Virginia Cooperative Extension Virginia Tech • Virginia State University

Food Storage Guidelines for Consumers

Authored by H. Lester Schonberger, Associate Extension Specialist, Department of Food Science and Technology, Virginia Tech; and Renee Boyer, Professor and Extension Specialist, Department of Food Science and Technology, Virginia Tech

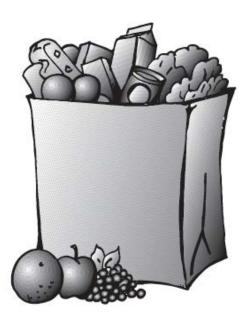


Figure 1. A paper shopping bag filled with groceries

Consumers get food in many ways. They can purchase their food from a convenience store, grocery store, or supermarket, grow or raise their own food, or receive food through a food pantry or other hunger relief program when needed. Often, an individual consumer will have access to more food than they can eat in a day and so it will need to be stored until it is used. This publication will address how you can safely store your food for optimal quality until you are ready to use and consume it.

Dates on Food Labels

The dates printed on food labels almost always refer to the quality, and not the safety, of the food. It notes when the manufacturer will no longer guarantee the quality of the food. Ideally, you will be able to get food before the food manufacturer's freshness dates. However, if a food has been properly stored and the printed date has passed, the food should still be safe to consume. The exception to this is infant formula. Infant formula should not be consumed past the manufacturers printed date. Infants need a specific balance of nutrients to properly grow, and past the printed date the manufacturer can no longer guarantee all of those nutrients are present within the formula.

Meat, fish, poultry, dairy, and fresh bakery products are dated with a "sell by" or "display until" date to indicate how long the food can be displayed for sale. The "sell by" date allows a reasonable amount of time after the purchase in which the product can be used. Often times, grocery stores and supermarkets will discount foods as they get closer to the "sell by" date.

Cereals, snack foods, frozen entrees, and dry packaged foods may be marked with a "best if used by," best by," "best before," or "use by" date. The products are not at their best quality after this date, but can still be used safely consumed.

Another label that can be found on some meat, poultry, fish, or other perishable products is a "freeze by," "prepare or freeze by," or "use or freeze by" date. This date is to let the consumer know when to prepare the food, or if they won't prepare it by then when to freeze it until they will prepare it.

Shopping for Food

When food shopping, pick-up refrigerated and frozen foods just prior to checkout. Refrigerated foods should be cold (<40°F), and frozen foods should be solid with no evidence of thawing (<0°F). Refrigerated and frozen food should be bagged together. After shopping, drive straight home and store food in the refrigerator or freezer. If you live further from the store, consider using insulated grocery bags or a cooler.

Proper Storage Extends Shelf-Life of Food

The shelf-life of food will depend upon the food itself, it's packaging, the temperature, and the humidity. Foods, such as dairy products, meats, poultry, eggs, as well as fresh fruits and vegetables, will spoil rapidly if not stored at proper temperatures.

For optimal quality and safety, dairy products should be stored at refrigerated temperatures between 34°F and 38°F, meats between 33°F and 36°F, and eggs 33°F to 37°F. Fresh vegetables and ripe fresh fruits should be stored between 35°F and 40°F. Always store refrigerated foods at temperatures less than 40°F. So, for optimal quality and safety consider keeping your refrigerator at 35°F. Place a thermometer in the refrigerator and monitor the temperature often.

There is a particular order you should store foods in the refrigerator to decrease the risk of crosscontamination. This is where any bacteria or other foodborne hazards that can make people sick are transferred from one food to another. It is based on if you will or will not cook the food, and if you will cook the food the final recommended cooking temperature.

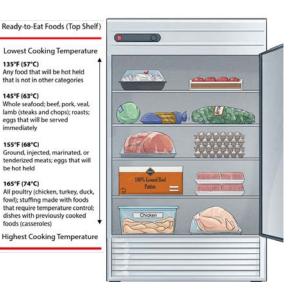


Figure 2. A chart showing the recommended order of storing foods in the refrigerator to decrease the risk of cross-contamination. Source: <u>State Food</u> <u>Safety</u>

Frozen foods should be stored below 0°F in moisture-proof, gas-impermeable plastic or freezer wrap. Make sure to label and date frozen foods so you know what it is when you take it out.

Be mindful not to overload your refrigerator or freezer. If you do, you can block the airflow necessary to keep the entire unit at the proper temperature.

Dry foods such as flour, crackers, cake mixes, seasonings, and canned goods should be stored in their original packages or tightly closed airtight containers below 85°F (optimally 50°F to 70°F). Humidity levels greater than 60% may cause dry foods to absorb moisture, resulting in caked and staled products. Canned goods stored in high humidity may ultimately rust, resulting in leaky cans. Discard canned goods that are swollen, badly dented, rusted, and/or leaking.

