
Rules of
Department of Agriculture
Division 90—Weights and Measures
Chapter 36—Egg Quality Program

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**Title 2—DEPARTMENT OF
AGRICULTURE**
Division 90—Weights and Measures
Chapter 36—Egg Quality Program

**2 CSR 90-36.010 Enforcement of Missouri
Egg Laws**

PURPOSE: Under Missouri Egg Law, this rule establishes the regulations governing the licensing, selling, trafficking in, delivering, transporting, marketing, processing and distribution of eggs. This rule is intended to insure that the consumer will be able to buy eggs that meet the proper standards.

(1) The Department of Agriculture utilizes the following standards, grades and weight classes for inspection of shell eggs.

(A) General Terms.

1. Denatured Eggs—Eggs unfit for human food may be sold or delivered to any dealer as inedible eggs, provided the shells of such eggs have been completely broken or crushed and the mixture of shell and egg meats has been denatured with any denaturing agent approved by the director of the Department of Agriculture and used in sufficient quantities to be easily detected by sight or smell.

2. Loss—An egg that is inedible, cooked, frozen, contaminated, musty, or moldy, or an egg that contains a large blood spot, large meat spot, bloody white, green white, rot, sour eggs, stuck yolk, blood ring, embryo chick (at or beyond the blood ring state), free yolk in the white, or other foreign material, or an egg that is adulterated as such term is defined pursuant to the Federal Food, Drug, and Cosmetic Act.

3. Leaker—An individual egg that has a crack or break in the shell and shell membranes to the extent that the egg contents are exuding or free to exude through the shell.

4. Check—An individual egg that has a broken shell or crack in the shell but with its shell membranes intact and its contents do not leak. A “check” is considered to be lower in quality than a “dirty.”

(B) Terms Descriptive of Shell.

1. Clean—A shell that is free from foreign material and from stains or discolorations that are readily visible. An egg may be considered clean if it has only very small specks, stains, or cage marks, if such specks, stains, or cage marks are not of sufficient number or intensity to detract from the generally clean appearance of the egg. Eggs that show traces of processing oil on the shell are considered clean unless otherwise soiled.

2. Dirty—A shell that is unbroken and that has dirt or foreign material adhering to

its surface, which has prominent stains, or moderate stains covering more than one-thirty second (1/32) of the shell surface if localized, or one-sixteenth (1/16) of the shell surface if scattered.

3. Practically Normal (AA or A Quality)—A shell that approximates the usual shape and that is sound and is free from thin spots. Ridges and rough areas that do not materially affect the shape and strength of the shell are permitted.

4. Abnormal (B Quality)—A shell that may be somewhat unusual or decidedly misshapen or faulty in soundness or strength or that may show pronounced ridges or thin spots.

(C) Terms Descriptive of the Air Cell.

1. Depth of the air cell (air space between shell membranes, normally in the large end of the egg)—The depth of the air cell is the distance from its top to its bottom when the egg is held air cell upward.

2. Free air cell—An air cell that moves freely toward the uppermost point in the egg as the egg is rotated slowly.

3. Bubbly air cell—A ruptured air cell resulting in one (1) or more small separate air bubbles usually floating beneath the main air cell.

(D) Terms Descriptive of the White.

1. Clear—A white that is free from discolorations or from any foreign bodies floating in it. (Prominent Chalzas should not be confused with foreign bodies such as spots or blood clots.)

2. Firm (AA Quality)—A white that is sufficiently thick or viscous to prevent the yolk outline from being more than slightly defined or indistinctly indicated when the egg is twirled. With respect to a broken-out egg, a firm white has a Haugh unit value of seventy-two degrees Fahrenheit (72°F) or higher when measured at a temperature between forty-five degrees Fahrenheit (45°F) and sixty degrees Fahrenheit (60°F).

