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

LY/T 3087-2019

**Technical regulations for cultivation seedling of *Machilus
thunbergii***

红楠育苗技术规程

(English Translation)

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Foreword

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

This standard was proposed by the Jiangxi Provincial Forestry Department.

This standard is under the jurisdiction of the National Forest Seed Standardization Technical Committee (SAC/TC 115).

This standard was drafted. Jiangxi Academy of Forestry Science, Ji'an Forest Tree Seedlings and Forest Farm Management Station, Jiangxi Yifang Forestry Engineering Co., Ltd.

1 Scope

This standard specifies *Machilus thunbergii* seed collection and seed treatment, sowing and seedling raising, seedling investigation, seedling classification, Nursery stocks and archives.

This standard applies to the cultivation of naked root seedlings and container seedlings of *Phoebe bournei*.

2 Normative references

The following documents are essential for the application of this document. For dated references, only the dated version applies to this document.

For undated references, the latest version (including all amendments) applies to this document.

GB 2772 Forest tree seed inspection regulations GB 6000 Quality Classification of Main Afforestation Tree Seedlings GB 6001 technical regulations LY/T 2280 Forest tree seedling production and operation file

3.1 Selection of mother tree

The selection of the mother tree should choose a good middle-aged forest with good growth conditions, straight stem shape, beautiful crown type, and no pests.

3.2 Seeding time

Collected from mid-June to early July when seeds become brown.

3.3 Real modulations

Put the collected fruits in a cool place and pile them for 2 d to 3 d. After repeated rubbing, wash the outer peel, pulp and other debris with water and place Dry the surface moisture in a well-ventilated place.

3.4.1 Seed Inspection

Refer to GB 2772 for implementation.

3.4.2 Seed Quality Classification

Seeds are divided into three levels according to the germination rate, purity, and water content indexes. See Table 1 for quality classification indexes.

Table 1 Quality classification of *Phoebe bournei* seeds

Seed level I	level II	level III	level	Clarity (%)	> 98	> 95	> 90	Germination rate (%)	> 90	> 80
> 70	Water content (%)	40 ~ 46	40 ~ 46	40 ~ 46	40 ~ 46					

3.5 Seed storage

Seeds should be harvested and planted. If the seed cannot be sown immediately, the seeds should be stored in sand at room temperature in time, the seed-sand ratio is about 1:3, and the seeds are water-containing.

The amount should be kept above 40%. The humidity of the fine sand is determined by the storage time. When it is stored for more than 20 days, the humidity of the fine sand is the degree of wetness.

When stored for less than 20 days, the humidity can be appropriately increased.

4.1.1 Nursery land selection

The nursery ground should be dry land with moist, fertile soil, close to water sources, better shade conditions, forest climate and convenient transportation.

Not suitable for continuous cropping.

4.1.2 Bed preparation

Combined with ploughing and whole raking, 750 kg of fully-fermented organic fertilizer and 300 kg to 450 kg of compound fertilizer were sprinkled per hectare. Make bed the soil mass is broken into pieces. The bed width is 1 m, the bed height is 25 cm to 30 cm, and the trail width is 25 cm. versus the bed width is parallel to a seeding ditch of 2 cm to 3 cm deep with a row spacing of 25 cm.

4.1.3.1 Seed germination

After the ground is leveled, a shading net with a shading degree of more than 70% is laid on it, and sand with a thickness of 10 cm to 15 cm is laid on the net to make about 1 m.

Wide germination bed. Spread the seeds evenly on the germination bed, cover with 2 to 3 cm thick sand, and wet the bed to keep it moist.

4.1.3.2 Sowing time

Mid-June to late July.

4.1.3.3 Seeding volume

The appropriate seeding rate is (130 kg to 170 kg)/hm².

4.1.3.4 Seeding

Broadcast. Seeds that were exposed after germination were sown into the sowing ditch with a row spacing of 6 cm to 8 cm and covered with a fine yellow heart soil with a thickness of 1

cm to 2 cm.

After covering the soil, cover the planting ditch or planting bed with straw or other crop stalks. Then the seedbed is watered in 2 to 3 times.

4.1.3.5 Remove Cover

After the seed germination seedlings are unearthed, the cover should be removed in time and placed in the rows of seedlings.

4.1.4.1 Preparation of transplant bed

3 d to 5 d before transplanting, prepare the bed and make the bed flat, and lay 2 cm to 3 cm thick yellow heart soil on the bed, and cover it with an agricultural film.

1 to 2 days before transplanting, water the seedbed once.

4.1.4.2 Setting up a canopy

Before transplanting the sprouts, set up a shade shelter with a light transmittance of 60% to 70% in time, and the height of the shade shelter is 1.5 m to 1.8 m.

4.1.4.3 Sprout cutting and transplanting

After the sprouts unfolded the first true leaf on the germination bed, the sprouts were gently pulled up, 1/3 of the main root was cut off, and the yellow mud was covered. Seedling transplanting line the distance is about 25cm, and the plant distance is 6cm ~ 8cm. When planting seedlings, roots must be reached and the seedlings must be firm.

4.1.4.4 Bed Cover

After transplanting, it is better to cover the straw or sprinkle the husk between the rows, and it is better not to see the soil.

4.1.4.5 Watering

On the day of transplantation, spray water with spray nozzles 2 to 3 times; within 15 days after transplanting, spray water sprays 2 to 3 times a day to increase air Humidity; after the new roots grow, water them in a timely manner according to the requirements of field seedlings.

4.1.5.1 Migration

Transplanted the following spring. The transplanted plant spacing is 8 cm to 10 cm, and the row spacing is 25 cm to 30 cm.