



Becoming a Michigan Licensed Shell Egg Processor

Overview

This document is a general summary of how to become a licensed shell egg processor in the State of Michigan. An egg processor is an establishment that conducts any of the following: cleans, candles, grades, sorts, or packages eggs.

Licensing

First receivers, retailers, and wholesale distributors are required to be licensed by the MDARD. MDARD does not license or regulate shell egg processors who meet all of the following requirements:

- (a) Is directly responsible for producing eggs from fewer than 3,000 hens.
- (b) Only sells eggs directly to consumers or first receivers*.
- (c) Only sells eggs in containers that each bear a label stating "packaged in a facility that has not been inspected by the department."
- (d) Does not sell eggs through the internet or by mail order or consignment.

*The definition of a "First receiver" means a person who receives eggs from a producer at any place of business and candles, grades, sorts, packs, or packages the eggs.

Applications

To schedule a licensing consultation with an MDARD inspector please call 800-292-3939. Online payment and applications are available at https://www.michigan.gov/mdard/0,4610,7-125-1569_94428---,00.html. To complete a paper Food Establishment License Application please access the MDARD website at [MDARD - Michigan Food Establishment License Applications](#). Prior to licensing the following operational and physical facility requirements must be met.

Operational Requirements:

1. Workers must maintain a high degree of personal cleanliness and wear clean outer garments.
2. Process eggs promptly upon receipt (at least same day).
3. Size, grade and candle eggs. For additional details go to:
https://www.ams.usda.gov/sites/default/files/media/Shell_Egg_Standard%5B1%5D.pdf
4. Eggs shall be clean If washing eggs good practices include:
 - Wash eggs in potable water that is warmer than the eggs.
 - Use a detergent or detergent sanitizer approved for use on eggs.
 - Rinse with water containing an approved sanitizer at a temperature slightly higher than the wash water. Approved products can be found at:
<http://www.nsf.org/usda/psnclistings.asp>. Search under "Q" in non-food categories.
 - Do not soak eggs.
 - Promptly dry eggs taking care not to package eggs that are not thoroughly dry.
 - Properly dried eggs may receive a light coating of food grade mineral oil.
5. Refrigerate eggs at an ambient temperature of 45°F
6. Package eggs using containers that are clean and suitable for holding eggs. Use of new egg cartons is recommended. Egg cartons must not bear labeling that is false or misleading and will be deemed as misbranded.
7. Label egg containers with the following minimum information:
 - a. Name and address of the responsible party.
 - b. Egg size (i.e., jumbo, extra large, large, medium, small, or pee wee).

- c. Egg grade (i.e., AA, A, or B).
- d. Last date of sale (recommended not to be greater than 30 days including the date of packing) and a lot code. The last date of sale may be used as a lot code.
- e. United States Department of Agriculture (USDA) safe handling labeling for eggs.

The Food and Drug Administration (FDA) has also issued a rule regarding egg safety for those egg producers with 3,000 or more laying hens. The rule can be viewed at:

<https://www.fda.gov/Food/GuidanceRegulation/GuidanceDocumentsRegulatoryInformation/Eggs/ucm170615.htm>

Review of the Michigan Food Law can be accessed at:

- Michigan Food Law [http://www.legislature.mi.gov/\(S\(cwswd0lslw1vltk3aprirein\)\)/documents/mcl/pdf/mcl-act-92-of-2000.pdf](http://www.legislature.mi.gov/(S(cwswd0lslw1vltk3aprirein))/documents/mcl/pdf/mcl-act-92-of-2000.pdf)

Operational Guidance:

Grading

Eggs are rated and graded into three classifications determined by the United States Department of Agriculture (USDA). If you have chickens and plan on selling eggs, grading and sizing is required. As a general rule, you should grade all your eggs before you store, sell or consume them.

General

When grading eggs, both the interior and exterior quality is measured. This process does not take into account weight or shell color. According to USDA guidelines, eggs are graded and labeled as AA, A, and B. **Grade AA** eggs are nearly perfect. The whites are thick and firm and the yolks are free from any defects. The shells are clean and without cracks. **Grade A** eggs appear to be the same as Grade AA, but the difference is a slightly lower interior *quality*. **Grade B** eggs are noticeably different. They may have slight stains and be irregular in shape and size. The quality of the interior is further reduced. Grade B eggs are not sold in supermarkets but are used commercially in powdered egg products or liquid eggs.

Exterior Grading

Begin the egg grading process by checking the quality of the shell. The ideal eggshell is clean, smooth and oval in shape with one end slightly bigger than the other. Eggs with cracked or broken shells should be discarded.

Interior Grading

Grading the interior of the egg is performed by a method called candling. Using an egg candler will allow you to examine the air cell, the egg white (called albumen) and the yolk. Candling also lets you check for spots and cracks. Listed below are the different components to observe when candling an egg:

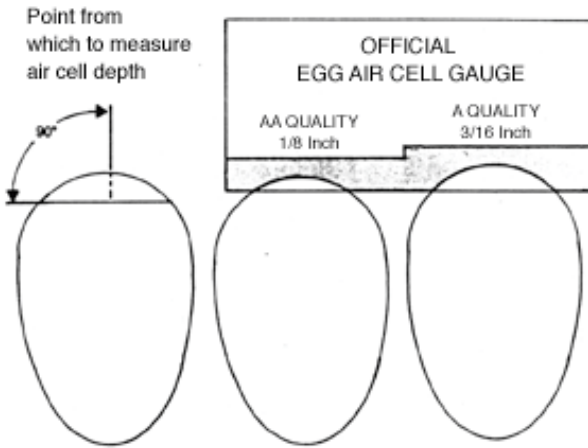
Air Cell Depth - The depth of the air cell is the distance from its top to its bottom when the egg is held with the air cell up (see figure 1). In a fresh egg, the air cell is small, not more than 1/8 inch deep. As the egg ages, the air cell depth grows, and the quality of the egg diminishes.

