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

GB 19176-2010

Replacing GB 19176-2003

Sugar beet seed

糖用甜菜种子

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Foreword

All the technical contents of this standard is mandatory. The standard reference to "international inspection of seed" 1996 edition, revised in accordance with relevant provisions of the "People's Republic of China Seed Law" and substitute GB 19176-2003 "sugar beet seed." This standard compared with GB 19176-2003, the main changes are as follows:

- Amendments to the normative references;
- Revised terms and definitions;
- Modified seed category and some technical indicators;
- Increasing the particle size measurement method;
- Modify the packaging, labeling, transportation and storage requirements;
- Amendments to Appendix A (normative) Clarity analysis;
- Revised Appendix B (normative) germination test;
- Revised Annex C (normative) triploid rate test. The Standard Appendix A, Appendix B, Appendix C are normative appendix. The standard proposed by the People's Republic of China Ministry of Agriculture. This standard by the National Standardization Technical

Committee crop seeds. This standard was drafted. the Ministry of Agriculture Quality Supervision and Testing Center beets, beet Institute of Chinese Academy of Agricultural Sciences, the National Agricultural Technology Extension and Service Center, Xinjiang Yili Seed Management Station (Xinjiang Yili Crop Seed Quality Supervision and Testing Center), Heilongjiang Province, sweet Seed Management Station, Baotou Huazishiye Co., Ltd., Heilongjiang University. The main drafters of this standard. Wu Yumei, Chen Lianjiang, Wu Qingfeng, Bai Teng Qian Lv Xiaogang, Xia province, Qin tree only. This standard replaces the standards previously issued as follows:

--- GB 19176-2003. Sugar beet seeds

1 Scope

GB 19176-2010 is the Chinese national standard on sugar beet seed, in the field of agriculture. It carries no /T suffix, which in the Chinese system means compliance is mandatory: a product or a practice within its scope has to meet it to be lawfully made, sold or carried out in China. It was issued on 14 January 2011 by the General Administration of Quality Supervision, Inspection and Quarantine of the People's Republic of China; Standardization Administration of China, and has been in force since 1 January 2012. Classification: ICS 65.020.20, CCS B61. This page is published from the official record of the standard held by the Chinese standards administration: the identification, the dates, the classification and the issuing body are taken from there. The clause text, the tables and the numeric limits are in the document itself, which is delivered complete in English translation.

This standard specifies the terms and definitions sugar beet (*Betavulgarisvar.saccharifera*) seeds, quality requirements, test side Method, inspection rules, packaging, labeling, transportation and storage requirements. This standard applies to the territory of People's Republic of China the production and sale of sugar beet seeds.

2 Normative references

The following documents contain provisions which, through reference in this standard and become the standard terms. For dated references, subsequent Amendments (not including errata content) or revisions do not apply to this standard, however, encourage the parties to the agreement are based on research Whether the latest versions of these documents. For undated reference documents, the latest versions apply to this standard.

GB/T 3543.2 agricultural seed testing protocols for sampling

GB/T 3543.3 crop seed testing Clarity Analysis Rules for the inspection

GB/T 3543.6 crop seed moisture determination

GB/T 3543.7 crop seed testing other items test

GB 20464 General labeling of agricultural seeds

2.0 Pelleted seeds 95 95 99.0 98 12.0 3.5 4.75 ~

Note 1. diploid monogerm triploid seed rate is not subject project.

Note 2. The table refers to the male sterile triploid Index of polyploid species.

5.1 Clarity Analysis Executed in accordance with Appendix A.

5.2 Germination Test Executed in accordance with Annex B.

5.3 triploid rate test Executed in accordance with Appendix C.

5.4 Single-particle ratio test From pure seeds Clarity analysis, the number of tablets or by manual random number seed to take 400 per 100 for the next iteration, each observation Repeat single embryo seed percentage. Repeat four times the average percentage rate is the single particle, the result rounded to the nearest integer.