Food that is not stored at the recommended temperature will spoil. You will know it has spoiled because of any off-odors, off-flavors, off-color, and/or soft texture. For instance, spoiled milk exhibits a fruity off-odor, acid taste, and may curdle. Spoiled fresh fruits and vegetables may exhibit an off-color and soft texture. Slime on the surface of meat, poultry, and fish indicates spoilage. Mold on the surface of dairy products indicates spoilage.

When you take foods out of the refrigerator or freezer, leave them out for no more than 2 hours (or 1 hour if the ambient temperature is above 90°F). Discard all refrigerated and frozen foods that may have been at room temperature more than 2 hours (or 1 hour if the ambient temperature is above 90°F).

To ensure your food stored is consumed at the highest quality, practice FIFO (First-In-First-Out). When stocking food storage areas, place recently purchased items behind the existing food items. If you shop or receive food from multiple sources, you may need to check the dates printed on the package so you know where to put your food in that order.

We recommend that you portion leftovers of prepared foods in clean, sanitized, shallow containers that you cover, label, and date (for example, by writing on a piece of masking or painters tape). Generally, leftovers should be discarded after 3-4 days in the refrigerator. You could also freeze leftovers to eat them later. For safety, always store food separate from non-food items such as household cleaners, and insecticides. Contamination of food or eating utensils with a household cleaner or insecticide could result in a chemical poisoning.

What To Do When The Power Goes Out

When the power goes out in the home, do not open your refrigerator or freezer. Refrigerators and freezers are insulated, aiding in keeping foods cold without active cooling. However, if the refrigerator or freezer door is opened, that cooling effect will be lost.

Perishable refrigerated foods (i.e. meat, poultry, seafood, dairy, and cut fruits and vegetables) should be discarded after a 4-hour period. Food stored in fully loaded freezers may last for approximately two days (48 hours), whereas food stored in partially loaded freezers may last for only one day (24 hours).

Freezer foods may be refrozen if ice crystals are present or if it is at 40°F or lower. However, quality may be diminished. If in doubt about the safety of any food stored in a refrigerator or freezer after the power goes out, do not eat it.

If the power is not going to be restored in enough time, you could consider loading your refrigerator or freezer with ice or dry ice to keep the foods appropriately cold. Or, you could move foods into an insulated cooler filled with ice or dry ice. If you use dry ice, be careful not to handle it with bare hands or breathe the vapors.

Recommended Storage For Various Foods

Breads, Cereals, Flour and Rice

Bread should be stored in the original package at room temperature. However, *bread* stored in the refrigerator may be firmer and will have a longer shelf-life due to delayed mold growth. Refrigerate *cream-filled bakery goods* containing *eggs, cream cheese, whipped cream and/or custards.*

Cereals may be stored at room temperature in tightly closed containers to keep out moisture and insects.

Whole wheat flour and other *whole grains* may be stored in the refrigerator or freezer to extend shelf-life by protecting the naturally present oil from becoming rancid.

Store *raw white rice* in tightly closed containers at room temperature and use within one year. *Brown* and *wild rice* stored at room temperature will have a shorter shelf-life due to the naturally present oil becoming rancid. Shelf-life of *rice* may be extended by refrigeration or freezing.

Fresh, Whole Vegetables

Removing air (oxygen) from the package, storing the vegetables at 40°F refrigerated temperatures, and maintaining optimum humidity (95 to 100%) may extend shelf-life of *fresh vegetables*. Most *fresh vegetables* may be stored up to 5 days in the refrigerator. Proper storage of *fresh vegetables* will maintain quality and nutritive value. Always store *fresh vegetables* in a separate storage area in the refrigerator, to avoid any odor transfer or bacterial contamination. Prior to consumption, rinse *fresh vegetables* under cold running water to remove possible pesticide residues, soil, and/or bacteria.

Root vegetables (potatoes, sweet potatoes, onions, etc.) and *squashes, eggplant,* and *rutabagas* should be stored in a cool, well-ventilated place between 50°F and 60°F.

Tomatoes continue to ripen after harvesting and should be stored at room temperature.

Removing the tops of *carrots, radishes,* and *beets* prior to refrigerator storage will reduce loss of moisture and extend shelf-life.

Palatability of *corn* diminishes during cold storage due to elevated starch content. *Corn* and *peas* should be stored in a ventilated container.

Lettuce should be rinsed under cold running water, drained, packaged in containers or bags, and refrigerated.

Processed Vegetables

Canned vegetables can be stored in a cool, dry area below 85°F (optimum 50°F to 70°F). *Canned vegetables* will remain safe to consumer after the use-by date, however overall quality and nutritional value may have diminished. Discard badly dented, swollen, and/or rusty cans. *Frozen vegetables* may be stored in the freezer. Follow package instructions for thawing/cooking. *Dehydrated vegetables* should be stored in a cool, dry place in a sealed container or bag.

