

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

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**Methods for the quarantine and identification of phytophthora
sojae kaufmann and gerdemann**

大豆疫霉病菌检疫鉴定方法

(English Translation)

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Appendix B of this standard is a normative appendix, and Appendix A is an informative appendix.

This standard is proposed and managed by the National Certification and Accreditation Administration.

This standard was drafted. Liaoning Entry-Exit Inspection and Quarantine Bureau of the People's Republic of China.

Introduction

Soybean disease caused by *Phytophthora sojae* is one of the devastating diseases in soybean production, and it is a kind of phytosanitary disease announced by China.

A dangerous pathogenic fungus. The pathogen is mainly soil-borne. Currently the world's major soybean exporting countries, such as the United States, Brazil, Argentina, etc.

There is the occurrence and distribution of soybean disease, and a certain amount of soil is often entrained in the exported commercial soybeans. In order to prevent the pathogen from being introduced into China, when entering the plant quarantine, it is necessary to standardize and correctly master the quarantine and identification methods of *Phytophthora sojae*.

In the process of formulation, this standard summarizes the practical experience of phytosanitary for many years and absorbs the latest international and domestic research results.

Quarantine detection and identification of *Phytophthora sojae* by soil propagation characteristics, biological characteristics and morphological characteristics of *Phytophthora sojae* Various technical requirements.

stew -

Quarantine and identification method for *Phytophthora sojae* range this standard specifies the quarantine and identification methods for *Phytophthora sojae* in plant quarantine.

This standard is applicable to the quarantine and identification of *Phytophthora sojae* in

soybean entrained soil, and is also applicable to areas where soybean disease has occurred.

Soil isolation and identification of *Phytophthora sojae*.

The terms in the following documents become the terms of this standard by reference to this standard. Any dated reference document, which is subsequently used Modifications (not including errata content) or revisions do not apply to this standard, however, research that encourages agreements based on this standard is no, the latest version of these files can be used. For undated references, the latest edition applies to this standard.

Quarantine and identification method of GB sterilized T18085-2000 phytosanitary wheat dwarf smut Principle . The taxonomic status of *Phytophthora sojae* *Phytophthora sojae* (??? it ????????? Kaufmann & Gerdemann, synonyms ??????????.?????????f.sp.????????? Kuan&Erwin and .?????????Var.?????Hildebrand) belongs to the genus *Mastigomycotina*, *Oomycetes* (*Oomycetes*), *Peronosporales*, *Pythiaceae*, *Phytophthora* (which is known as it), can infect any fertility Soybean host at the stage, including roots, stems, leaves, pods and seeds, but is more common in causing soybean root rot and stem rot, English name. Soy-bean *Phytophthora* stem and root rot, referred to as *Phytophthora sojae*.

. Quarantine principle the pathogenic fungus is a typical soil-inhabited fungus, mainly with highly resistant oospore in the soil and in the host residue of the soil.

Winter and long-term survival. When the field temperature and humidity are appropriate, the oospores break the dormant germination and produce sporangia. When there is water after rain or after irrigation, the sporangia quickly release a large number of zoospores, which are splashed by rainwater onto the host surface, or attracted by the host's secretions.

Move and eventually infect the host. When there is water, a large number of sporangia are formed on the outer surface of the host, and a large number of oospores are formed inside.

According to this characteristic of pathogenic bacteria, this standard collects soil and cultures under suitable conditions for a certain period of time to cause spores to germinate and produce spores.

The sac is then soaked in water to release the zoospores from the sporangia, and the leaf discs of the susceptible soybean varieties are used to trap zoospores until the zoospores infect when the leaf discs produce new sporangia at the edge of the leaf disc (occasionally on the surface of the leaf disc) and release the zoospores, the pathogens can be separated and Identification.

. Identification principle the biological characteristics and morphological characteristics of *Phytophthora sojae* are different from other *Phytophthora* species and are the basis for identification of the pathogen.

. Biological microscope (with oil lens) . Eyepiece and stage micrometer . Stereo microscope with transmitted light source (maximum magnification not less than 50 times) . dry heat sterilizer . Autoclave . Ordinary balance (sensing 1 stew 100) . Analytical balance (sensing 1 stew 10000) stew -