

How Can I Get the Most Out of My Food Storage

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Storing food is a traditional, domestic skill that has been used for thousands of years in times of plenty to prepare for times of famine or when food is in short supply. Food is stored by many animals and in almost every human society. It's interesting to note that wheat found stored in vessels in the tombs of Egypt was still edible after 4,000 years.



Maintaining a food supply often ensures savings of time and money and provides safety and security in time of need. Storing food has several main purposes: it preserves harvested and processed food products for later use, it provides a balanced diet throughout the year, it helps prepare for catastrophes, emergencies and periods of food scarcity or famine, and it provides peace of mind and self-sustainability.

To get the most out of your food storage, consider these factors.

- **Temperature:** The temperature at which food is stored is very critical to shelf life. The USDA reports that for every 10.8 degrees in temperature rise, the shelf life of stored food is decreased by half. The best range for food storage is a constant temperature between 40-60 degrees. Avoid freezing temperatures.
- **Moisture:** It is recommended that moisture be removed when storing foods. For long-term storage, foods should have a 10 percent or less moisture content.
- **Oxygen:** Foods store best when they are oxygen free. Removing oxygen prevents oxidation of compounds in foods. Ways to remove oxygen include: displacing oxygen by purging air from the product with an inert gas (nitrogen); using dry ice to

give off carbon dioxide gas, which displaces oxygen; and using an oxygen absorber. Since air contains about 78 percent nitrogen and 21 percent oxygen, this leaves about 1 percent for the other gasses. If the oxygen is absorbed, what remains is 99 percent pure nitrogen in a partial vacuum.

- **Light:** This form of energy can degrade the value of foods. Store food in dark areas.
- **Container:** Store foods in food-grade plastic, metal or glass containers that indicate the container does not contain harmful chemicals that could be transferred to food. For best storage life, use containers with a hermetic (air tight) seal. Containers with air tight seals include number 10 cans, sealable food storage buckets, sealable food quality metal (lined) or plastic drums, foil pouches and PETE bottles (for dry products such as wheat, corn and beans). These containers, when used with oxygen absorber packets, eliminate food-borne insects and help preserve nutritional quality and taste. Be aware that botulism poisoning may result if moist products are stored in packaging that reduces oxygen. When stored in airtight containers with oxygen absorbers, products must be dry (about 10 percent or less moisture content).
- **Infestation:** Several common insects infest home-stored dried foods. To control with cold treatment, put infested items in a deep freezer (0 degrees) for three to four days. This will kill any live insects, larva and eggs.

Note that shelf date listed on packaging is the "best if used by" date, meaning that you are getting most of the original taste and nutrition. The "life sustaining shelf life" date means the length of time that the food is still edible.

For help planning try using this [food storage calculator tool](#).

To prolong your flour try storing wheat and using a grain mill. See the article [Selecting the Best Grain/Flour Mill](#).

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