Fresh, Whole Fruit

In general, store *fresh fruit* in the refrigerator or in a cold area to extend shelf-life. Reduce loss of moisture from *fresh fruit* by using covered containers. Always store *fresh fruit* in a separate storage area in the refrigerator, to avoid any odor transfer or bacterial contamination. Prior to consumption, rinse *fresh fruits* under cold running water to remove possible pesticide residues, soil, and/or bacteria.

Ripe eating *apples* should be stored separately from other foods in the refrigerator and eaten within one month. *Apples* stored at room temperature will soften rapidly within a few days. Remember to remove *apples* that are bruised or decayed prior to storage in the refrigerator. Do not wash *apples* prior to storage.

Green pears and *apricots* should be ripened at room temperature and then stored in the refrigerator.

Unripe *peaches* and *nectarines* may be ripened at room temperature and ripe *peaches* and *nectarines* may be stored in the refrigerator. Consume *peaches* and *nectarines* at room temperature.

Grapes and *plums* can be stored in the refrigerator. Store unwashed *grapes* separately from other foods in the refrigerator and wash prior to consumption.

Ripe *strawberries* can be stored in the refrigerator separately from other foods. *Strawberries* should be washed and stemmed prior to consumption.

Citrus fruits, such as *lemons*, *limes*, and ripened *oranges*, can be stored in the refrigerator. *Grapefruit* may be stored at a slightly higher temperature of 50°F.

Melons, such as the *honeydew melon*, *cantaloupe*, and *watermelon*, may be ripened at room temperature. Store ripe *melons* in the refrigerator.

Avocados and bananas should be ripened at room temperature. Storing unripe bananas in the refrigerator will cause the bananas to rapidly darken.

Processed Fruit

Canned fruit and *fruit juices* may be stored in a cool, dry place below 85°F (optimum 50°F to 70°F). As with *canned vegetables*, *canned fruits* can be safely consumed after the printed use-by date, however overall quality and nutritional value may have diminished. Discard badly dented, bulging, rusty, or leaky cans. *Dried fruits* have a long shelf-life because moisture has been removed from the product.

Dairy Products

The shelf-life of *fluid milk* stored in the refrigerator (<40°F) will range from 8 to 20 days depending upon the date of manufacture and storage conditions in the grocery store. *Milk* is a very nutritious and highly perishable food. *Milk* should never be left at room temperature and always capped or closed during refrigerator storage. Freezing *milk* is not recommended, since the thawed *milk* easily separates and is susceptible to development of off-flavors.

Dry milk may be stored in airtight containers for one year. Opened containers of *dry milk*, especially whole *milk* products, should be stored at cold temperatures to reduce off-flavors. Handle *reconstituted milk* like *fluid milk* and store at refrigeration temperatures if not immediately used.

Canned evaporated milk and *sweetened condensed milk* may be stored at room temperature. Refrigerate opened *canned milk*.

Natural and *processed cheese* should be kept tightly packaged in moisture-resistant wrappers and stored below 40°F. Surface mold growth on hard *natural cheese* may be removed with a clean knife and discarded. Rewrap *cheese* to prevent moisture loss.

Presence of mold growth in *processed cheese*, *semi-soft cheese*, and *cottage cheese* is an indicator of spoilage. These foods should be discarded.

Store commercial *ice cream* in the freezer. Immediately return opened *ice cream* to the freezer to prevent loss of moisture and development of ice crystals. Store *ice cream* at constant freezer temperatures to slow growth of ice crystals.

Meats, Poultry, Fish, and Eggs

Meat, poultry, fish, and *eggs* are highly perishable and potentially hazardous due to their high moisture and high protein content. Generally, fresh cuts of *meat, poultry, and fish* contain spoilage bacteria on the surface that will grow, produce slime, and cause spoilage after 3 days of refrigerator storage in oxygen-permeable packaging film. For maximum storage in the freezer, wrap in moisture-proof, gas impermeable packaging to prevent freezer burn.

Raw meats should be stored on the lower shelves of the refrigerator. Refrigerator storage slows bacterial growth; however, the product will eventually spoil. Optimum storage temperature of refrigerated *meats*, including *ground meat*, is 33°F to 36°F.

Ground meat products are more susceptible to spoilage due to the manufacturing process and increased surface area of the product. Bacteria in *ground meats* are distributed throughout, providing rapid growth in the presence of air.

Cured meats, such as *bacon*, should be stored in their original packaging in the refrigerator. *Cured meats* have a tendency to become rancid when exposed to air. Therefore, rewrap *cured meats* after opening the package.

