

A BRIEF HISTORY OF CANNING

By Tarey Kay and Sue Ellen White

Anyone who has planned and packed meals for a group heading off on a backpack, fishing or kayak trip can identify with the truism, “an army marches on its stomach,” which has been attributed to both Frederick the Great and to Napoleon Bonaparte.

As late as the American Revolution, soldiers were expected to forage for part of their sustenance. Nutritional requirements were often fulfilled by plundering civilian stores, an aid in demoralizing enemy territory as well as fulfilling the need for adequate calories to march and fight.

Early Greeks and Persians began the practice of supply trains, arrangements with merchants and food caches to feed their troops, and the great Roman army became known for having the most advanced logistical strategies for food supply in the ancient world.

ORIGINS

Napoleon Bonaparte became frustrated with the problems of feeding his vast army and in 1795 offered a prize with the princely sum of 12,000 francs for the person who perfected a method of preserving food.

A French chef and confectioner, Nicholas Appert, took up the challenge and for about 15 years experimented with ways to preserve foods such as soups, dairy, jellies, vegetables and juices. He placed the food in glass bottles, sealed them with cork and wax or pitch and placed them in boiling water. Voilà! Chef Nicholas in 1809 won the prize, the appreciation of his emperor and La Maison Appert became the first canning factory.



Canning jar, à la Nicholas Appert.

Bonaparte, meanwhile, learned a lesson during his 1812 winter campaign across the bleak Russian landscape when he dismissed his supply trains as too burdensome, expecting his troops to live off their surroundings. Of his 600,000 soldiers, 500,000 died.

Records indicate that the Dutch began packing heated meat, covered by fat, into tinned iron containers and secured by soldered lids as early as 1772. But their process, like that of the French was a military top secret. Successfully feeding an army on the move gave one's side a considerable advantage. Civilians went about in their accustomed ways: drying, salting, brining, sugaring and potting (cooked meat immersed in fat to exclude air, which we now call a confit).

Peter Durand, a British merchant, took the process to the next level soon after using tinned cans and obtained a patent, which he sold in 1812 to two businessmen who, by 1813, were marketing to the British Army.

As advanced as these methods were, their developers had no

understanding of why canning worked. That would have to wait until the work of Louis Pasteur identified microbes as the cause of spoilage; he introduced pasteurization in 1864.

And early on, it was not as convenient as one might imagine. Hungry diners had to force the can open with a knife, bayonet or smash it with a rock as the first effective can openers were not introduced until the mid-1850s.

HOME CANNING

Commercial canning of food always increased during wars and it was at about the time of the Civil War that a New York tinsmith, John Landis Mason, developed a system that would revolutionize food preservation for the home market. His invention of the reusable glass jar with threaded rim and matching tin lid with a rubber gasket for the seal meant that families could invest in Mason's jars and safely use them again and again.

Combined with the popularization of the cast-iron kitchen stove and a drop in the price of refined sugar, home preservation took off in the 1880s. These first efforts, though, focused on jams, ketchup, pickles tomatoes and fruits as the equipment and techniques for preserving low-acid foods such as meat and vegetables at home had not yet been developed.

The charming wire-clamped jars such as Lightning and Atlas — which employed a glass lid and rubber gasket held down by a moveable wire for sealing — were used from the late 19th century until the 1960s and are popular now, along with their replicas, as decorative objects.

The first wide-mouth, self-sealing jars were made in 1903 by Alexander Kerr, who perfected his invention a dozen years later with the introduction of the flat metal lid, ring and jar system we use today. The wide mouth made it easier to get the food into the jars and the gasket material built into the lid was a simpler way to seal the jars.

The open-kettle method for high-acid foods was the first home standard: boiling jam or brine was poured to overflowing in a hot, sterilized jar and then the rubber seal and screw lid secured the contents. This ensured that the components were sterilized and subsequently safe to eat. Another method for high-sugar treats such as jams and jellies was to cook them to the desired thickness, pour into small jars and then top with a layer of paraffin to seal.

Older readers might remember swiping a finger along the edge of the wax-sealed jam in Grandma's pantry to taste the sweet, thick syrup that had seeped out.

Of course, now your local county extension agent would faint at the mention of these methods of canning, which were succeeded by the cold-pack method in which blanched or fresh foods are packed in clean jars, covered in liquid, sealed and then immersed in hot water for a specified time. Other methods followed, including hot pack and pressure canning.



Early home pressure canner — about 1915.

PATRIOTISM & PRIVATION



1918 patriotic poster encouraging canning.

With the United States' entry into World War I, provisioning an overseas army resulted in cuts on the homefront. In April of 1917, Herbert Hoover was appointed head of the Food Administration, which encouraged citizens to have Meatless Mondays and Wheatless Wednesdays, plant gardens and preserve the harvest. Hoover wrote that his message was "Go back to simple food, simple clothes, simple pleasures. Pray hard, work hard, sleep hard and play hard. Do it all courageously and cheerfully."

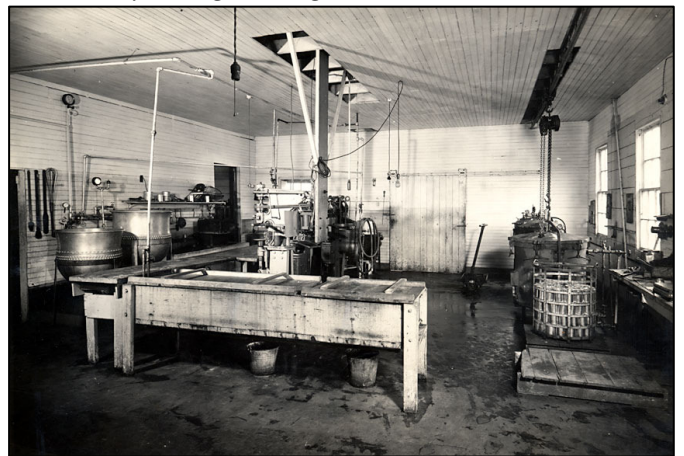
The government printed posters entreating people to support these efforts for the boys overseas and civilians responded enthusiastically, with ever-more home canners. It was about this time that steam pressure canners came into use. Some towns set up community-run canning centers, complete with instructors, so everyone could can up the local harvest. As late as the 1970s, there was a custom cannery Toppenish, Washington, where residents brought

everything from asparagus to tomatoes and took it home in neat metal cans.

