

U.S. Standards

May 2014

Subpart M -- United States Standards for Wheat

Contents

Terms Defined	2
Principles Governing the Application of Standards	4
Grades and Grade Requirements	5
Special Grades and Special Grade Requirements	6

The U.S. Department of Agriculture (USDA) prohibits discrimination in its programs on the basis of race, color, national origin, sex, religion, age, disability, political beliefs, and marital or familial status. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternate means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at (202) 720-2600 (voice and TDD).

To file a complaint, write to the USDA, Office of Civil Rights, Room 326-W, 1400 Independence Avenue, SW, Washington, DC 20250-9410, or call (202) 720-5964 (voice and TDD). USDA is an equal employment opportunity employer.

Terms Defined

§ 810.2201 Definition of wheat.

Grain that, before the removal of dockage, consists of 50 percent or more common wheat (*Triticum aestivum* L.), club wheat (*T. compactum* Host.), and durum wheat (*T. durum* Desf.) and not more than 10 percent of other grains for which standards have been established under the United States Grain Standards Act and that, after the removal of the dockage, contains 50 percent or more of whole kernels of one or more of these wheats.

§ 810.2202 Definition of other terms.

(a) *Classes*. There are eight classes for wheat: Durum wheat, Hard Red Spring wheat, Hard Red Winter wheat, Soft Red Winter wheat, Hard White wheat, Soft White wheat, Unclassed wheat, and Mixed wheat.

(1) *Durum wheat*. All varieties of white (amber) durum wheat. This class is divided into the following three subclasses:

(i) *Hard Amber Durum wheat*. Durum wheat with 75 percent or more of hard and vitreous kernels of amber color.

(ii) *Amber Durum wheat*. Durum wheat with 60 percent or more but less than 75 percent of hard and vitreous kernels of amber color.

(iii) *Durum wheat*. Durum wheat with less than 60 percent of hard and vitreous kernels of amber color.

(2) *Hard Red Spring wheat*. All varieties of Hard Red Spring wheat. This class shall be divided into the following three subclasses:

(i) *Dark Northern Spring wheat*. Hard Red Spring wheat with 75 percent or more of dark, hard, and vitreous kernels.

(ii) *Northern Spring wheat*. Hard Red Spring wheat with 25 percent or more but less than 75 percent of dark, hard, and vitreous kernels.

(iii) *Red Spring wheat*. Hard Red Spring wheat with less than 25 percent of dark, hard, and vitreous kernels.

(3) *Hard Red Winter wheat*. All varieties of Hard Red Winter wheat. There are no subclasses in this class.

(4) *Soft Red Winter wheat*. All varieties of Soft Red Winter wheat. There are no subclasses in this class.

(5) *Hard White wheat*. All hard endosperm white wheat varieties. There are no subclasses in this class.

(6) *Soft White wheat*. All soft endosperm white wheat varieties. This class is divided into the following three subclasses:

(i) *Soft White wheat*. Soft endosperm white wheat varieties which contain not more than 10 percent of white club wheat.

(ii) *White Club wheat*. Soft endosperm white club wheat varieties containing not more than 10 percent of other soft white wheats.

(iii) *Western White wheat*. Soft White wheat containing more than 10 percent of white club wheat and more than 10 percent of other soft white wheats.

(7) *Unclassed wheat*. Any variety of wheat that is not classifiable under other criteria provided in the wheat standards. There are no subclasses in this class. This class includes any wheat which is other than red or white in color.

(8) *Mixed wheat*. Any mixture of wheat that consists of less than 90 percent of one class and more than 10 percent of one other class, or a combination of classes that meet the definition of wheat.

(b) *Contrasting classes*. Contrasting classes are:

(1) Durum wheat, Soft White wheat, and Unclassed wheat in the classes Hard Red Spring wheat and Hard Red Winter wheat.

(2) Hard Red Spring wheat, Hard Red Winter wheat, Hard White wheat, Soft Red Winter wheat, Soft White wheat, and Unclassed wheat in the class Durum wheat.

(3) Durum wheat and Unclassed wheat in the class Soft Red Winter wheat.

(4) Durum wheat, Soft Red Winter wheat, and Unclassed wheat, in the classes Hard White wheat and Soft White wheat.

(c) *Damaged kernels*. Kernels, pieces of wheat kernels, and other grains that are badly ground-damaged, badly weather-damaged, diseased, frost-damaged, germ-damaged, heat-damaged, insect-bored, mold-damaged, sprout-damaged, or otherwise materially damaged.

(d) *Defects*. Damaged kernels, foreign material, and shrunken and broken kernels. The sum of these three factors may not exceed the limit for the factor defects for each numerical grade.

(e) *Dockage*. All matter other than wheat that can be removed from the original sample by use of an approved device according to procedures prescribed in FGIS instructions. Also, underdeveloped, shriveled, and small pieces of wheat kernels removed in properly separating the material other than wheat and that cannot be recovered by properly rescreening or recleaning.