Vacuum-packaging (absence of air) and modified atmospheric packaging (partial removal of air) extends shelf-life of *meats* and *meat products* (i.e. *luncheon meats*). Freezing inhibits the growth of bacteria.

Poultry can be bought fresh or frozen. *Raw poultry* should be stored on the lower shelf of the refrigerator. Thaw *poultry* in the refrigerator, under cold running water, or in the microwave.

Fresh *fish*, *shrimp*, and *crab should be* stored in the refrigerator (slightly above 32°F). Never store *fresh fish* in water due to leaching of nutrients, flavor, and pigments. Keep *frozen fish*, *shrimp*, and *crab* in the freezer until ready to use. Thaw according to package instructions.

Eggs should be purchased refrigerated and stored in the refrigerator (33°F to 37°F) in their original carton. Storage of *eggs* in the original carton reduces absorption of odors and flavors from other foods stored in the refrigerator. *Shell eggs* should never be stored in the freezer. Leftover *egg yolks* and *egg whites* may be stored in the refrigerator. Cover *egg yolks* with water. *Hardboiled eggs, pasteurized liquid eggs, pasteurized liquid egg white,* and *pasteurized liquid egg substitute* should be stored in the refrigerator. *Egg whites, pasteurized liquid eggs, pasteurized liquid egg white,* and *pasteurized liquid egg substitute* may also be frozen.

Water

Commercial bottled water has an extended shelf-life of one to two years due to extensive water treatment (filtration, demineralization, and ozonation) and strict environmental controls during manufacturing and packaging. Bottled water should be stored in a cool, dry place in the absence of sunlight. Household tap water has a limited shelf-life of only a few days due to the growth of microorganisms during storage. Therefore, consumers should purchase bottled water if planning to store water for extended periods.

References

FoodSafety.gov. 2023. FoodKeeper App. https://www.foodsafety.gov/keep-foodsafe/foodkeeper-app

McCurdy, S., J. Peutz, and G. Whittman. 2009. Storing Food for Safety and Quality. University of Idaho. https://catalog.extension.oregonstate.edu/sites/cat alog/files/project/pdf/pnw612.pdf

USDA. 2021. Safe Food Handling and Preparation. USDA, Food Safety and Inspection Service, Washington, D.C. https://www.fsis.usda.gov/food-safety/safe-foodhandling-and-preparation

Acknowledgements

We would like to acknowledge Tim Roberts, Paul Graham, and Julie McKinney for their contributions to previous editions of this publication.

Visit Virginia Cooperative Extension: ext.vt.edu

Virginia Cooperative Extension is a partnership of Virginia Tech, Virginia State University, the U.S. Department of Agriculture, and local governments. Its programs and employment are open to all, regardless of age, color, disability, gender, gender identity, gender expression, national origin, political affiliation, race, religion, sexual orientation, genetic information, military status, or any other basis protected by law.

2023

348-960 (FST-453NP)

Virginia Cooperative Extension

Appendix 1. Food Storage Recommendations

The following tables provide general recommended storage times from date of purchase for various food products stored under optimum conditions. Storage generally is not recommended under conditions where no time is listed in the chart.

This chart does not include all foods. Please use/download the FoodKeeper App from the United States Department of Agriculture to find foods not included on this chart. The tables in this appendix include information about the following foods:

- 1. Bread and cereal products (page 6)
- 2. Dry goods, packaged foods, and mixes (page 7)
- 3. Spices, herbs, condiments, and extracts (page 8)
- 4. Other food staples (page 8)
- 5. Vegetables (page 10)
- 6. Fruits (page 11)
- 7. Dairy (page 12)
- 8. Meat (page 13)
- 9. Fish and seafood (page 14)
- 10. Poultry (page 15)
- 11. Eggs (page 15)
- 12. Wild game (page 16)

Please note the following code to interpret symbols within the charts:

- * Opened
- + Cooked
- ^ Refrigerate after opening
- # After manufacture date

Table 1. Recommendations for storing bread and cereal products.

Food	Pantry (Room Temperature)	Refrigerator (33°F to 40°F)	Freezer (32°F)
Bread, homemade	3-5 days	2-3 months	
Bread, purchased	14-18 days	2-3 weeks*	3-5 months
Breadcrumbs	6 months		
Bread rolls, unbaked		3-4 days	1 year
Cereals, ready-to-eat	6-12 months		
	2-3 months*		
Cereals, ready-to-cook	1 year		
	6-12 months*		
Corn meal (regular, de-germinated)	6-12 months	1 year*	
	2 years*		
Corn meal (stone ground or blue)	1 month	2-4 months*	
Croutons	5-6 months	5-6 months	11-12 months

