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

LY/T 3187-2020

**Technological regulation for preservation of germplasm
resources of wild plant with extremely small populations**

极小种群野生植物种质资源保存技术规程

(English Translation)

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Table of Contents

Foreword
1 Scope
2 Normative references
3 Terms and definitions
4 Principles and basic requirements for collection of germplasm resources
5 Principles and Methods of Conservation of Germplasm Resources
6 Screening of core germplasm resources
7 Evaluation of the effectiveness of germplasm conservation
8 Construction of Germplasm Resource Information Management System

Foreword

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

This standard was proposed and managed by the State Forestry and Grassland Administration.

The organization responsible for drafting this standard. Research Institute of Forest Ecology, Environment and Protection, Chinese Academy of Forestry, Chinese Academy of Forestry graduate School.

1 Scope

This standard regulates the selection of wild plant provenance for very small populations, the collection and preservation methods of germplasm resources, the selection of core germplasm resources, Detection and adaptability evaluation of germplasm resources, etc.

This standard is applicable to all kinds of wild plants with very small populations in my country, and the protection of other rare and endangered plants can be implemented by reference.

2 Normative references

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

GB/T 14072 Principles and Methods for Conservation of Forest Tree Germplasm

Resources LY/T 2192--2013 General description of forest germplasm resources LY/T 2417--2015 Technical specifications for construction of forest germplasm resources off-site preservation warehouse

3 Terms and definitions

The following terms and definitions defined in GB/T 14072, LY/T 2192-2013 and LY/T 2417-2015 apply to this standard.

3.1 Wild plant with extremely small populations

It refers to the narrow distribution area, long-term interference from external factors, showing population degradation and continuous decrease in the number of individuals, population and individual the population is extremely small, the smallest living population that has fallen below the limit of stable survival, and the wild plants that are on the verge of extinction at any time. Mainly include the following 3 types Type. (1) The wild population is extremely small, extremely endangered, and is at risk of extinction at any time; (2) Unique habitat requirements and narrow ecological range; (3) Potential base Because the value is not clear, its extinction will cause gene loss, reduction of biodiversity, huge loss of socio-economic value and relatively small population.

3.2 Germplasm

Refers to the genetic species or genes that directly pass offspring through the sexual reproduction process or somatic cells and determine inherent characteristics.

3.3 Core germplasm resources

The general term for the least number of genetic resources that can maximize the genetic diversity of the entire population.

3.4 the store of germplasms resources Places to preserve germplasm resources.

3.5 in situ preservation Refers to the preservation of germplasm resources in situ, also known as in-situ preservation.

3.6 Ex situ preservation

Refers to the transfer of germplasm resources out of the native place for cultivation and preservation, also known as ex situ preservation.

3.7 Preservation off body

Refers to germplasm resources such as seeds, pollen, roots, spikes, buds and other propagation materials, which are stored away from the mother.

3.8 Natural protected area

It is a specific area defined by legal means or in accordance with traditional customs, and its purpose is to carry out biodiversity and its related natural resources protection of. In my country, it mainly includes nature reserves, national parks, and natural heritage sites, among which nature reserves are the in-situ conservation of wild plants (Preserved in situ) the main carrier.

4.1 Principles of collection

4.1.1

It shall not affect the growth, reproduction and renewal of the original mother tree, and shall not damage its habitat.

4.1.2

Adopt corresponding collection methods according to the characteristics of different species.

4.1.3

Under the above premises, collect germplasm resources in all different populations and habitats of species.

4.1.4

The first seed is collected; when the number of seeds is insufficient, nutrient tissue is collected.

4.2 Collection requirements

4.2.1

Collectors must be professionals or trained and qualified wild plant protectors.

Strictly record every collection activity and its investigation information, establish a pedigree information system, and update and track records regularly. Which survey information the table is implemented with reference to the forest tree germplasm resource survey table of GB/T 14072.

5.1 Preservation principles

5.1.1

Wild plant species in a very small population will not be extinct and will develop properly, and the genetic genes of the species will not be lost.

5.1.2

According to the biological characteristics and provenance distribution of different species, formulate corresponding preservation procedures and preservation methods.

5.1.3

Before formulating a conservation plan for germplasm resources, it is necessary to do a good job in the investigation of the status of the species' germplasm resources and the detection of genetic diversity.

5.2 Storage method

5.2.1

In situ preservation

5.2.1.1

According to the characteristics of species and their habitats, the establishment of in-situ conservation (protection) areas for germplasm resources should use the national and local Established various types of natural reserves, such as nature reserves.

5.2.1.2

For species distributed outside the nature reserve, in situ preservation (protection) communities can be established. Each species must have more than 3 in situ preservation (protection) of the community. For species with a population of less than 3 in the wild or with only scattered individuals, set up in-situ preservation (protection) point.

5.2.1.3

All wild individuals of each species in in-situ preservation (protection) sites, communities and sites shall be marked and located.

5.2.1.4

For the established in situ preservation (protection) communities (spots), the management and protection measures shall be taken as the main ban and artificial tending as the supplement.

5.2.1.5

According to the stability of the ecological and genetic composition of the plant population, it is determined that the area of the in-situ preservation area should not be less than 25 ha;

When the cover area is less than 25 ha, the area where the population is distributed is the core, and a buffer zone with a width of not less than 300 meters is set up, and the preservation in place is determined accordingly.

(Protection) The area of a cell or point.