

Starting a Food Business: Canning

Canned food is any food in a hermetically-sealed container. A hermetic seal is air-tight. Often we think of canned food as being packaged in a metal can, but the term ‘canning’ also applies to food in glass jars, and to some foods packaged in foil or laminate packages.

In the state of Wisconsin, if you are processing canned food that you intend to sell **wholesale**, if the food will be sold **outside the state**, or if you are not operating under Wisconsin Act 101 (the ‘Pickle Bill’ exemption), then you must be **licensed** to process and sell canned food.

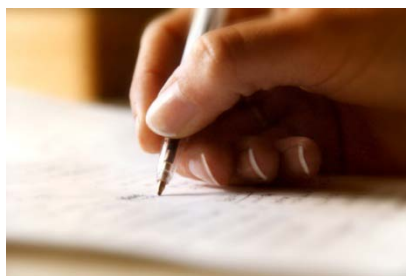
Licensing. A **license** is required to manufacture and sell many kinds of foods, not just canned food. Food manufacturing operations from ‘A-Z’ require a license, for example: baking, bottling, canning, coating, cutting, dicing, distilling, drying, extracting, fermenting, freezing, grinding, mixing, pickling, smoking, and stuffing – companies involved in all these activities, and many others, must be licensed.

A license is required to manufacture and sell many kinds of food. In order to be issued a license to manufacture food, a processor must identify a location that is acceptable. Instead of building a facility, a processor just starting out may find that renting space in a restaurant, a church kitchen, or a community kitchen makes good business sense.

In order to be issued a license to manufacture food, a processor must identify a **location** that is acceptable. The requirements of an acceptable facility include adequate lighting and ventilation, work surfaces in good repair, cleanable floors, walls and ceilings, and a safe water supply. A full list of requirements can be found within Wisconsin’s administrative code [ATCP70](http://legis.wisconsin.gov/rsb/code/atcp/atcp070.pdf): legis.wisconsin.gov/rsb/code/atcp/atcp070.pdf

License fee schedule. As long as you are not processing meat or poultry, the operations listed above can be carried out under **one** license. You are able to bake bread, process jam, and make pickles for sale, all under one license. The cost of a license from the Wisconsin Department of Agriculture, Trade and Consumer Protection (WDATCP) begins at \$60 annually for a retail food establishment license, or \$90 annually for a food processing plant license (wholesale). This license category allows you to process and sell food with up to \$25,000 in sales. As a company’s sales increase, the cost of a license increases. Under a license issued by the state of Wisconsin, there is no fee for licensing the processing facility.

A license is issued to an individual, an entity, or a corporation, and is not transferrable. A license is issued for processing food at a particular location. Licenses renew each year on March 31st; the fee schedule is not pro-rated for the time remaining in the license year.



In some instances, processors may be required to obtain a mobile retail license, a food warehouse license, or other permit as dictated by state, county, or municipal jurisdictions. Check with your Food Inspector and the local Chamber of Commerce or public health office for more

information. In addition, businesses need to consider the cost of insurance for their business and other fees.

How do I know which type of license I need? A retail food establishment license is issued to processors selling directly to the public from the processing location. A bakery with a sales counter could operate under a retail food establishment license. A food processing plant license, sometimes referred to as a wholesale license, is issued to processors manufacturing food for sale to grocery stores,



convenience stores, restaurants, or other retail outlets. Under a wholesale license, you may sell both wholesale and retail. For example, a bakery may bake bread for sale at a farmers' market and to a local grocery store. This bakery would need a food processing plant (wholesale) license for their operation.

Many processors find that renting a facility such as a restaurant kitchen or a community kitchen is the most economical way to get started in the business. **All processors renting kitchen space are issued a food processing plant (wholesale) license regardless of the sales outlet.**

All processors who manufacture pickles, salsa and other acidified foods (see p.3) are issued a food processing plant (wholesale) license regardless of the sales outlet.

In some counties, the local health department can serve as an agent of the Wisconsin Department of Agriculture, Trade and Consumer Protection. In this case, the local agent can issue a retail food establishment license on behalf of the state. Local agents may have different requirements from the state and their fee structure may vary. **A local agent can not issue a food processing plant license;** they can not issue a license to a food processor manufacturing food to be sold wholesale. **A local agent can not issue a license for manufacture of food sold outside the boundaries of the county.** When a local agent does not have jurisdiction, the license is issued by the Wisconsin Department of Agriculture, Trade and Consumer Protection. Call 608-224-4682 for answers to your licensing questions.

The Wisconsin Department of Agriculture, Trade and Consumer Protection issues licenses for many food processing operations:

- *Manufacturing foods at a shared-use facility*
 - *Manufacturing foods for wholesale distribution*
 - *Manufacturing foods for sale outside a narrow geographic area, i.e. outside county boundaries*
 - *Manufacturing acidified canned foods*
- Call 608-224-4682 for more information*

The licensing process. A Food Inspector from the Wisconsin Department of Agriculture, Trade and Consumer, Protection, or an agent program, will work with you one-on-one to help you get your business started. The inspector will meet with you at your processing location to inspect the facility and review the requirements for licensing. If everything is in order, you may receive a temporary license 'on the spot.' If you do not have everything in order, the inspector will tell you what remains before a license can be issued to you. All food manufacturers are expected to follow Good Manufacturing Practices as outlined in the Code of Federal Regulations, Chapter 21 – section 110: <http://www.accessdata.fda.gov/scripts/cdrh/cfdocs/cfCFR/CFRSearch.cfm> and Wisconsin ATCP70.