Doughnuts	1-2 days	2 days	
Flour, all-purpose, white	6-12 months	1 year	
	6-8 months*		
Flour, whole wheat	3-6 months	6-8 months*	
Pasta	2 years		
	1 year*		
Pies and pastries		Package use-by date	2 months
Pies and pastries, fruit	1-2 days	1 week*	8 months
Pies and pastries, cream filled		3-4 days	
Pies and pastries, custard filled	2 hours	3-4 days [*]	1-2 months
Pizza, frozen		3-4 days	1 year
Pizza, leftovers		3-4 days	1-2 months
Rice, brown	1 year	4-6 days+	6 months+
	1 year*	6 months*	
Rice, white	2 years	4-6 days⁺	6 months⁺
	1 year*	6 months*	
Tortillas, corn	25-45 days	60-90 days	
Tortillas, flour	3 months	3 months*	6 months
Waffles, frozen			3 months

Table 2. Recommendations for storing dry goods, packaged foods, and mixes.

Food	Pantry (Room Temperature)	Refrigerator (33°F to 40°F)	Freezer (32°F)
Bread, brownie, and cake mixes	12-18 months		
Cakes and muffins, prepared	3-7 days	7-10 days*	6 months
Casseroles, prepared	3-4 days		
Cookies, frozen dough		3-4 days⁺	1 year
Cookies, refrigerated dough		Package use-by date	2 months
Cookies, packaged	2-6 months		8-12 months
Crackers	8 months	3-4 months*	3-4 months
	1 month*		
Frosting, canned	10-12 months	2-3 weeks*	
Frosting, mix	8 months		
Fruit cake	6 months	1 year*	1 year
Instant breakfast drinks	6 months		
Muffin mix	9 months		
Pancake, waffle, and biscuit mix	9 months		

Pretzels	4-9 months		
	3 weeks*		
Toaster pastries	6-12 months		
	1-2 weeks*		
Sauce and gravy mixes	2 years	1-2 days⁺	
Soup mixes	1 year		

Table 3. Recommendations for storing spices, herbs, condiments, and extracts

Food	Pantry (Room Temperature)	Refrigerator (33°F to 40°F)	Freezer (32°F)
Ketchup, chili, or cocktail sauce	1 year	6 months*	
Herbs	1-2 years	1-2 years	
Herb/spice blends	6 months		
Mustard	1-2 years	1 year*	
Spices, ground	2-3 years		
	2-3 years*		
Spices, whole	3-4 years		
	3-4 years*		
Vanilla extract	2 years		
	1 year*		
Other extracts	2 years		
	1 year*		

Table 4. Recommendations for storing other food staples

Food	Pantry (Room Temperature)	Refrigerator (33°F to 40°F)	Freezer (32°F)
Bacon bits	1 year	Package use-by date [*]	
Baking powder	6-18 months		
	3-6 months*		
Baking soda	2-3 years		
	6 months*		
Bouillon (dry)	1 year		
	1 year*		
Carbonated soft drinks (bottles or cans)		2-3 days*	
Chocolate syrup	2 years	6 months*	
Chocolate, semisweet and unsweetened	1-2 years		

