

ICS 65.020
CCS B 61

LY

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

LY/T 3208-2020

**Guidelines for the conduct of tests for distinctness, uniformity
and stability (DUS) - Hawthorn (Crataegus L.)**

植物新品种特异性、一致性、稳定性测试指南 山楂属
(English Translation)

Issued on: March 30, 2020

Implemented on: October 1, 2020

Issued by: State Forestry and Grassland Administration

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Foreword

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

Please note that certain contents of this standard may involve patents. The issuing agency of this document is not responsible for identifying these patents.

This standard is under the jurisdiction of the State Forestry and Grassland Administration.

This standard corresponds to UPOV Guide TG/239/1, and the degree of consistency with TG/239/1 is not equivalent.

Compared with UPOV guideline TG/239/1, this standard has technical differences, the main differences are as follows.

--Added "Annual branches. internode length", "Annual branches. color", "Leaf. Shape", "Leaf. Upper Surface main color", "Flower. number of florets per inflorescence", "Flower. number of petals (double-petal flower)", "Flower. multiple color of petals", "Flower.

"Petal folds", "Flower. Anther color", "Fruit. Number of fruits per inflorescence", "Fruit. pulp texture", "Fruit. fruit Flesh flavor", "Fruit. Fruit point color", "Fruit. Sepal shape", "Fruit. Sepal shape" and "Seed core. hardness" Wait 16 personality traits.

- Adjusted "Plant. Number of Main Branches", "Plant. Main Branch Extension Posture", "Plant. Crown Shape", "Leaf. Leaf" Edge serration", "Leaf. Multicolor", "Fruit. Peel Color", "Fruit. Shape", "Fruit. Stem Base Shape" and "Fruit Reality. 9 personality traits such as main color of pulp.

-Deleted "Leaf. Leaf Density", "Branches. Number of Branches and Spines", "Branches. Length of Branches and Spines", and "Branches. Length Degree", "Flower. Calyx length", "Flower. Anther shape", "Flower. base color of filament", "Flower. petal posture", "Fruit. Fruit. surface texture", "fruit. fragrance" and "fruit. depth of calyx depression" and other 11 personality traits.

The organization responsible for drafting this standard. Beijing Forestry University

1 Scope

This standard specifies the technical requirements for the specificity, consistency, and stability testing of new varieties of *Crataegus* L. plants in the Rosaceae begging.

This standard applies to the testing of all new species of Hawthorn.

2 Normative references

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

GB/T 19557.1-2004 General Principles for Testing the Specificity, Consistency and Stability of New Plant Varieties

3 Terms and definitions

The terms and definitions established in GB/T 19557.1-2004 apply to this document.

4.1 Test materials

4.1.1

The applicant submits plant materials of tested varieties that meet the quantity and quality requirements at the specified time and place. From non-testing country Applicants should provide relevant documents such as customs and plant quarantine in accordance with relevant regulations on entry, exit and transportation.

Pieces.

4.1.2

The test materials should be plants that have been vegetatively propagated for more than 2 years, and the grafted seedlings should indicate the rootstock.

4.1.3

The number of submitted test materials should not be less than 10 plants.

4.1.4

The test materials submitted should be robust, free from pests and diseases, and free from virus infection.

4.1.5

Except as permitted or required by the approval agency to process the test materials, the submitted test materials shall not be subject to any impact Treatment of normal expression of traits. If processed, details of the processing should be provided.

4.1.6

Applicants should submit a technical questionnaire when applying, see Appendix B.

4.2.1 Test cycle

In the case of meeting the test conditions, at least two growth cycles are tested.

4.2.2 Test location

The test should be carried out in a designated testing organization.

4.2.3 Test conditions

The test should be carried out under the condition that the relevant characteristics of the test material can be fully expressed, and the selected test material should be at least the site is planted for one year.

4.2.4 Test design

4.2.4.1

The test materials, standard varieties and similar varieties should be planted in the same location and environmental conditions.

4.2.4.2

If certain parts of the plant need to be extracted as samples for the test, the sample collection shall not affect the entire growth cycle of the test plant of observations.

4.2.4.3

The breeding methods and management methods of the applied varieties and standard varieties and similar varieties shall be consistent;

And management methods should be consistent.

4.2.4.4

Unless otherwise stated, all observations should be made on at least 9 plants or materials taken from the same part of at least 9 plants get on.

4.2.4.5

Unless otherwise specified, the number of plants for individual observation traits (VS, MS) shall not be less than 9 plants. Observing plant organs or for the location, the number of samples for each plant is not less than 2. Group observation traits (VG, MG) should observe the entire community or regulation Mixed sample of fixed size.

4.2.5 Test methods for similar traits

4.2.5.1

Plants. Except for special instructions, tests should be carried out after the leaves are unfolded in spring.

4.2.5.2

Annual branches. unless otherwise specified, the ones on the sun-facing side of the central crown of the test plant should be selected from after leaf fall to before germination.

Annual branches are tested.

4.2.5.3

Leaves. Unless otherwise specified, the mature leaves of the middle section of the vegetative branches of the current year should be selected for testing in summer.

4.2.5.4

Flower. Unless otherwise specified, the middle branch of the test plant should be selected after the blooming period.

The inflorescence (small flowers in the inflorescence are healthy and open on the same day) for testing.

4.2.5.6

Fruit. Unless otherwise specified, when the fruit is fully mature, the middle part of the sun-facing surface of the outer crown of the test plant should be selected.

The fruit of the fruit branch is tested.

4.2.5.7

Seed kernels. unless otherwise specified, when the fruit is fully mature, select the middle knots on the sun-facing surface of the central part of the test plant.

The fruit seeds of the fruit branches are tested.

4.2.6 Observation and evaluation of color traits

The observation of color characteristics is based on the RHS colour Chart published by the Royal Horticultural Society (RHS).