3. Reasonably firm (A Quality)—A white that is somewhat less thick or viscous than a firm white. A reasonably firm white permits the yolk to approach the shell more closely which results in a fairly well defined yolk outline when the egg is twirled. With respect to a broken-out egg, a reasonably firm white has a Haugh unit value of sixty degrees Fahrenheit (60°F) up to, but not including, seventy-two degrees Fahrenheit (72°F) when measured at a temperature between forty-five degrees Fahrenheit (45°F) and sixty degrees Fahrenheit (60°F).

4. Weak and watery (B Quality)—A white that is weak, thin, and generally lacking in viscosity. A weak and watery white permits the yolk to approach the shell close-

ly, thus causing the yolk outline to appear plainly visible and dark when the egg is twirled. With respect to a broken-out egg, a weak and watery white has a Haugh unit value lower than sixty degrees Fahrenheit (60°F) when measured at a temperature between forty-five degrees Fahrenheit (45°F) and sixty degrees Fahrenheit (60°F).

5. Blood spots or meat spots—Small blood spots or meat spots (aggregating not more than one-eighth inch (1/8") in diameter) may be classified as B Quality. If larger, or showing diffusion of blood into the white surrounding a blood spot, the egg shall be classified as Loss. Blood spots shall not be due to germ development. They may be on the yolk or in the white. Meat spots may be blood spots which have lost their characteristic red color or tissue from the reproductive organs.

6. Bloody white—An egg which has blood diffused through the white. Eggs with bloody whites are classed as loss. Eggs with blood spots which show a slight diffusion into the white around the localized spot are not to be classed as bloody whites.

(E) Terms Descriptive of the Yolk.

1. Outline slightly defined (AA Quality)—A yolk outline that is indistinctly indicated and appears to blend into the surrounding white as the egg is twirled.

2. Outline fairly well defined (A Quality)—A yolk outline that is discernible but not clearly outlined as the egg is twirled.

3. Outline plainly visible (B Quality)—A yolk outline that is clearly visible as a dark shadow when the egg is twirled.

4. Enlarged and flattened (B Quality)—A yolk in which the yolk membranes and tissues have weakened and/or moisture has been absorbed from the white to such an extent that the yolk appears definitely enlarged and flat.

5. Practically free from defects (AA or A Quality)—A yolk that shows no germ development but may show other very slight defects on its surface.

6. Serious defects (B Quality)—A yolk that shows well developed spots or areas and other serious defects, such as olive yolks, which do not render the egg inedible.

7. Clearly visible germ development (B Quality)—A development of the germ spot on the yolk of a fertile egg that has progressed to a point where it is plainly visible as a definite circular area or spot with no blood in evidence.

8. Blood due to germ development—Blood caused by development of the germ in a fertile egg to the point where it is visible as definite lines or as a blood ring. Such an egg is classified as inedible.

(F) Classifying Eggs by Weight and Grade.

1. Eggs shall be classified by weight into the classes of Jumbo, Extra Large, Large, Medium, Small, and Peewee. Egg scales for accurately weighing individual eggs in ounces per dozen shall be a part of the equipment in the egg candling room.

2. Classes and weights for consumer grades for shell eggs are:

Size or weight class	Minimum net weight per dozen (ounces)	Minimum net weight 30 per dozen (pounds)	Minimum net weight for individual eggs at rate per dozen (ounces)
Jumbo	30	56	29
Extra Large	27	50 1/2	26
Large	24	45	23
Medium	21	39 1/2	20
Small	18	34	17
Peewee	15	28	- -

3. Interior egg quality specifications for these standards are based on the apparent condition of the interior contents of the egg as it is twirled before the candling light.

4. Inspectors will determine grades of eggs (AA, A, and B) by candling with a suitable single hole candling light.

(G) Grades.

1. U.S. Grade AA.

A. U.S. Consumer Grade AA (at origin) shall consist of eggs which are at least eighty-seven percent (87%) AA Quality. The maximum tolerance of thirteen percent (13%) which may be below AA Quality may consist of A or B Quality in any combination, except that within the tolerance for B Quality not more than one percent (1%) may be B Quality due to air cells over three-eighths inch (3/8"), blood spots (aggregating not more than one-eighth inch (1/8") in diameter), or serious yolk defects. Not more than five percent (5%) (seven percent (7%) for Jumbo size) Checks are permitted and not more than one-half percent (0.50%) Leakers, Dirties, or Loss (due to meat or blood spots) in any combination, except that such Loss may not exceed three-tenths percent (0.30%). Other types of Loss are not permitted.