Cocoa mixes Indefinitely Indefinitely Indefinitely Coconut, shredded 1 year 8 months' 1 year Coffee, ground 2 years 1 month' 6-12 months Coffee, instant 1 year 2.3 months' 1 Coffee, whole beans 3-5 months' 3-4 months' 1 Coffee creamer (liquid) 3 weeks 1 2.3 months' 1 Coffee creamer (powdered) 2 years 1 year 1 2.3 months' 1 Coffee creamer (powdered) 2 years 1 year 1 1 1 Coffee creamer (powdered) 2 years 1 year 1 1 1 Coffee creamer (powdered) 2 years 1 1 1 1 1 Coffee creamer (powdered) 2 years 1		1 year*		
Coconut, shredded1 year8 months'1 yearCoffee, ground2 years1 month'6-12 months2 weeks'116-12 monthsCoffee, instant1 year112-3 months'3-4 months'1Coffee, whole beans3-5 months'3-4 months'Coffee creamer (liquid)3 weeks1Coffee creamer (powdered)2 years1 yearCornstarch18-24 months'118 months'11Gelatin3 years1Honey2 years1Jams, jellies, and preserves6-18 months6-12 months'Syrup1 year6 months'1Marshmallows1 year11Marshmallows1 year6 months'1Masses2-5 months21Molasses1-2 years11Muts, shelled2-4 weeks9-12 months24 monthsOil, salad6-12 months24 months24 monthsOil, salad6-12 months4 months'1Peanut butter6-24 months4 months'24 monthsPopcorn, kernels2 years1 year1Popcorn, kernels2 years2 weeks'3 monthsPopcorn, microwave packets6-12 months12Popcorn, microwave packets6-12 months22Popcorn, microwave packets6-12 months12Popcorn, microwave packets6-12 months12	Cocoa mixes	Indefinitely		
Coffee, ground2 years1 month'6-12 monthsCoffee, instant1 year2.3 months'Coffee, whole beans3-5 months3-4 months'-3-5 months3-4 months'Coffee creamer (liquid)3 weeksCoffee creamer (powdered)2 years1 year2:3 months'Cornstarch18-24 months18 months'Gelatin3 yearsHoney2 yearsJams, jellies, and preserves6-18 months6-12 months'Syrup1 year6 months'Marshmallows1 year1 month'Marshmallow cream2-5 months2 monthsMayonnaise3-6 months2 months24 monthsMuts, shelled2-4 weeks9-12 months24 monthsNuts, unshelled2-4 weeks9-12 months24 monthsOil, saladPeanut butter6-24 months22Popcorn, kernels2 years-1year'-		1 year*		
Z weeks'Image: Sector of the sect	Coconut, shredded	1 year	8 months*	1 year
2 weeks'12 weeks'1Coffee, instant1 year2-3 months'3-4 months'2-3 months3-4 months'3-5 months3-4 months'Coffee creamer (liquid)3 weeksCoffee creamer (powdered)2 years2 years1 yearCornstarch18-24 months18 months'1Cornstarch19/24 months19 wears1Gelatin3 yearsHoney2 yearsJams, jellies, and preserves6-18 months6-18 months'1Syrup1 year1 month'1Marshmallows1 year1 month'1Marshmallow cream2-5 months1-2 years1Mayonnaise3-6 months1-2 years1Muts, shelled2-4 weeks2-4 weeks9-12 months2-4 weeks9-12 months3-5 months'1Parmesan grated cheese1 yearParmesan grated cheese1 yearPeanut butter2-2 years2-3 months'2 weeks'2-3 months'2 weeks'2-3 months'2 weeks'2-3 months'2 weeks'2-4 weets9-12 months2-5 months4 months'3-5 months'1Parmesan grated cheese1 yearParmesan grated cheese2 years2-3 months'2 weeks'2-3 months'2 weeks'2-3 months'2 weeks'2-3 months' <th>Coffee, ground</th> <th>2 years</th> <th>1 month[*]</th> <th>6-12 months</th>	Coffee, ground	2 years	1 month [*]	6-12 months
2-3 months'Image: second s		2 weeks*		
Coffee, whole beans3-5 months3-4 months'Coffee creamer (liquid)3 weeks	Coffee, instant	1 year		
3-5 months'3Coffee creamer (liquid)33Coffee creamer (powdered)2years12-3 months'12Cornstarch18-24 months118 months'11Gelatin3years1Honey2years1Jams, jellies, and preserves6-18 months6-12 months'Syrup1year6 months'Marshmallows111month'1Marshmallow cream2-5 months1111Mayonnaise3-6 months2Nuts, shelled2-4 weeks9-12 months0il, salad6-12 months'24 months0il, salad6-12 months1Parmesan grated cheese11Parmesan grated cheese2years22years3 months'Peanut butter6-24 months261years22years3-5 months'102years3-5 months'102-402-403-5021years1103-5021years2years1111111111111212		2-3 months*		
Coffee creamer (liquid)3 weeks1Coffee creamer (powdered)2 years1 year2-3 months'12Cornstarch18-24 months118 months'11Gelatin3 years1Honey2 years1Jams, jellies, and preserves6-18 months6-12 months'Syrup1 year6 months'1Marshmallows1 year6 months'1Marshmallow cream2.5 months11Mayonnaise3-6 months2 months1Molasses1-2 years11Muts, shelled2-4 weeks9-12 months24 monthsOil, salad6-12 months'11Parmesan grated cheese1 year1 year1Parmesan grated cheese2 years2 weeks'3 monthsPeanut butter6-24 months2 weeks'3 monthsPopcorn, kernels2 years2 weeks'3 monthsPopcorn, microwave packets6-12 months11Popcorn, microwave packets6-12 months11Popcorn, microwave packets6-12 months11Popcorn6-24 months11Popcorn, microwave packets6-12 months16-12 months111Popcorn6-24 months1111911911911921	Coffee, whole beans	3-5 months	3-4 months*	
