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CONSUMER HEALTH SERVICES

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<http://agriculture.wy.gov/divisions/chs/food-safety>

### Minimum Requirements for Selling Eggs After Candling and Grading

Listed below are minimum requirements for candling and grading eggs. These requirements will allow for the sale of these eggs to all types of food establishments in Wyoming. If at any time the producer goes over the 3,000 hen limit, all the requirements will have to be met that are contained in Title 7 of the Code of Federal Regulations Part 56 Governing the Voluntary Grading of Shell Eggs, Part 57 Inspection of Eggs and USDA AMS 56 U.S. Standards, Grades, and Weight Classes for Shell Eggs. These minimum requirements were derived from the regulations noted above and from the Wyoming Food Safety Rule.

1. Plans and specifications shall be submitted to the Consumer Health Services inspector prior to beginning construction of the separate room or building for processing eggs.
2. A food license from Consumer Health Services is required prior to beginning candling and grading of eggs for sale.
3. Training approved by the regulatory authority in candling and grading is required prior to implementing these processes.
4. The walls, floor and ceiling in this room or building must be smooth, non-absorbent, easily cleanable and of a light color.
5. A toilet room is required for employees.
6. Lights in the egg room/building shall be shielded or utilize shatterproof type bulbs.
7. The egg washing room may double as the candling and grading room and must have the ability to be made adequately dark for the candling process. The candling and grading equipment shall provide adequate light to facilitate quality determinations.
8. A certified scale must be provided and be constructed to be easily cleanable.
9. Refrigerators for the eggs shall be kept in the egg room, be capable of maintaining a temperature of 45°F or colder and have a thermometer conspicuously located in it.
10. The egg room/building shall be provided with facilities for washing the eggs and a separate hand sink. The egg washing facilities and the hand sink shall be provided with hot and cold running water. Soap and disposable towels must be available at the hand sink. The drain from the egg washing equipment shall be indirectly drained and wastewater from all sinks shall drain to an approved sewage disposal system.

11. The temperature of the egg wash water shall be maintained at 90°F or higher (see below for additional washing instructions). The wash water must be changed as often as necessary to maintain sanitary conditions.
12. The water used for egg washing must come from an approved source. If the water source is a private well, it can be approved by sampling the water semiannually for coliform bacteria. Copies of the sample results must be made available for viewing during the facility inspections.
13. Eggs shall not be allowed to stand or soak in water.
14. Washed eggs shall be air dried before packing.
15. Eggs that are to be transported to another location for sale shall be maintained at 45°F or colder during transportation.
16. The cartons must be new and labeled with the establishment name, address, grade, safe-handling instructions, number of eggs in the carton, packing date and “Keep Refrigerated”.
17. It is recommended that the eggs be collected from the production facility 3 times a day.

### **Washing, Grading, and Packing Operations and Equipment\*\***

Even with good farm-management practices and careful handling, a small percentage of dirty eggs will be produced. Producers must bear in mind that dirty eggs are covered with bacteria that will cause spoilage if they enter the egg. Whether conducted at the production or processing site, washing must be performed in a manner that will minimize the chances of bacterial penetration of the shell. If these important facts are forgotten, and eggs are washed carelessly, more damage can be done than by leaving the dirt on the shell. Wetting a dirty shell provides moisture in which bacteria may breed and assists their growth and penetration through the shell. A washing solution colder than the egg causes the egg content to contract and thus allows polluted water to be drawn through the shell. When washing eggs the following precautions should be followed:

1. Wash eggs with water at least 20 °F (11.1 °C) warmer than the internal temperature of the eggs and at a minimum of 90 °F (32.2 °C).
2. Select a detergent or detergent sanitizer that is compatible with the wash water and one that will not give off foreign odors that may be imparted to the egg.
3. Use only potable water with an iron content of less than 2 parts per million (ppm) for washing and keep wash water as clean as possible.
4. Rinse by spraying with water slightly warmer than the wash water.
5. Use an approved sanitizer in the spray rinse.
6. Dry the eggs to remove any excess moisture prior to packaging.

After washing, eggs should be rinsed with a warm water spray containing an approved chemical sanitizer to remove any remaining bacteria. The strength of the sanitizing spray should be no less than 50 ppm nor more than 200 ppm of available chlorine or its equivalent.

Research has shown that during the washing process, most of the outer cuticle on the egg shell is removed. Removal of this cuticle increases the rate of carbon dioxide and moisture loss of the internal egg contents. To reduce the rate of loss, spraying the eggs with a light coating of food grade mineral oil is a common practice. For best results, the entire oiling system, including spray nozzles, filters, and oil storage reservoir, should be checked frequently to assure that the equipment is functioning adequately and that the oil is free from contamination.

\*\*Excerpted from the USDA Egg-Grading Manual.

## 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

The standards described below are summarized in table 2 and are based on the candled appearance of the egg.

**AA quality** — The shell must be clean, unbroken, and practically normal. The air cell must not exceed one-eighth inch (3.2 mm) 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 (4.8 mm) in depth, may show unlimited movement, and may be free or 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 (0.8 mm) of the shell surface if localized, or one-sixteenth (4.8 mm) 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 (1.6 mm) 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 (3.2 mm) 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 a 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.

\*\*Excerpted from the USDA Egg-Grading Manual.