B. U.S. Consumer Grade AA (destination) shall consist of eggs which are at least seventy-two percent (72%) AA Quality. The remaining tolerance of twenty-eight percent (28%) shall consist of at least ten percent (10%) A Quality and the remainder shall be B Quality, except that within the tolerance for B Quality not more than one percent (1%) may be B Quality due to air cells over three-eighths inch (3/8"), blood spots (aggregating not more than one-eighth inch (1/8") in

diameter), or serious yolk defects. Not more than seven percent (7%) (nine percent (9%) for Jumbo size) Checks are permitted and not more than one percent (1%) Leakers, Dirties, or Loss (due to meat or blood spots) in any combination, except that such Loss may not exceed three-tenths percent (0.30%). Other types of Loss are not permitted.

2. U.S. Grade A.

A. U.S. Consumer Grade A (at origin) shall consist of eggs which are at least eighty-seven percent (87%) A Quality or better. Within the maximum tolerance of thirteen percent (13%) which may be below A Quality, not more than one percent (1%) may be B Quality due to air cells over three-eighths inch (3/8"), blood spots (aggregating not more than one-eighth inch (1/8") in diameter), or serious yolk defects. Not more than five percent (5%) (seven percent (7%) for Jumbo size) Checks are permitted and not more than one-half percent (0.50%) Leakers, Dirties, or Loss (due to meat or blood spots) in any combination, except that such Loss may not exceed three-tenths percent (0.30%). Other types of Loss are not permitted.

B. U.S. Consumer Grade A (destination) shall consist of eggs which are at least eighty-two percent (82%) A Quality or better. Within the maximum tolerance of eighteen percent (18%) which may be below A Quality, not more than one percent (1%) may be B Quality due to air cells over three-eighths inch (3/8"), blood spots (aggregating not more than one-eighth inch (1/8") in diameter), or serious yolk defects. Not more than seven percent (7%) (nine percent (9%) for Jumbo size) Checks are permitted and not more than one percent (1%) Leakers, Dirties,

or Loss (due to meat or blood spots) in any combination, except that such Loss may not exceed three-tenths percent (0.30%). Other types of Loss are not permitted.

3. U.S. Grade B.

A. U.S. Consumer Grade B (at origin) shall consist of eggs which are at least ninety percent (90%) B Quality or better, not more than ten percent (10%) may be Checks and not more than one-half percent (0.50%) Leakers, Dirties, or Loss (due to meat or blood spots) in any combination, except that such Loss may not exceed three-tenths percent (0.30%). Other types of Loss are not permitted.

B. U.S. Consumer Grade B (at destination) shall consist of eggs which are at least ninety percent (90%) B Quality or better, not more than ten percent (10%) may be Checks and not more than one percent (1%) Leakers, Dirties, or Loss (due to meat or blood spots) in any combination, except that such Loss may not exceed three-tenths percent (0.30%). Other types of Loss are not permitted.

4. Additional tolerances:

A. In lots of two (2) or more cases:

(I) For Grade AA—No individual case may exceed ten percent (10%) less AA Quality eggs than the minimum permitted for the lot average.

(II) For Grade A—No individual case may exceed ten percent (10%) less A Quality eggs than the minimum permitted for the lot average.

(III) For Grade B—No individual case may exceed ten percent (10%) less B Quality eggs than the minimum permitted for the lot average.

B. For Grades AA, A, and B, no lot shall be rejected or downgraded due to the quality of a single egg except for Loss other than blood or meat spots.