Coffee creamer (powdered)2 years1 year2-3 months'ICornstarch18-24 months18 months'IGelatin3 yearsHoney2 yearsJams, jellies, and preserves6-18 months6-12 months'ISyrup1 year1 wear6 months'Marshmallows1 year1 month'IMarshmallow cream2-5 months2-5 months2 months1 month'IMayonnaise3-6 months'1 1 2 yearsIMuts, shelled2-4 weeks9-12 months'24 months'Nuts, shelled2-4 weeks9-12 months24 months'Oil, salad6-12 months'Parmesan grated cheese1 yearPasteurized process cheese spread2 years2 years2 weeks'2 weeks'3 months'Papoporn, kernels2 yearsPopcorn, microwave packets6-12 months6-12 months'I9-12 months29-12 months19-12 months3 months'9-12 months41 year19-12 months19-12 months1<		3-5 months*		
2-3 months'Image: sector s	Coffee creamer (liquid)		3 weeks	
Cornstarch18-24 monthsImage: state sta	Coffee creamer (powdered)	2 years	1 year	
Image: series of the series		2-3 months*		
Gelatin3 yearsImage: series of the ser	Cornstarch	18-24 months	<u>_</u>	
Honey2 yearsImage: series of the serie		18 months*		
Jams, jellies, and preserves6-18 months6-12 months'Syrup1 year6 months'6Marshmallows1 year66Marshmallow cream2-5 months11Mayonnaise3-6 months2 months1Molasses1-2 years11Muts, shelled2-4 weeks9-12 months24 monthsNuts, unshelled2-4 weeks9-12 months24 monthsOil, salad6-12 months4 months'1Parmesan grated cheese1 year1 year1Peanut butter6-24 months'2 weeks'3 months'Popcorn, kernels2 years1 year'1Popcorn, microwave packets6-12 months116-12 months'111Popcorn, microwave packets6-12 months11Popcorn the crowave packets6-12 months11Packet Packet	Gelatin	3 years		
Syrup1 year6 months'Marshmallows1 year6 months'Marshmallow cream1 year1Mayonnaise2-5 months1Mayonnaise3-6 months2 monthsMolasses1-2 years1Molasses1-2 years1Muts, shelled2-4 weeks9-12 monthsNuts, unshelled2-4 weeks9-12 monthsOil, salad6-12 months'1Parmesan grated cheese1 year1 yearPasteurized process cheese spread2 years3 months'Peanut butter6-24 months2 weeks'3 monthsPopcorn, kernels2 years1 year'1Popcorn, microwave packets6-12 months11Port6-12 months11Port6-12 months11Port6-12 months11Port6-12 months11Port111Port11Port11Port11Port11Port1Port1Port1Port1Port1Port1Port1Port1Port1Port1Port1Port1Port1Port1Port1Port1Port1Port <t< th=""><th>Honey</th><th>2 years</th><th></th><th></th></t<>	Honey	2 years		
Marshmallows1 year1Marshmallow cream1 year1Marshmallow cream2-5 months11 month'11Mayonnaise3-6 months2 monthsMolasses1-2 years1Muts, shelled2-4 weeks9-12 monthsNuts, unshelled2-4 weeks9-12 monthsOil, salad6-12 months4 months'Parmesan grated cheese1 year1Pasteurized process cheese spread2 years2 weeks'Popcorn, kernels2 years2 weeks'Popcorn, microwave packets6-12 months1For potential cheese1 year'1Popcorn, microwave packets6-12 months1For potential cheese1 year'1Popcorn, microwave packets6-12 months1For potential cheese1 year'1For potential cheese1 year1For potential cheese1 year1For potential cheese1 year1For potential cheese1 year1For potential cheese <th>Jams, jellies, and preserves</th> <th>6-18 months</th> <th>6-12 months*</th> <th></th>	Jams, jellies, and preserves	6-18 months	6-12 months*	
I month*1 month*I month*Marshmallow cream2-5 monthsI1 month*1IMayonnaise3-6 months2 monthsMolasses1-2 yearsI6 months*IINuts, shelled2-4 weeks9-12 monthsNuts, unshelled2-4 weeks9-12 monthsOil, salad6-12 months4 months*Parmesan grated cheese1 yearIParmesan grated cheese2 years2 weeks*Peanut butter6-24 months2 weeks*Popcorn, kernels2 yearsIPopcorn, microwave packets6-12 monthsII year*1IPopcorn, microwave packets6-12 monthsI	Syrup	1 year	6 months*	
Marshmallow cream2-5 monthsImmothing1 monthing1ImmothingMayonnaise3-6 months2 monthsMolasses1-2 yearsImmothingMuts, shelled2-4 weeks9-12 monthsNuts, unshelled2-4 weeks9-12 monthsOil, salad6-12 months4 monthsingParmesan grated cheese1 year24 monthsPasteurized process cheese spread2 years2 weeksingPeanut butter6-24 months2 weeksingPopcorn, kernels2 yearsImmothingPopcorn, microwave packets6-12 monthsImmothing	Marshmallows	1 year		
