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

GB/T 45191-2025

F1 hybrid eggs of silkworm (Bombyx mori)

桑蚕一代杂交种

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Foreword

This document is in accordance with the provisions of GB/T 1.1-2020 "Guidelines for standardization work Part

1. Structure and drafting rules for standardization documents" Drafting. Please note that some of the contents of this document may involve patents. The issuing organization of this document does not assume the responsibility for identifying patents. This document was proposed by the Ministry of Agriculture and Rural Affairs of the People's Republic of China. This document is under the jurisdiction of the National Sericulture Standardization Technical Committee (SAC/TC437). This document was drafted by: Jiangsu University of Science and Technology, Sericulture Research Institute of Chinese Academy of Agricultural Sciences, Zhejiang Agricultural Technology Extension Center, Sichuan Sericulture Research Institute Sericulture Administration, Guangxi Zhuang Autonomous Region Sericulture Technology Extension Station, Guangdong Silk Source Group Co., Ltd., Jiangsu Province Silkworm Seed Institute, Chongqing Sericulture Administration Station, Sichuan Nanchong Silkworm Seed Farm, Shandong Guangtong Silkworm Seed Co., Ltd., Hubei Academy of Agricultural Sciences Economic Crops Research Institute, Jiangxi Economic Crops Research Institute Institute, Special Agriculture Management Station of Anhui Provincial Department of Agriculture and Rural Affairs, and Jilin Sericulture Science Research Institute. The main drafters of this document are. Chen Tao, Zhang Meirong, He Enjie, Mo Yunxia, Zhu Chunqun, Yang Yuanping, Ma Luyun, Hu Wenjuan, Wang Xianyan, Wang Xin, Li Hongyuan, Tang Bin, Fang Dewen, Wu Fan, Zhong Lijun, Wang Jianxia, Peng Lihong, Yao Xiaohui, and Zhou Ying. Silkworm hybrid

1 Scope

GB/T 45191-2025 is the Chinese standard for F1 hybrid silkworm eggs. Almost all commercial sericulture is done with first-generation hybrids, because the hybrid vigour raises the cocoon yield and the silk quality well above either parent, and the egg is the input on which a rearing season entirely depends: a farmer who receives eggs of poor viability or of the wrong cross loses the crop and has no remedy until the following year. The standard sets the requirements: the identity and purity of the cross and the acceptable rate of

off-types, the appearance and the uniformity of the eggs, the hatching rate and the concentration of hatching, the incidence of unfertilised and dead eggs, the freedom from pebrine and the other diseases that must be certified, the moisture and the storage condition of the eggs; then the test and inspection methods including the microscopic examination for pebrine, the inspection rules, and the packaging, labelling, transport and the cold storage and incubation instructions. It takes effect on 1 August 2025.

This document specifies the quality requirements, result determination and inspection report of first generation silkworm hybrids, and describes the corresponding inspection methods. This document applies to the production, operation, use and quality inspection of the first generation hybrids of mulberry silkworms.

2 Normative references

The contents of the following documents constitute the essential clauses of this document through normative references in this document. For referenced documents without a date, only the version corresponding to that date applies to this document; for referenced documents without a date, the latest version (including all amendments) applies to This document.

GB/T 8170 Rules for rounding off values and expression and determination of limit values

NY/T 1093 Technical Specification for the Breeding of First Generation Hybrid Silkworms

3 Terms and definitions

The following terms and definitions apply to this document.

3.1 F1hybrid Taking advantage of hybrid advantages, silkworm species are bred using original species in a fixed combination.

3.2 looseeggs Silkworm eggs are laid on silkworm paper or egg-scattering cloth and processed through techniques such as shedding, disinfection, and selection.

3.3 Flat eggs laying on card Produce silkworm eggs attached to silkworm paper of certain specifications.

3.4 Hibernating eggs The silkworms are bred in the same year and protected in the form of dormant eggs until they are used in the next year.

3.5 Instant acid-treated commonacid-treated eggs Soaking seeds After silkworm eggs are laid, they develop to the embryonic stage and are treated with hydrochloric acid to help them break out of dormancy.

3.6 Cold soaked seeds After the silkworm eggs are laid, they are refrigerated in the early stages of embryonic development. After a certain period of time, they are taken out of the warehouse and soaked in acid to help them break out of dormancy.

3.7 Normaleggs Silkworm eggs whose egg color, egg shape and other external characteristics are consistent with the inherent characteristics of the silkworm breed.

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