Table I—Summary of U.S. Consumer Grades for Shell Eggs

U.S. Consumer Grade (origin)	Quality required ¹	Tolerance permitted ²	
		Percent	Quality
Grade AA	87 percent AA	Up to 13 Not over 5	A or B ⁵ Checks ⁶
Grade A	87 percent A or better	Up to 13 Not over 5	B ⁵ Checks ⁶
Grade B	90 percent B or better	Not over 10	Checks
U.S. Consumer Grade (destination)	Quality Required ¹	Tolerance permitted ³	
		Percent	Quality
Grade AA	72 percent AA	Up to 28 ⁴ Not over 7	A or B ⁵ Checks ⁶
Grade A	82 percent A or better	Up to 18 Not over 7	B ⁵ Checks ⁶
Grade B	90 percent B or better	Not over 10	Checks

¹ In lots of two or more cases, see Table II of this section for tolerances for an individual case within a lot.

² For the U.S. Consumer grades (at origin), a tolerance of 0.50 percent Leakers, Dirties, or Loss (due to meat or blood spots) in any combination is permitted, except that such Loss may not exceed 0.30 percent. Other types of Loss are not permitted.

³ For the U.S. Consumer grades (destination), a tolerance of 1 percent Leakers, Dirties, or Loss (due to meat or blood spots) in any combination is permitted, except that such Loss may not exceed 0.30 percent. Other types of Loss are not permitted.

⁴ For U.S. Grade AA at destination, at least 10 percent must be A quality or better.

⁵ For U.S. Grade AA and A at origin and destination within the tolerances permitted for B quality, not more than 1 percent may be B quality due to air cells over 3/8 inch, blood spots (aggregating not more than 1/8 inch in diameter), or serious yolk defects.

⁶ For U.S. Grades AA and A Jumbo size eggs, the tolerance for Checks at origin and destination is 7 percent and 9 percent, respectively.

Table II—Tolerance for Individual Case Within a Lot

U.S. Consumer Grade	Case Quality	Origin (percent)	Destination (percent)
Grade AA	AA (min)	77	62
	A or B	13	28
	Check (max)	10	10
Grade A	A (min)	77	72
	B	13	18
	Check (max)	10	10
Grade B	B (min)	80	80
	Check (max)	20	20

SUMMARY OF U.S. STANDARDS FOR QUALITY OF INDIVIDUAL SHELL EGGS
Specifications for Each Quality Factor

Quality Factor	AA Quality	A Quality	B Quality
Shell	Clean Unbroken Practically normal	Clean Unbroken Practically normal	Clean to slightly stained* Unbroken Abnormal
Air Cell	1/8 inch or less in depth Unlimited movement and free or bubbly	3/16 inch or less in depth Unlimited movement and free or bubbly	Over 3/16 inch in depth Unlimited movement and free or bubbly
White	Clear Firm	Clear Reasonably firm	Weak and Watery Small blood and meat spots present**
Yolk	Outline slightly defined Practically free from defects	Outline fairly well defined Practically free from defects	Outline plainly visible Enlarged and flattened Clearly visible germ development but not blood Other serious defects
For eggs with dirty or broken shells, the standards of quality provide two additional qualities. They are:			
Dirty	Checks		
Unbroken. Adhering dirt or foreign material, prominent stains, moderate stained areas in excess of B Quality.	Broken or cracked shell but membranes intact, not leaking.***		
* Moderately stained areas permitted (1/32 of surface in localized, or 1/16 if scattered). ** If they are small (aggregating not more than 1/8 inch in diameter). *** Leaker has broken or cracked shell membranes, and contents leaking or free to leak.			

(H) Basis of Grading Service (Sampling).

1. Any grading service in accordance with the regulations in this part shall be for class, quality, quantity, or condition or any combination thereof. Grading service with respect to the determination of the quality of products shall be on the basis of the United States Standards, Grades, and Weights Classes. However, grading service may be rendered with respect to products which are bought and sold on the basis of institutional contract specifications or specifications of the applicant and such service, when approved by the administrator, shall be rendered on the basis of such specifications. The supervision of packaging shall be in accordance with such instructions as may be approved or issued by the administrator.