Permaculture teacher Michael Pilarski recalled his memories of the Toppenish facility:

In 1973 and 1974, I worked at one of the last custom canneries left in Washington state, the Toppenish Custom Cannery in the Yakima valley. Each day during the growing season, the cannery was filled with a bedlam of hundreds of people peeling, slicing, dicing and pureeing all kinds of fruits and vegetables they had grown, gathered or bought locally. They filled cans with their own products and recipes.

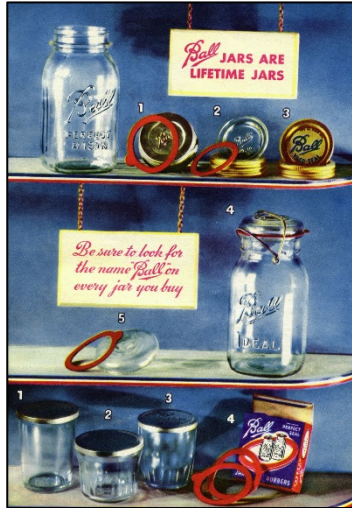
Our small cannery crew heated the cans (and contents), ran them through the lidding machine and then pressure cooked the cans for specified times depending on the contents. Some things like salmon and meats were cooked longer. The customers picked their cans up the next day when the cans had cooled down. The noise was deafening and the languages were many. The customer base included Hispanics, Indians (half the Yakima valley is on the Yakama Reservation), Filipinos, Japanese, African-Americans, Southerners and all kinds of



Ferguson custom cannery in Snohomish, Wash.

whites. It was a real melting pot of a crowd and it was all focused on food. Local food for local people.

There used to be about 50 custom canneries around the state in the mid- 1900s. There is not a one left. Perhaps it is time to start some new ones.



The crushing hardships of the Great Depression encouraged even more people to make do with canning. In 1931, 1.2 million Ball canning jars were purchased, the largest amount ever sold up to that time by the company. Research had begun into the science of food preservation and in 1932 investigators suggested groupings of food according to acidity because of spoilage properties associated with the pH of each individual food.

By this time methods and equipment had proliferated. Canning methods included open kettle, water bath, steam canning, oven canning and pressure canning. Zinc lids with rubber rings, wire bales over glass lids and gaskets and self-sealing lids of various types existed. It took a number decades and scientific research

and testing to sort things out for safety and efficiency.

The Victory Gardens and propaganda posters of the World War II are most popularly connected with home canning as women contributed to the war effort with food preservation and work in the factories vacated by the men who were fighting in Europe and the Pacific.

After the war, when women were pressed back to their proper place in the home, prosperity and convenience foods such as frozen TV dinners began to replace the home-produced and preserved food. The frozen food industry had developed during the war years due to tin shortages and homemakers embraced it in the 1950s, along with supermarkets and prosperity.

BACK TO THE LAND

However, a new generation waited in the wings and the 1970s saw a great cultural shift among the young, including the back-to-the-land movement that stressed self-sufficiency and a home-grown lifestyle. Perhaps the budding homesteaders remembered Grandma's jam and pickles — they embraced canning, drying and other home skills. One of the early proponents was Carla Emery, who mimeographed and sent installments of her 700-page classic, *An Old-Fashioned Recipe Book*, to readers over several years while living on a remote Idaho ranch with her husband, raising six children and numerous species of farm animals. She inspired the young women whose shining jars of canned goods began showing up at county fairs.



WWII government poster, 1944.



Author Tarey Kay's plentiful, colorful pantry.

After another hiatus, home food preservation is enjoying a 21st century resurgence. In 2009, the sale of home canning equipment increased by 12 percent and canning classes and books are proliferating. A new generation is discovering the pleasures of jewel-like jams, tart pickles, flavorful tuna and homemade hot sauce. Canning's new popularity is driven by concerns over commercial food additives and processing, issues of sustainability and a wave of local, epicurean canned goods. Elegant jars, labels

and packaging available today can make anyone's homemade best into a gourmet gift.

For those who would like to start canning, the *Ball Blue Book*, published annually, is an excellent primer on canning, covering the techniques of water bath for high-acid and pressure canning for low-acid foods. It offers a wide variety of recipes and troubleshooting tips. More experienced canners may want to branch out and try the heavenly jam, jelly and marmalade recipes in *Mes Confitures*, written by master French patissière Christina Ferber, or perfect small batches with the forthcoming *Preserving by the Pint* by canning blogger Marissa McClelland.

Local canning classes are sometimes offered on Whidbey or one can seek out an experienced canner for advice. Spring is the time to plan and get equipment ready so that your own fruits of summer can be "put up," shown at the county fair, given as gifts or simply enjoyed next winter. There is nothing quite like a bowl of oatmeal with your home canned organic golden peaches on a cold winter morning.



A new generation of canning supplies and ideas await the adventurous canner.

About the authors: Tarey Kay is [[put your info here]]. Sue Ellen White began canning in the early 1970s, when she moved to Whidbey and has a big garden, orchard, chickens and a Little Free Library at her home.