

U.S. Standards, Grades, and Weight Classes for Shell Eggs

The U.S. standards, grades, and weight classes for individual shell eggs are applicable only to eggs of the domesticated chicken that are in the shell.

U.S. Standards for Quality of Individual Shell Eggs

(Based on Canded Appearance)

The standards described below are summarized in table 2.

AA quality — The shell must be clean, unbroken, and practically normal. The air cell must not exceed one-eighth inch in depth, may show unlimited movement, and may be free or bubbly. The white must be clear and firm so that the yolk is only slightly defined when the egg is twirled before the candling light. The yolk must be practically free from apparent defects.

A quality — The shell must be clean, unbroken, and practically normal. The air cell must not exceed three-sixteenths inch in depth, may show unlimited movement, and may be free or

Table 2. — Summary of U.S. Standards for quality of individual shell eggs

Quality Factor	Specifications for each 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.	Clear.	Weak and watery.
	Firm.	Reasonably firm.	Small blood and meat spots present.**
Yolk	Outline——slightly defined.	Outline——fairly well defined.	Outline——plainly visible.
	Practically free from defects.	Practically free from defects.	Enlarged and flattened. Clearly visible germ development but no blood. Other serious defects.

*Moderately stained areas permitted (1/32 of surface if localized, or 1/16 if scattered).

**If they are small (aggregating not more than 1/8 inch in diameter).

For eggs with dirty or broken shells, the standards of quality provide two additional qualities. These are:

Dirty	Check
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.***

*** Leaker has broken or cracked shell and membranes, and contents leaking or free to leak.

bubbly. The white must be clear and at least reasonably firm so that the yolk outline is only fairly well defined when the egg is twirled before the candling light. The yolk must be practically free from apparent defects.

B quality — The shell must be unbroken, may be abnormal, and may have slightly stained areas. Moderately stained areas are permitted if they do not cover more than one-thirty-second of the shell surface if localized, or one-sixteenth of the shell surface if scattered. Eggs having shells with prominent stains or adhering dirt are not permitted. The air cell may be over three-sixteenths inch in depth, may show unlimited movement, and may be free or bubbly. The white may be weak and watery so that the yolk outline is plainly visible when the egg is twirled before the candling light. The yolk may appear dark, enlarged, and flattened, and may show clearly visible germ development but no blood due to such development. It may show other serious defects that do not render the egg inedible. Small blood spots or meat spots (aggregating not more than one-eighth inch in diameter) may be present.

Dirty — An individual egg that has an unbroken shell with adhering dirt or foreign material, prominent stains, or moderate stains covering more than one-thirty-second of the shell surface if localized, or one-sixteenth of the shell surface if scattered.

Check — An individual egg that has a broken shell or crack in the shell but its shell membranes are intact and its contents do not leak.

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.

NOTE: The C quality classification for individual shell eggs was eliminated in 1981. The percentage of C quality eggs found in the total egg production had decreased to an insignificant point—about 1 percent of nest run eggs.

U.S. Consumer Grades and Weight Classes for Shell Eggs

The grading regulations for shell eggs provide for “origin” and “destination” consumer grades. “Origin grading” is defined as a grading made on a lot of eggs at a plant where the eggs are graded and packed.

Table 3 gives a summary of the consumer grades, while table 4 gives the tolerance for individual cases within a lot.

U.S. consumer grade AA (at origin) shall consist of eggs that are at least 87 percent AA quality. The maximum tolerance of 13 percent that 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 1 percent may be B quality due to air cells over three-eighths inch, blood spots (aggregating not more than one-eighth inch in diameter), or serious yolk defects. Not more than 5 percent (7 percent for Jumbo size) checks are permitted and not more than 0.50 percent leakers, dirties, or loss (due to meat or blood spots) in any combination, except that such loss may not exceed 0.30 percent. Other types of loss are not permitted.

U.S. consumer grade AA (destination) shall consist of eggs that are at least 72 percent AA quality. The remaining tolerance of 28 percent shall consist of at least 10 percent A quality and the remainder shall be B quality, except that within the tolerance for B quality not more than 1 percent may be B quality due to air cells over three-eighths inch, blood spots (aggregating not more than one-eighth inch in diameter), or serious yolk defects. Not more than 7 percent (9 percent for Jumbo size) checks are permitted and not more than 1 percent leakers, dirties, or loss (due to meat or blood spots) in any combination, except that such loss may not exceed 0.30 percent. Other types of loss are not permitted.

U.S. consumer grade A (at origin) shall consist of eggs that are at least 87 percent A quality or better. Within the maximum tolerance of 13 percent that may be below A quality, not more than 1 percent may be B quality due to air cells over three-eighths inch, blood spots (aggregating not more than one-eighth inch in diameter), or serious yolk defects. Not more than 5 percent (7 percent for Jumbo size) checks are permitted and not more than 0.50 percent leakers, dirties, or loss (due to meat or blood spots) in any combination, except that such loss may not exceed 0.30 percent. Other types of loss are not permitted.