2. Whenever grading service is performed on a representative sample basis, such sample shall be drawn and consist of not less than the minimum number of cases as indicated in the following table. A minimum of one hundred (100) eggs shall be examined per sample case. For lots which consist of less than one (1) case, a minimum of fifty (50) eggs shall be examined. If the lot consists of less than fifty (50) eggs, all eggs will be examined.

Minimum Number of Cases Comprising a Representative Sample	
Cases in Lot	Cases in Sample
1 case	1
2 to 10, inclusive	2
11 to 25, inclusive	3
26 to 50, inclusive	4
51 to 100, inclusive	5
101 to 200, inclusive	8
201 to 300, inclusive	11
301 to 400, inclusive	13
401 to 500, inclusive	14
501 to 600, inclusive	16

For each additional fifty (50) cases, or fraction thereof, in excess of six hundred (600) cases, one (1) additional case shall be included in the sample.

(I) Identification of Graded Eggs in Containers.

1. Eggs packaged in containers by licensed dealers for supply or sale to retailers must be identified on each container with either the name and address (city and state), or approved identification number of the dealer under whose authority the eggs were packed and the day, month and year when

said eggs were graded. Either a normal dating procedure or a numerical code based on the day of the year may be used. (Example: July 1, 1966, or 182-6; July 2, 1966, or 183-6).

2. The identification shall be stamped or printed in bold legible type upon each container with letters no less than three-sixteenths inch (3/16") in height. The term container includes box, basket, carton, sack, bag, case or other receptacle.

(J) Identification of Graded Eggs in Bulk. All eggs in bulk, packed in cases, graded for retail sale, must be accompanied by grading certificates bearing the name and address (city and state), or approved identification number of the dealer under whose authority the eggs were packed and the date when said eggs were graded. The identification may be stamped or printed in bold, legible type with letters no less than three-sixteenths inch (3/16") in height upon a grading certificate of strong paper approximately five inches (5") long and three inches (3") wide which shall be placed under the top flat above the first layer of eggs, or said information may be stamped or printed on the outside of the egg case.

(2) Advertising. All advertising including newspapers, handbills, radio and window signs shall carry the full, correct and unabbreviated designation of size and quality as provided by law. Persons selling eggs from door to door, if not entirely of their own production must have the container properly labeled as to size and quality.

(3) Records. All persons licensed under the provisions of this rule shall keep on file for a period of two (2) years a true and complete record of all eggs purchased or sold with the following exceptions: no record need be kept of the name and address of the person from whom the eggs are bought when such person is the original producer of the eggs and the quantity purchased is less than thirty (30) dozen; no record need be kept of eggs sold at retail; records need not show size and quality of eggs bought from original producers or exchanged between wholesalers. With the previous exceptions, this record will show the name and address of the person, firm or corporation from whom eggs were purchased and to whom sold. Such record to show the size and quality of such eggs in each transaction after they have been graded and also the number of dozens or cases included in such transaction, and the dates thereof.

(4) Stop Sale Notice. The director of the Department of Agriculture, or duly autho-

rized agents, upon determining that the provisions of this rule, or the rules promulgated for its enforcement, are being violated may place "Stop Sale Notice" on all eggs being sold or offered for sale in violation of the provisions of this rule or the regulations thereunder and shall report the circumstances to the director of the Department of Agriculture for action. Eggs which have had "Stop Sale Notice" applied shall be recandled and regraded for size and quality within forty-eight (48) hours from the time such "Stop Sale Notice" was applied. Upon failure to bring the eggs into compliance with the rule, the director of the Department of Agriculture will take necessary steps to cause the eggs to be condemned, denatured, processed, destroyed or otherwise disposed of by court action.

(5) Maximum Temperature for Eggs Held for Retail Sale. Shell eggs that are to be officially identified as U.S. Grade AA, A, or B shall be placed under refrigeration at an ambient temperature no greater than forty-five degrees Fahrenheit (45°F) seven and two-tenths degrees Centigrade (7.2°C) promptly after packaging. Shell eggs officially identified as U.S. Grade AA, A, or B, when shipped between official plants, shall be transported at an ambient temperature no greater than forty-five degrees Fahrenheit (45°F) seven and two-tenths degrees Centigrade (7.2°C).

