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

**LY/T 2190-2013**

Replacing LY/T 2190-2013

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**Guidelines for the conduct of tests for distinctness, uniformity  
and stability of Ziziphus (Ziziphus Mill.)**

植物新品种特异性、一致性、稳定性测试指南 枣

**(English Translation)**

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## Foreword

This document complies with the provisions of GB/T 1.1-2020 "Standardization Work Guidelines Part 1: Structure and Drafting Rules of Standardization Documents".

Drafting.

This document replaces LY/T 2190-2013 "Guidelines for Testing the Distinctiveness, Uniformity and Stability of Plant Varieties (Jujube)" and is consistent with LY/T 2190-Compared to 2013, aside from structural adjustments and editorial changes, the main technical changes are as follows.

--The testing scope has been expanded to include jujube (*Ziziphus jujuba*), sour jujube (*Ziziphus jujuba* var. *spinosa*), and hairy-leaved jujube.

Tests on the distinctiveness, uniformity and stability of new jujube (*Ziziphus mauritiana*) plant varieties (see Chapter 1).

--Added "Main bud" and "Accessory bud" to the "Terms and Definitions" section (see 3.5 and 3.6);

--Added "Typological Observation" to "Test Methods" (see 6.5);

--Added "General Principles" to the "Specificity, Consistency and Stability Determination" section (see 7.1);

--Added "Flower. Flowering Time", "Needle. Length", and "Secondary Branch. Internode Interval" to the "Grouping Traits" (see 8.2.1, 8.2.3, 8.2.4);

--The "Overview," "Observation Methods," and "Observation Period" sections of the "Typical Table" have been added, along with supplementary details (see 9.1).

9.6, 9.7);

--Added "Jujube bud. color", "flower. flowering time", "fruit. longitudinal diameter", and "fruit. transverse diameter" to "Table C.1 Technical Questionnaire 5 Main Traits".

"Diameter", "Fruit. Irregular", "Fruit. Side View Shape (Limited to Regular Shape Varieties)", "Fruit. Side View Shape (Limited to Irregular Varieties)", "Fruit. color of mature fruit", "Fruit. degree of wrinkling of stem cavity", "Phenological period. budding period", and "Phenological period. leaf fall period" (see Table C.1);

--Added "Current Year Branches. Hairiness", "Shoots. Color", and "Secondary Branches. Zigzag Intensity (Zigzag Only)" to "Table A.1 Trait Table".

"Type of variety", "Secondary branch. internode spacing", "Secondary branch. number of jujube branches", "thorn. persistent", "thorn. length", "leaf. length-to-width ratio", "leaf. base".

"Partial slant", "Leaf. Leaf base shape", "Leaf. Bubble-like", "Flower. Flowering time", "Fruit. Heterogeneous", "Fruit. Side view shape (limited to non-heterogeneous)", "Shape of the variety", "Fruit. Side view shape (limited to irregular varieties)", "Fruit. Color of young fruit", "Fruit. Color of mature fruit", "Fruit. Location of the pulp cavity", "Fruit. Degree of wrinkling in the stem cavity", "Fruit. Persistence of the sepals", "Fruit. Ratio of pulp thickness to seed width", "Fruit. The test traits include "kernel width," "kernel degeneration," and "kernel beak shape," and corresponding standard varieties are also included. [See A.1] [Characteristics table, 2013 edition, Table B.1];

--Added "B.1 Explanation involving multiple traits" (see Appendix B);

--Added "Jujube Head. Internode Spacing", "Secondary Branch. Zigzag Strength (Zigzag Varieties Only)", "Secondary Branch. Number of Nodes", and "Secondary Branch. Jujube Hangings" "Quantity", "Zao Dang. Leaf density", "Leaf. Base oblique", "Leaf. Leaf base shape", "Leaf. Leaf surface blister-like", "Flower. Diameter", "Flower.

"Flowering time", "Fruit. Side view shape (limited to non-irregular varieties)", "Fruit. Side view shape (limited to irregular varieties)", "Fruit. Young fruit" "Fruit color. color of the fruit after ripening", "Fruit. location of the pulp cavity", "Fruit. degree of wrinkling of the stem cavity", "Fruit. persistence of the sepals".

Individual characteristics such as "Fruit. Ratio of flesh thickness to pit width", "Pit. Shape of the pit beak", "Phenology. Budding period", and "Phenology. Leaf fall period" Explanation of

the state (see B.2);

--The terms "white ripening period," "crisp ripening period," "fully ripening period," "edible rate," "drying rate," and "fruit uniformity" have been removed from the "Terms and Definitions" section (see [link to relevant documentation]).

