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

LY/T 1933-2019

**Forestry machinery -- Self-propelled seedling transplanter
(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 replaces LY/T 1933-2010 "Forestry machinery self-propelled seedling transplanter". Compared with LY/T 1933-2010, the main technology the content changes are as follows.

- a) the scope of application has been modified (see Chapter 1);
- b) revised normative references (see Chapter 2, Chapter 2 of the 2010 edition);
- c) The terms and definitions of "traction seedling transplanter" and "hanging seedling transplanter" have been deleted, and their contents have been moved to Chapter 1.

Note (see Chapter 1, 2010 version 3.3, 3.4);

d) added variant code (see 4.2);

e) added "basic parameters" (see Chapter 5);

f) Added requirements and inspection methods for "supporting power" (see 6.2)

g) "Transport gap" (2010 version 5.1.5) was deleted;

h) Deleted "structural quality" (2010 version 5.1.5);

i) "Maximum Planting Density" has been modified (see 6.3.5, 2010 version 5.1.6);

j) Added requirements for "transmission", "steering mechanism", and "walking gear" (see 6.4.2, 6.4.3, 6.4.4)

k) revised "safety" requirements and inspection methods (see 6.5, 2010 version 5.4, 6.5);

l) Increased surface quality requirements of painted parts (see 6.7.1.7);

m) the content of the "inspection rules" has been deleted (chapter 7 of the 2010 edition);

n) added "mark" inspection method (see 7.1.2);

o) Added the inspection method of "Instruction Manual" (see 7.2.2);

p) Added "packaging" inspection method (see 7.3.2).

Please note that some elements of this document may involve patents. The issuer of this document is not responsible for identifying these patents.

This standard is proposed and managed by the National Forestry Machinery Standardization Technical Committee (SAC/TC 61).

1 Scope

This standard specifies the terms and definitions, technical requirements and test methods, marks, Instruction manual, packaging, transportation and storage.

This standard applies to self-propelled seedling transplanters with gasoline engines or lithium-ion batteries as the power source. Traction and hanging seedling transplants the non-power part of the machine can also be used as a reference.

Note: The walking power of the traction seedling transplanter comes from the tractor or other walking power system.

Comes from a tractor or other walking power system and uses a three-point suspension connection.

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/T 191 Packaging, storage and transportation icon GB/T 6001 Seedling raising technical regulations GB/T 9480 Rules for the preparation of manuals for agricultural and forestry tractors and machinery, lawn and garden power machinery GB 10395.1 Safety of agricultural and forestry machinery-Part 1. General GB 10396 General rules for safety signs and hazard graphics for agricultural and forestry tractors and machinery, lawn and garden power machinery GB/T 13306 signs GB/T 13384 General technical requirements for packaging of electromechanical products GB/T 20786 rubber track GB/T 24659.1 Technical specifications of guide wheels for agricultural track tractors GB/T 24659.2 Technical requirements for driving wheels of agricultural crawler tractors GB/T 24659.3 Technical specifications of agricultural track tractor track rollers GB/T 31484 Cycle life requirements and test methods for power batteries for electric vehicles GB/T 31485 Safety requirements and test methods for power batteries for electric vehicles GB/T 31486 Electrical performance requirements and test methods for power batteries for electric vehicles JB/T 5135.1 General small gasoline engine Part 1. Technical conditions JB/T 5135.2 General-purpose small gasoline engine Part 2. Test method for bench performance JB/T 5135.3 General-purpose small gasoline engines Part 3. Reliability, durability test and evaluation method JB/T 5673 General technical requirements for painting of agricultural and forestry tractors and implements JB/T 8548 Technical conditions of power shift transmission for construction machinery LY/T 1045 Modeling method of forestry machinery

3 Terms and definitions

The following terms and definitions apply to this document.

Seedling transplanter A machine capable of completing one- to two-year-old beds as bare root seedling planting operations (see Figure 1).

Note: The seedling transplanter is also called a bed changer.

Explanation.

1--drive wheel;

2--track walking device;

3-- supporting power;

4 ---- Driving seat;

- 5 ---- transmission;
- 6--Control system;
- 7--Working device lifting system;
- 8--working device;
- 9--Miao seedling seat and seed box;
- 10--main frame;
- 11--guide wheel;
- 12--roller.

Figure 1 Simplified structure of seedling transplanter

Self-propelled seedling transplanter the power for walking and working comes from the machine's seedling transplanter.

Work equipment

Mechanisms and component combinations for seedling clamping, furrowing, seedling insertion, soil covering, compaction, and seedling removal (see Figure 2).

Explanation.

- 1--Main drive sprocket;
- 2--Main drive gear;
- 3--shaper;
- 4--Transitional support sprocket;
- 5--main frame;
- 6- tensioning sprocket;
- 7--Miao folder;
- 8--Opener.

Figure 2 Schematic diagram of the working device structure

Seedling folder

Parts for holding seedlings.

Furrow opener

A component for making grooves in seedbeds for implantation of seedlings.

Planting density