

U.S. Standards

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Subpart J -- United States Standards for Soybeans

Contents

Terms Defined	2
Principles Governing the Application of Standards	3
Grades, Grade Requirements, and Grade Designations	3
Special Grades and Special Grade Requirements	4

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Terms Defined

§ 810.1601 Definition of soybeans.

Grain that consists of 50 percent or more of whole or broken soybeans (*Glycine max* (L.) Merr.) that will not pass through an 8/64 round-hole sieve and not more than 10.0 percent of other grains for which standards have been established under the United States Grain Standards Act.

§ 810.1602 Definition of other terms.

(a) *Classes*. There are two classes of soybeans: Yellow soybeans and Mixed soybeans.

(1) *Yellow soybeans*. Soybeans that have yellow or green seed coats and which in cross section, are yellow or have a yellow tinge, and may include not more than 10.0 percent of soybeans of other colors.

(2) *Mixed soybeans*. Soybeans that do not meet the requirements of the class Yellow soybeans.

(b) *Damaged kernels*. Soybeans and pieces of soybeans that are badly ground-damaged, badly weather-damaged, diseased, frost-damaged, germ-damaged, heat-damaged, insectbored, mold-damaged, sprout-damaged, stinkbug-stung, or otherwise materially damaged. Stinkbug-stung kernels are considered damaged kernels at the rate of one-fourth of the actual percentage of the stung kernels.

(c) *Foreign material*. All matter that passes through an 8/64 round-hole sieve and all matter other than soybeans remaining in the sieved sample after sieving according to procedures prescribed in FGIS instructions.

(d) *Heat-damaged kernels*. Soybeans and pieces of soybeans that are materially discolored and damaged by heat.

(e) *Purple mottled or stained*. Soybeans that are discolored by the growth of a fungus; or by dirt; or by a dirt-like substance(s) including nontoxic inoculants; or by other nontoxic substances.

(f) *Sieve. 8/64 round-hole sieve*. A metal sieve 0.032 inch thick perforated with round holes 0.125 (8/64) inch in diameter.

(g) *Soybeans of other colors*. Soybeans that have green, black, brown, or bicolored seed coats. Soybeans that have green seed coats will also be green in cross section. Bicolored soybeans will have seed coats of two colors, one of which is brown or black, and the brown or black color covers 50 percent of the seed coats. The hilum of a soybean is not considered a part of the seed coat for this determination.

(h) *Splits*. Soybeans with more than one-fourth of the bean removed and that are not damaged.

Principles Governing the Application of Standards

§ 810.1603 Basis of determination.

Each determination of class, heat-damaged kernels, damaged kernels, splits, and soybeans of other colors is made on the basis of the grain when free from foreign material. Other determinations not specifically provided for under the general provisions are made on the basis of the grain as a whole.

Grades, Grade Requirements, and Grade Designations

§ 810.1604 Grades and grade requirements for soybeans

Grading factors	Grades U. S. Nos.			
	1	2	3	4
Maximum percent limits of				
Damaged kernels:				
Heat (part of total)	0.2	0.5	1.0	3.0
Total	2.0	3.0	5.0	8.0
Foreign material	1.0	2.0	3.0	5.0
Splits	10.0	20.0	30.0	40.0
Soybeans of other colors ¹	1.0	2.0	5.0	10.0
Maximum count limits of				
Other materials:				
Animal filth	9	9	9	9
Castor beans	1	1	1	1
Crotalaria seeds	2	2	2	2
Glass	0	0	0	0
Stones ²	3	3	3	3
Unknown foreign substance	3	3	3	3
Total ³	10	10	10	10
<p>U.S. Sample grade are soybeans that:</p> <p>(a) Do not meet the requirements for U.S. Nos. 1, 2, 3, or 4; or</p> <p>(b) Have a musty, sour, or commercially objectionable foreign odor (except garlic odor); or</p> <p>(c) Are heating or otherwise of distinctly low quality.</p>				
<p>¹ Disregard for Mixed soybeans.</p> <p>² In addition to the maximum count limit, stones must exceed 0.1 percent of the sample weight.</p> <p>³ Includes any combination of animal filth, castor beans, crotalaria seeds, glass, stones, and unknown foreign substances. The weight of stones is not applicable for total other material.</p>				

Special Grades and Special Grade Requirements

§ 810.1605 Special grades and special grade requirements.

(a) *Garlicky soybeans.* Soybeans that contain five or more green garlic bulblets or an equivalent quantity of dry or partly dry bulblets in a 1,000-gram portion.

(b) *Purple mottled or stained.* Soybeans with pink or purple seed coats as determined on a portion of approximately 400 grams with the use of an FGIS Interpretive Line Photograph.