(2013 edition, 3.5-3.10)

--The categories "Secondary Branches. Morphology," "Fruit. Size," and "Fruit. Maturity" in the "Grouping Traits" section have been removed (see section 6.2.1 of the 2013 edition).

6.2.2, 6.2.4);

--The following sections have been removed from "Appendix A Technical Questionnaire 4 Main Characteristics". "Plant. Tree Form," "Leaf. Shape," "Fruit. Size," and "Fruit. Color." "Seed. Size", "Seed. Shape", "Seed. State", and "Phenology. Maturity" (see Appendix A, Technical Questionnaire 4, 2013 version) feature);

--The following sections have been removed from "Appendix A. Characteristic Table". "Secondary Branches. Thorns", "Flowers. Bud Shape", "Fruits. Size", "Fruits. Longitudinal Diameter", and "Fruits. Transverse Diameter".

"Diameter", "Fruit. Uniformity", "Fruit. Color", "Fruit. Top Shape", "Fruit. Stem Hole Depth", "Fruit. Lens Size", "Fruit. Fruit" "Density", "Fruit. Pulp Color", "Fruit. Pulp Coarseness", "Fruit. Edible Rate", "Fruit. Juice", "Fruit. Sweetness and Acidity", "Fruit.

Soluble solids; Fruit. Cracking; Fruit. Development stage; Seed. Size; Seed. Shape; Seed. State; Seed. Contains "Kernel ratio" and "Phenology. Fruit ripening period" (see Table B.1, 2013 edition);

--The following sections in "B.2 Explanation of Individual Traits" have been removed. "Fruit. Shape", "Fruit. Depth of the Stem Canal", "Fruit. Size of the Lens", and "Fruit. Lens".

"Density" and "Seed. Shape" (see B.2, 2013 edition);

--The title "Guidelines for Testing the Distinctness, Uniformity, and Stability of New Plant Varieties" has been changed to "Distinctness, Uniformity, and Stability of New Plant Varieties".

Qualitative Testing Guidelines for the Jujube Genus;

--The specific content of "Normative References" has been changed (see 2, Chapter 2 of the 2013 edition).

--Specific changes have been made to the "Terms and Definitions" section (see 3, Chapter 3 of the 2013 edition).

--Changed "Zaotou Extension shoot", "Secondary shoot", "Zao Twig Mother bearing shoot", and "Zao Hanging" for a detailed explanation of "Bearing shoot" (see 3.1, 3.2, 3.3 and 3.4,

3.1 to 3.4 in the 2013 edition);

--Specific changes have been made to the "Test Materials" and "Test Methods" sections (see Chapters 5 and 6, sections 4.1 and 4.2 of the 2013 edition).

--Specific changes have been made to the "Test Location," "Test Conditions," and "Test Design" sections (see 6.2, 6.3, 6.4, and 4.2.2 of the 2013 version).

4.2.3, 4.2.4);

--The specific details of the "Additional Tests" have been changed (see 6.6, 4.2.7 of the 2013 version).

--The specific content of the "Variety Grouping Explanation" has been changed (see 8.1, 6.1 in the 2013 edition).

--The specific content of "Expression Type" and "Standard Variety" has been changed (see 9.3, 9.5, 7.3, 7.4 in the 2013 edition).

--The phenotypic diagram for "Secondary Branches. Morphology" has been revised (see B.2.3, B.2.2 in the 2013 edition).

--The description of "Zao Tuo. Number of Leaves" in "Appendix B.1 Variety Characteristics" has been changed to "Zao Tuo. Leaf Density"; "Fruit. Smooth Surface" has been changed.

"Degree" is "Fruit. smooth surface" (see A.1 trait table, B.1 trait characteristics table in the 2013 edition);

--Changed the following in "B.2 Explanation of Individual Traits". "Plant. Tree Form", "Secondary Branches. Morphology", "Leaf. Shape", "Leaf. Leaf Tip Shape", "Leaf Illustrations of "Leaf margin shape" and "Fruit shape" (see B.2, B.2, 2013 edition).

Please note that some content in this document may involve patents. The issuing organization of this document assumes no responsibility for identifying patents.

This document was proposed and is under the jurisdiction of the National Forestry and Grassland Administration.

## 1 Scope

This document specifies the techniques for testing the distinctiveness, uniformity, and stability of new varieties of plants in the genus *\*Ziziphus\** of the family Rhamnaceae.

Require.

This document primarily applies to the jujube (*Ziziphus jujuba*), sour jujube (*Ziziphus jujuba* var. *spinosa*), and hairy-leaved jujube (*Ziziphus jujuba* var. *spinosa*).

(*mauritiana*) Plant variety specificity, uniformity and stability test.