5.5 Determination of particle size Send test samples for particle size measurement of quality at least 250g, samples should be enclosed in a sealed container. From pure seeds clarity of analysis, Two test samples each weighed about 50.00g, each of the test samples were placed in a sieve set specified in (a difference of each mesh 0.5mm, from the Sequentially stacked to the next), Filters screen management 3min; manual sifting method is 20 times back and forth, changing to 90 °, and then back and forth 20 times, beat about After. After each sieve screen management of pure seeds were weighed, to two decimal places. The net seed quality big three adjacent sieve Seed showing pore size range, to one decimal place. If the three adjacent sieve net of seed quality of the test and not less than 70.0% of the mass of the sample, and the results of two repeated measurements Difference is not higher than 5.0%, measured by the average of the results of the two test samples are expressed. Otherwise, re-analysis of samples shall be approximately 50.00g until there The measurement results of the two samples meet the requirements so far, and the average value of the measurement results of two samples as a measurement result.

5.6 Determination of Moisture Execution according to the provisions GB/T 3543.6 of.

5.7 Determination of grain weight Execution according to the provisions GB/T 3543.7 of.

5.8 coated seed testing Execution according to the provisions GB/T 3543.7 of.

3 Terms and Definitions

The following terms and definitions apply to this standard.

3.1 For sugar beet seed production of raw materials.

3.2 Breeder seed breederseed Breeders bred stable hereditary characteristics consistent pedigree or seed strains.

3.3 Stock basicseed Breeder seed multiplication with the first generation to the third

generation, seeds and confirmed to meet the specified quality requirements.

3.4 Diploid diploid In beet somatic cells contain two genomes ($2x = 18$ chromosomes).

3.5 Triploid triploid In beet somatic cells, containing three genomes ($3x = 27$ chromosomes).

3.6 Tetraploid tetraploid In beet somatic cells genome contains four ($4x = 36$ chromosomes).

3.7 Common polyploid exoploid Diploid and tetraploid strains mutual parental strain, according to a certain proportion of the natural seed of hybrid obtained.

3.8 Male polyploid polyploidbasedonCMS In male sterile diploid (or tetraploid) lines as female, with the pollen of tetraploid normal (diploid) of the parent strain, according to a certain ratio Example formulated natural hybrid hybrids.

3.9 Beet CMS beetmalesterile Because beet pollen mother cells degenerate without having the ability to pollinate, also known as sugar beet male infertility.

3.10 Single germ geneticmonogermseed Embryo containing only one seed, also known as single species of grain, fruit species, intraspecific ball single bud obtained by genetic.

3.11 Multi-germ multigermseed Intraspecific ball with more than two (including two) types of seed embryos, also known as multi-grain species, complex fruit species, multi-bud seed.

3.12 Polished species polishedseed Simply processed to remove the bulb surface calyx, in addition to the genetic nature, other characteristics (such as particle size, specific gravity, etc.) there are significant changes in the sugar beet seed.

3.13 Pelleted seeds peletedseed In order to meet a single seed precision sowing the seeds of beets made no significant difference in size and shape similar to spherical. Pelleted seeds In addition to adding sub pelleting substances, it may contain pesticides, fungicides, dyes or other additives.

3.0 Field with the species 75 kinds of polished

98.0 Pelleted 85 98.0 45 (common polyploidy) or 90 (sterile polyploidy) 14.0 ≥ 2.5 12.0 2.5 4.5

4.2 sugar Sugarbeet Seed Sugar Sugarbeet seeds shall meet the minimum requirements of Table 2. Table 2 sugar Sugarbeet Seed quality requirements Seeds category Single-grain rate /% not lower than Germination rate/% not lower than Cleaness/% not lower than Triploid rate /% not lower than Moisture /% not higher than Particle size/mm Stock 95 80 98.0 - 12.0 $\geq$

4 Quality requirements

4.1 polyembryonic sugar beet seeds Polyembryonic sugar beet seeds shall meet the