(f) *Foreign material*. All matter other than wheat that remains in the sample after the removal of dockage and shrunken and broken kernels.

(g) *Heat-damaged kernels*. Kernels, pieces of wheat kernels, and other grains that are materially discolored and damaged by heat which remain in the sample after the removal of dockage and shrunken and broken kernels.

(h) *Other grains*. Barley, corn, cultivated buckwheat, einkorn, emmer, flaxseed, guar, hull-less barley, nongrain sorghum, oats, Polish wheat, popcorn, poulard wheat, rice, rye, safflower, sorghum, soybeans, spelt, sunflower seed, sweet corn, triticale, and wild oats.

(i) *Shrunken and broken kernels*. All matter that passes through a 0.064 x 3/8 oblong-hole sieve after sieving according to procedures prescribed in the FGIS instructions.

(j) *Sieve*. 0.064 x 3/8 oblong-hole sieve. A metal sieve 0.032 inch thick with oblong perforations 0.064 inch by 0.375 (3/8) inch.

Principles Governing the Application of Standards

§ 810.2203 Basis of determination.

Each determination of heat-damaged kernels, damaged kernels, foreign material, wheat of other classes, contrasting classes, and subclasses is made on the basis of the grain when free from dockage and shrunken and broken kernels. Other determinations not specifically provided for under the general provisions are made on the basis of the grain when free from dockage, except the determination of odor is made on either the basis of the grain as a whole or the grain when free from dockage.

Grades and Grade Requirements

§ 810.2204 Grades and grade requirements for wheat.

(a) Grades and grade requirements for all classes of wheat, except Mixed wheat.

Grading factors	Grades U.S. Nos.				
	1	2	3	4	5
Minimum pound limits of:					
Test weight per bushel					
Hard Red Spring wheat or White Club wheat	58.0	57.0	55.0	53.0	50.0
All other classes and subclasses	60.0	58.0	56.0	54.0	51.0
Maximum percent limits of:					
Defects:					
Damaged kernels					
Heat (part of total)	0.2	0.2	0.5	1.0	3.0
Total	2.0	4.0	7.0	10.0	15.0
Foreign material	0.4	0.7	1.3	3.0	5.0
Shrunken and broken kernels	3.0	5.0	8.0	12.0	20.0
Total ¹	3.0	5.0	8.0	12.0	20.0
Wheat of other classes: ²					
Contrasting classes	1.0	2.0	3.0	10.0	10.0
Total ³	3.0	5.0	10.0	10.0	10.0
Stones	0.1	0.1	0.1	0.1	0.1
Maximum count limits of:					
Other material in one kilogram:					
Animal filth	1	1	1	1	1
Castor beans	1	1	1	1	1
Crotalaria seeds	2	2	2	2	2
Glass	0	0	0	0	0
Stones	3	3	3	3	3
Unknown foreign substances	3	3	3	3	3
Total ⁴	4	4	4	4	4
Insect-damaged kernels in 100 grams	31	31	31	31	31
<p>U.S. Sample grade is Wheat that:</p> <p>(a) Does not meet the requirements for U.S. Nos. 1, 2, 3, 4, or 5; or</p> <p>(b) Has a musty, sour, or commercially objectionable foreign odor (except smut or garlic odor) or</p> <p>(c) Is heating or of distinctly low quality.</p> <p>¹ Includes damaged kernels (total), foreign material, shrunken and broken kernels.</p> <p>² Unclassed wheat of any grade may contain not more than 10.0 percent of wheat of other classes.</p> <p>³ Includes contrasting classes.</p> <p>⁴ Includes any combination of animal filth, castor beans, crotalaria seeds, glass, stones, or unknown foreign substance.</p>					

(b) Grades and grade requirements for Mixed wheat. Mixed wheat is graded according to the U.S. numerical and U.S. Sample grade requirements of the class of wheat that predominates in the mixture, except that the factor wheat of other classes is disregarded.

Special Grades and Special Grade Requirements

§ 810.2205 Special grades and special grade requirements.

- (a) *Ergoty wheat*. Wheat that contains more than 0.05 percent of ergot.
- (b) *Garlicky wheat*. Wheat that contains in a 1,000 gram portion more than two green garlic bulblets or an equivalent quantity of dry or partly dry bulblets.
- (c) *Light smutty wheat*. Wheat that has an unmistakable odor of smut, or which contains, in a 250-gram portion, smut balls, portions of smut balls, or spores of smut in excess of a quantity equal to 5 smut balls, but not in excess of a quantity equal to 30 smut balls of average size.
- (d) *Smutty wheat*. Wheat that contains, in a 250-gram portion, smut balls, portions of smut balls, or spores of smut in excess of a quantity equal to 30 smut balls of average size.
- (e) *Treated wheat*. Wheat that has been scoured, limed, washed, sulfured, or treated in such a manner that the true quality is not reflected by either the numerical grades or the U.S. Sample grade designation alone.