U.S. consumer grade A (destination) shall consist of eggs that are at least 82 percent A quality or better. Within the maximum tolerance of 18 percent that may be below A quality, not more than 1 percent may be B quality due to air cells over three-eighths inch, blood spots (aggregating not more than one-eighth inch in diameter), or serious yolk defects. Not more than 7 percent (9 percent for Jumbo size) checks are permitted and not more than 1 percent leakers, dirties, or loss (due to meat or blood spots) in any combination, except that such loss may not exceed 0.30 percent. Other types of loss are not permitted.

U.S. consumer grade B (at origin) shall consist of eggs that are at least 90 percent B quality or better, not more than 10 percent may be checks and not more than 0.50 percent leakers, dirties, or loss (due to meat or blood spots) in any combination, except that such loss may not exceed 0.30 percent. Other types of loss are not permitted.

U.S. consumer grade B (destination) shall consist of eggs that are at least 90 percent B quality or better, not more than 10 percent may be checks and not more than 1 percent leakers, dirties, or loss (due to meat or blood spots) in any combination, except that such loss may not exceed 0.30 percent. Other types of loss are not permitted.

Additional tolerances — In lots of two or more cases:

For grade AA — No individual case may exceed 10 percent less AA quality eggs than the minimum permitted for the lot average.

For grade A — No individual case may exceed 10 percent less A quality eggs than the minimum permitted for the lot average.

For grade B — No individual case may exceed 10 percent less B quality eggs than the minimum permitted for the lot average.

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.

NOTE: The fresh fancy quality control program was eliminated in 1981 because it was used very little. The grade A quality control program was also eliminated then because it was not being used.

Weight Classes

The weight classes for U.S. consumer grades for shell eggs shall be as indicated in table 5 and shall apply to all consumer grades.

A lot-average tolerance of 3.3 percent for individual eggs in the next lower weight class is permitted as long as no individual case within the lot exceeds 5 percent.

Table 3.—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	A or B ⁵
		Not over 5	Checks ⁶
Grade A	87 percent A or better	Up to 13	B ⁵
		Not over 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	A or B ⁵
		Not over 7	Checks ⁶
Grade A	82 percent A or better	Up to 18	B ⁵
		Not over 7	Checks ⁶
Grade B	90 percent B or better	Not over 10	Checks

¹In lots of two or more cases, see table 4 of this section for tolerances for an individual case within a lot.

²For 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.

³For 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.

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

⁵For 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.

⁶For 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 4.—Tolerance for individual case within a lot

U.S. consumer grade	Case quality	Origin	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	

Table 5.—Weight classes of U.S. consumer grades for shell eggs

Size or weight class	Minimum net weight per dozen	Minimum net weight per 30 dozen	Minimum 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	—

**U.S. Nest Run Grade and Weight Classes
for Shell Eggs**

Table 8 summarizes the nest run grade described below.

U.S. Nest Run—% AA quality shall consist of eggs of current production of which at least 20 percent are AA quality; and the actual percentage of AA quality eggs shall be stated in the grade name. Within the maximum of 15 percent that may be below A quality, not more than 10 percent may be B quality for shell shape, for interior quality (including meat or blood spots), or due to rusty or blackish-appearing cage marks or blood stains; not more than 5 percent may have adhering dirt or foreign material on the shell one-half inch or larger in diameter; not more than 6 percent may be checks; and not more than 3 percent may be loss. Marks that are slightly gray in appearance and adhering dirt or foreign material on the shell less than one-half inch in diameter are not considered quality factors. The eggs shall be officially graded for all other quality factors. No case may contain less than 75 percent A quality and AA quality eggs in any combination.

The weight classes for the U.S. nest run grade for shell eggs shall be as indicated in table 9.

Table 9.—Weight classes for U.S. nest run grade for shell eggs

Weight classes	Minimum average net weight on lot basis 30-dozen cases
	<i>Pounds</i>
Class XL.....	51
Class 1.....	48
Class 2.....	45
Class 3.....	42
Class 4.....	39

No individual sample case may vary more than 2 pounds (plus or minus) from the lot average.

**U.S. Procurement Grades and Weight Classes
for Shell Eggs**

NOTE: U.S. procurement grades and weight classes for shell eggs were eliminated in 1981 since they were obsolete. Procurement grade II had not been used for a number of years. Procurement grade I was practically identical to U.S. consumer grade A; thus, the consumer grade standard could readily be used in place of the procurement standard. The U.S. Department of Defense was the principal user of procurement grade I.