There is no charge for the pre-licensing visit(s) under the state licensing program. To meet with a state food inspector, call 608-224-4682 for the contact information of the inspector assigned to your area of the state.

Processors of canned foods. There are many types of canned food: fruits, jams and jellies, pickles, salsa, sauces and dressings, and tomatoes. In almost all cases, manufacturing these foods for sale requires that you have a license. For information on the licensing exemption for low-volume, in-state sales of canned fruits or acidified vegetables (the 'Pickle Bill' licensing exemption), see www.foodsafety.wisc.edu Small processors generally **do not** have the type of equipment required to safely manufacture for sale **low-acid canned foods** such as canned meat, seafood or vegetables. Questions about licensing for this type of processing should be directed to the Wisconsin Department of Agriculture, Trade and Consumer Protection at 608-224-4682.



Classification. A **naturally acid food** is a food that has a natural pH of 4.6 or below (21 CFR 114.3(a)). Examples of acid foods include: apples, oranges, and lemons (as well as the juices expressed from these fruits); and standardized and non-standardized food dressings (such as mayonnaise) and condiment

sauces (such as ketchup) that have a natural pH of 4.6 or below.



An **acidified food** is a low-acid foods to which acid(s) or acid food(s) are added; they have a water activity greater than 0.85 and have a finished equilibrium pH of 4.6 or below (21 CFR 114.3(b)). The FDA considers any finished food product containing an acidified food as an ingredient to be an acidified food. Foods stored, distributed and retailed under refrigeration are **not** considered acidified. Fermented foods such as **sauerkraut** are **not** considered acidified.

Training. **Both federal and state law require that processing of acidified canned foods (salsa, pickles, relishes, tomatoes) take place under the supervision of a trained operator.** In Wisconsin, there are two training programs approved for those supervising the processing of acidified canned foods:

- **Wisconsin Acidified Canned Foods Training for Small Food Processors** – this one-day training is designed for processors with sales of canned food (all categories) of \$25,000 or less. This training is approved by the state of Wisconsin and is sponsored by the University of Wisconsin-Extension. More information may be found here: www.foodsafety.wisc.edu
- **Wisconsin Better Process Control School** – this four-day training is approved by the FDA for supervisors in canning operations where low-acid and/or acidified foods are processed. This training is designed for supervisors in food processing companies with sales of over \$25,000 per year. More information can be obtained by calling the University of Wisconsin-Madison, Department of Food Science at 608-263-7383.

If you are processing acidified canned foods, or if you add this product category to your license, the processor/supervisor must attend a training program approved by the Wisconsin Department of Agriculture, Trade and Consumer Protection.

Manufacturing a Safe Product. Whether you are canning naturally acid, acidified, or fermented foods, following Good Manufacturing Practices and keeping appropriate records will help you manufacture a safe product. The following list highlights important steps in manufacturing a safe food product (see ATCP 70 for a complete list of requirements).

- **Packages** used in food or beverage canning operations must be clean and sanitary. Effective mechanical washers must be used to clean food packages prior to use.
- **Raw agricultural products** must be washed, sorted, trimmed as necessary, and inspected before being canned.
- **A scheduled process** (recipe) should be established, and followed, for each canning process. **For acidified canned foods or beverages, a schedule process must be established and approved by a process authority.** The critical factors outlined in the scheduled process must be recorded.
- The food or beverage product **must be heated prior to packaging** to destroy vegetative cells of acid-tolerant pathogens and spoilage organisms. The minimum temperature/time combinations for each product are found in Table 1.
- In most cases, the food or beverage product must receive a **post-packaging heat process (pasteurization)** to destroy vegetative cells of acid-tolerant pathogens and spoilage organisms, and to ensure a package seal. This can be achieved with a hot-fill-hold or a boiling water/atmospheric steam canning process. Time/temperature combinations for effective post-packaging pasteurization are found in Table 1.
- Canned product must be cooled, inspected, and **labeled** prior to distribution.
- Food distribution records must be kept and a food **recall plan** developed.
- All food and beverage manufacturers must register under the **Public Health Security and Bioterrorism Preparedness and Response Act of 2002** <https://www.access.fda.gov/oa/>
- Manufacturers of **acidified canned foods** must register with the FDA using form 2541 and must file each scheduled process with the FDA using form 2541a.

Table 1. The process must deliver a heat treatment of sufficient lethality so as to ensure a safe, shelf-stable product. Minimum temperature/time combinations are given.

Temp (°F)	Time (min)	Temp (°F)	Time (min)	Temp (°F)	Time(min)	Temp (°F)	Time(min)
140	12.7	152	3.1	162	0.9	172	0.3
142	10.1	154	2.4	164	0.7	174	0.2
144	7.9	156	1.9	166	0.6	176	0.2
146	6.3	158	1.6	168	0.5	178	0.1
148	4.9	160	1.2	170	0.4	180	0.1
150	3.9						

Reference for Table 1: *Use of Linear Models for Thermal Processing of Acidified Foods.* F. Breidt, K.P. Sandeep, and F. Arritt. 2010. *Food Protection Trends.* 30: 268-272.