AUTHORITY: section 196.354, RSMo 2000. Original rule filed April 27, 1964, effective May 7, 1964. Amended: Filed April 1, 1966, effective April 11, 1966. Emergency rescission filed Dec. 10, 1981, effective Jan. 1, 1982, expired March 1, 1982. Rescinded: Filed Dec. 10, 1981, effective Jan. 1, 1982. Emergency rule filed Dec. 10, 1981, effective Jan. 1, 1982, expired March 1, 1982. Readopted: Filed Dec. 10, 1981, effective March 11, 1982. Rescinded and readopted: Filed Nov. 4, 2002, effective May 30, 2003.*

**Original authority: 196.354, RSMo 1955, amended 1995.*

2 CSR 90-36.020 Repackaging of Eggs at Retail Level

PURPOSE: This rule establishes requirements for repackaging of shell eggs at the retail level.

(1) It shall be unlawful for any handler or retailer to pack eggs into consumer-size containers other than during the original candling

and grading operations except under the following stipulations:

(A) The retail location offering the eggs for sale shall make a written request and obtain written permission from the Department of Agriculture to repackage eggs. The request must include the name and location of the store. If there are multiple store locations, only one (1) letter will be required with all store locations listed in the letter;

(B) A retailer shall only repackage clean and sound shell eggs which originate from properly labeled consumer-size containers that have been damaged or their contents damaged. These eggs shall be placed in new, clean containers that are properly labeled. Eggs or the original egg cartons must not be washed or cleaned in any way for use because of the many possibilities of bacterial introduction. All original egg cartons must be destroyed immediately upon removal of eggs. The repacked eggs shall meet USDA standards for consumer Grade B eggs. Eggs in the repacked consumer-size container shall be no less than medium in size;

(C) The consumer-size egg container which contains eggs that have been repacked shall be labeled with a statement declaring that the eggs in such containers were repacked by the retail store offering such eggs for sale, name of the retail store, its location and the oldest candling date which appeared on the consumer-size egg container or containers from which the repacked eggs originated. The candling date may be handwritten or stamped in ink. The repackaged egg container shall also be labeled "Grade B Medium" and contain a statement indicating that some of the eggs may be larger than indicated on the carton;

(D) The labeling on the consumer-size container used for the repackaged eggs shall meet the type and lettering size requirements as required on the original consumer-size containers. The additional labeling information required on repacked egg containers shall be in bold face type with lettering no less than one-eighth inch (1/8") in height;

(E) Once eggs have been repacked they are the responsibility of the retailer who must accept loss if eggs are classified as stop sale. Eggs under an official stop sale by the Department of Agriculture must be sent back to the dealer for regrading regardless of who is responsible for the eggs. Retailers are not grading stations. Only licensed dealers have the authority to grade and pack shell eggs; and

(F) The Department of Agriculture shall grant permission to repackage eggs at the retail level when a written request is made by a retailer. This request will be automatically

renewed on an annual basis providing the retailer has not violated any segment of the repackaging rules. A retailer violating the repackaging rules shall be subject to penalties, as provided by section 196.361, RSMo 1986 of the Missouri Egg Law, and upon having two (2) or more violations of 2 CSR 90-36.020 during any twelve (12)-month period the retailer's permission to repack eggs shall be revoked for a period not to exceed ninety (90) days. Once a retailer's permission to repackage eggs has been revoked twice, the retailer will be subject to permanent suspension of permission to repackage eggs, at the discretion of the Department of Agriculture. A retailer who has received written permission from the Department of Agriculture to repackage eggs shall post such license in a conspicuous location in the place of business to which it applies.

*AUTHORITY: section 196.354, RSMo 1986. * Original rule filed April 12, 1985, effective June 27, 1985.*

**Original authority: 196.354, RSMo 1955, amended 1995.*