White or Albumen - The white of the egg is called the albumen. The quality is based on its clarity and thickness. Look for a clear color without discolorations or floating foreign matter. If the yolk retains its position in the center when the egg is twirled, the white is usually firm and thick. Thick albumen allows limited movement of the yolk and indicates a higher quality egg.

Yolk - The yolk of a fresh, high quality egg will be surrounded by a rather dense layer of albumen or white. Therefore, it moves only slightly away from the center of the egg when it is twirled before the candler. Because of this, yolk outline is only slightly defined in the highest quality eggs. As the albumen thins, the yolk tends to move more freely and closer to the shell. A more visible yolk when candled indicates a lower quality egg.

Spots - Candling can help reveal foreign matter like blood spots or meat spots. Eggs with interior spots should not be sold.

Figure 1. Measuring air cell depth



USDA Grade Standard Chart: This table is a quick reference for determining the grade of an egg by candling.

Table 1 USDA Grade Standard Chart.

Quality Factor	AA Quality	A Quality	B Quality	Inedible
Air Cell	1/8 inch or less in depth	3/16 inch or less in depth	More than 3/16 inch	Doesn't apply
White	Clear, Firm	Clean, May be reasonably firm	Clean, May be weak and watery	Doesn't apply
Yolk	Outline slightly defined	Outline may be fairly well-defined	Outline clearly visible	Doesn't apply
Spots (blood or meat)	None	None	Blood or meat spots aggregating not more than 1/8" in diameter	Blood or meat spots aggregating more than 1/8" in diameter

Candling

It is best that you sort the eggs before you store, sell, or consume them. The easiest way to sort eggs is to candle them with a bright light. This process can help you eliminate cracked eggs or eggs with foreign matter inside like blood spots.

- 1) Candle Eggs:** Hold the egg up to the candling light in a slanting position (see figure 2). You can see the air cell, the yolk, and the white. The air cell is almost always in the large end of the egg. Therefore, put the large end next to the candling light.
Hold the egg between your thumb and first two fingers. Then by turning your wrist quickly, you can cause the inside of the egg to whirl. This will tell you a great deal about the yolk and white. When you are learning to candle, you will find it helpful to break and observe any eggs you are in doubt about.
- 2) Identifying Cracks:** Cracked eggs will appear to have a white line somewhere on the shell. These cracks will open if you apply slight pressure to the shell. Remove cracked eggs and consume them as soon as possible or discard.
- 3) USDA Grade Standard:** Use the specifications given in table 1 to determine the grade of an egg by candling. Consider air cell depth, yolk outline, and albumen quality.

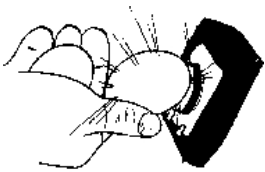


Figure 2. Candling with a light

Sizing Eggs

If you plan on being licensed to sell your eggs, you need to sort and size them. You might be surprised to learn that eggs are not sized individually, but rather sized by the combined weight of one dozen eggs. A size breakdown by weight can be found in table 2.

For more information about grading and sizing eggs, you can refer to:

<https://www.ams.usda.gov/publications/content/egg-grading-manual>

Size Category	Minimum Weight
Small	18 oz.
Medium	21 oz.
Large	24 oz.
X-Large	27 oz.
Jumbo	30 oz.

Table 2. Egg size by weight

Physical Facility Requirements

Provide an adequately* sized building for egg processing. The building and equipment must meet the following minimum requirements:

1. Provide approved potable water supply and sewage disposal facilities for the building that will house the egg processing operation. MDARD will work with new establishments to coordinate the review of on-site water supply and sewage disposal facilities with the local health department.
2. Be able to exclude the weather and vermin from the facility.
3. Have easily cleanable floors, walls, and ceilings of sound construction.
4. Have adequate lighting.
5. Have hand washing facilities providing both hot and cold running water, soap and disposable towels.
6. Contain equipment constructed so as to be easily cleanable.
7. Have suitable egg and ware washing facilities consisting of a three compartment ware washing sink
8. Have adequately sized refrigeration units, equipped with thermometers accurate to $\pm 2^{\circ}\text{F}$. Eggs must be held at an ambient temperature of 45°F prior to receipt by a retailer.

9. Have hooks or lockers for employee clothing (not located in toilet room).
10. Provide toilet facilities or access to toilet facilities. Workers must have access to toilet facilities that include hand washing facilities, soap and disposable towels. Toilets must not open directly into areas where eggs are exposed.
11. Provide physical separation of equipment, sinks, storage, etc., from personal items, and living areas, including domestic kitchens. Obtaining approval from local municipal zoning department for the processing establishment is strongly recommended.

***Note: Adequate means that which is needed to accomplish the intended purpose, in keeping with good public health practices.**