

Preparedness: Food and Water

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Disaster Preparedness Water Disaster Preparedness: Water is Basic Survival

How was Food preserved in ancient times?

Even the earliest humans needed to develop methods to preserve their food, both because of cold seasons and because of droughts: "Now there was a famine in the land, and Abram went down to Egypt to live there for a while because the famine was severe." Genesis 12:10 And then: They should collect all the food of these good years that are coming and store up the grain under the authority of Pharaoh, to be kept in the cities for food. This food should be held in reserve for the country, to be used during the seven years of famine that will come upon Egypt, so that the country may not be ruined by the famine." Genesis 41:35-37 . The preservation and safe storage of Food in Egypt had obviously been well developed and refined as we read: "There was famine in all the other lands, but in the whole land of Egypt there was food." Genesis 41:54

So how exactly was the food collected during seven years of abundance for the seven years of famine? Records from 2600 B.C. show that the annual flooding of the Nile produced surpluses of grain that were stored and kept to feed builders of irrigation schemes and pyramid tombs. Ancient Egyptians employed a variety of methods for food preservation. Great silos were constructed to preserve grain for long periods of time. Fish, meat, vegetables and fruits were preserved by drying and salting. Grains were fermented to create beer. The Babylonians and Egyptians pickled fish such as sturgeon, salmon, and catfish, as well as poultry and geese and stored them for a long time. Fish curing, depicted in the tombs of ancient Egypt, was so highly regarded that only temple officials were entrusted with the knowledge of the art, and it is significant that the Egyptian word for fish preserving was the same as that used to denote the process of embalming the dead."

"Pickled, Potted and Canned: How the Art and Science of Food Processing Changed the World," Sue Shepard [Simon & Schuster: New York] 2000 (p. 31 / 79)

During the Han Dynasty (206 B.C.) imperial kitchens grew vegetables in hothouses, so their availability was not limited by the season. In the final years of the Eastern Han Dynasty food sweetened with honey began to appear in the palace. The technique of using fermentation to make staple foods was already well known in China at this time.

The Modern History of Industrialized Food

Here is a timeline of development of longer shelf life:

- 1755: William Cullen produces ice by causing water to evaporate in a vacuum container.
- 1765: Spallanzani suggests preserving by means of hermetic sealing.
- 1795: Francois Appert designs preserving jar for food.
- 1802: Thomas Moore invents the refrigerator.
- 1802: World's first successful beet sugar factory begins operation.
- 1805: First important shipment of ice from New England is made by Frederick Tudor.
- 1810: Francois Appert wins prize for developing practical canning process.
- 1810: First tin can is patented.
- 1811: Work started on the National Road.
- 1812: British sailors eating canned soups and meat.
- 1818: Peter Durand introduces the tin can in America.
- 1819: Canning firms operating in New York City.
- 1820: William Underwood opens a canning factory in Boston.
- 1820: More than 9000 miles of surfaced roads in the United States.
- 1825: Thomas Kensett patents tin-plated cans.
- Before 1830: Flour sieved through bolting cloth.
- 1834: Jacob Perkins invents first mechanical refrigerator.
- 1839: Glass bottles yield to tin cans.
- 1840: 4,500 miles of canals carry U.S. goods.
- 1843: Norman Rillieux patents his multiple-effect evaporator for sugar cane.
- 1853: National Road turned over to the states.
- 1855: Patent issued in England for dried milk.
- 1856: Gail Borden receives patent for condensed milk process.
- 1858: John L. Mason perfects the mason jar.
- 1860: More than 88,000 miles of surfaced roads in the United States.

1861: T.S. Mort builds first machine-chilled cold storage unit.
1861: 3,500 steamboats operating on western rivers.
Civil War: Both armies use canning to supply troops.
Civil War: northern plains begin using hard spring wheat.
1862: Beginning of transition from subsistence to commercial farming.
1864: First salmon cannery in the United States.
1864: Louis Pasteur invents pasteurization (for wine).
1865: Thaddeus Lowe invents ice machine.
1865: Patent for dried eggs issued.
1866: America's first refrigerated railroad car is built in Detroit.
1869: Hippolyte Mege-Mouries develops oleomargarine.
1870: Karl von Linde uses ammonia as refrigerant, begins its manufacture.
1870's: Introduction of roller milling for wheat.
1874: H. Solomon introduces pressure-cooking methods for canning foods.
1874: Refrigerator cars are used regularly to ship meat from Midwest stockyards to the east.
1874: Margarine introduced to the United States.
1877: Joel Tiffany patents a successful refrigerator car.
1877: Frozen mutton shipped from Argentina to France.
1878: Gustav de Laval invents the centrifugal cream separator.
1878: Full-scale egg dehydrating plant in operation.
1879: 40 tons of frozen mutton shipped from Australia to London.
1880: Canned fruits and meats first appear in stores.
Late 1880's: Mechanically refrigerated cars running on railroads.
1890: The Babcock test makes dairymen honest.
1892: First cans of pineapples.
1895: Lewis B. Halsey begins commercial production of pasteurized milk.
1897: American Sugar Company is formed.
1900: Dairy products a full-fledged industry.
1903: The great corporation is the basic unit of American industry.
1910: Steel-roller flour milling is commonplace.
1915: Ford produces his millionth car.
1919: 265,000 miles of railroad lines in America.
About 1920: Mechanical refrigerators for homes appear.
1920's: Solvent extraction replaces expeller-pressed process for oils.
1927: Airplanes first used to dust crops with insecticides.
1930: Thomas Midgley invents Freon.
1930's-now: Small farms yield to giant food companies.
1930's: The first packages of frozen food, developed by Clarence Birdseye, appear on the shelves of 10 grocery stores in Springfield, Mass.
Post-WWII: Restructured foods.
1990's: Recombinant DNA biologically engineered foods.

Source: Ronald Brown in "Unintended Consequences And The Standard American Diet"

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