I month*1 month*Mayonnaise3-6 months2 monthsMolasses1-2 years-I -2 years6 months*9-12 months24 monthsNuts, shelled2-4 weeks9-12 months24 monthsNuts, unshelled2-4 weeks9-12 months24 monthsOil, salad6-12 months4 months*-Parmesan grated cheese1 year3-5 months*-Pasteurized process cheese spread2 years2 weeks*3 monthsPeanut butter6-24 months2-3 months*Popcorn, kernels2 yearsPopcorn, microwave packets6-12 months6-12 months6-12 months*9-12 months*9-12 months*9-12 months*9-12 months*9-12 months*9-12 months*9-13 months*9-14 months*9-15 months*9-16 months*9-17 months*9-18 months*9-19 months*9-10 months*9-10 months*9-11 months*9-12 months*9-13 months*-9-14 months*- <tr< th=""><th></th><th>1 month*</th><th></th><th></th></tr<>		1 month*		
Mayonnaise3-6 months2 monthsMolasses1-2 years-6 months'-Nuts, shelled2-4 weeks9-12 monthsNuts, unshelled2-4 weeks9-12 monthsOil, salad6-12 months4 months'Oil, salad6-12 months4 months'Parmesan grated cheese1 yearPasteurized process cheese spread2 years2 weeks'Peanut butter6-24 months-Popcorn, kernels2 years-Popcorn, microwave packets6-12 months-	Marshmallow cream	2-5 months		
Molasses1-2 yearsImage: constraint of the section of the secti		1 month*		
Nuts, shelled6 months'9-12 months24 monthsNuts, unshelled2-4 weeks9-12 months24 monthsOil, salad6-12 months4 months'24 monthsOil, salad6-12 months4 months'1Parmesan grated cheese3-5 months'11Pasteurized process cheese spread2 years2 weeks'3 monthsPeanut butter6-24 months11Popcorn, kernels2 years11Popcorn, microwave packets6-12 months11	Mayonnaise	3-6 months	2 months	
Nuts, shelled2-4 weeks9-12 months24 monthsNuts, unshelled2-4 weeks9-12 months24 monthsOil, salad6-12 months4 months'24 monthsParmesan grated cheese3-5 months'11Pasteurized process cheese spread2 years2 weeks'3 monthsPeanut butter6-24 months221Popcorn, kernels2 years111Popcorn, microwave packets6-12 months11	Molasses	1-2 years		
Nuts, unshelled2-4 weeks9-12 months24 monthsOil, salad6-12 months4 months*6-12 months4 months*Parmesan grated cheese3-5 months*1 year6-12 weeks*3 monthsPasteurized process cheese spread2 years2 weeks*3 monthsPeanut butter6-24 months2-3 months*1Popcorn, kernels2 years1 year*1Popcorn, microwave packets6-12 months11		6 months*		
Oil, salad6-12 months4 months*Parmesan grated cheese3-5 months*1 yearPasteurized process cheese spread2 years2 weeks*3 monthsPeanut butter6-24 months2-3 months*1Popcorn, kernels2 years1 year1Popcorn, microwave packets6-12 months11	Nuts, shelled	2-4 weeks	9-12 months	24 months
And the set3-5 months*1Parmesan grated cheese1 year1 yearPasteurized process cheese spread2 years2 weeks*3 monthsPeanut butter6-24 months2-3 months*1Popcorn, kernels2 years11Popcorn, microwave packets6-12 months11	Nuts, unshelled	2-4 weeks	9-12 months	24 months
Parmesan grated cheese1 yearPasteurized process cheese spread2 years2 weeks'3 monthsPeanut butter6-24 months222Popcorn, kernels2 years122Popcorn, microwave packets6-12 months11	Oil, salad	6-12 months	4 months*	
Pasteurized process cheese spread2 years2 weeks*3 monthsPeanut butter6-24 months2-3 months*Popcorn, kernels2 years1 year*Popcorn, microwave packets6-12 months		3-5 months*		
Peanut butter6-24 monthsPopcorn, kernels2-3 months*Popcorn, microwave packets6-12 months	Parmesan grated cheese		1 year	
Popcorn, kernels 2-3 months* 1 year* 2 Popcorn, microwave packets 6-12 months	Pasteurized process cheese spread	2 years	2 weeks*	3 months
2-3 months* 2-3 months* Popcorn, kernels 2 years 1 year* 1 Popcorn, microwave packets 6-12 months	Peanut butter	6-24 months		
1 year* Popcorn, microwave packets 6-12 months		2-3 months*		
1 year* Popcorn, microwave packets 6-12 months	Popcorn, kernels	2 years		
· · · · · · · · · · · · · · · · · · ·		1 year*		
	Popcorn, microwave packets	-		
. =		1-2 days⁺		

Popcorn, popped in bags	6-12 months		
	1-2 days+		
Pectin	Package use-by date		
	1 month [*]		
Salad dressings, bottled	10-12 months	1-3 months*	
Soft drinks		2-3 days [*]	
Artificial sweetener	2 years		
	Indefinitely		
Sugar, brown	Indefinitely		
	18-24 months*		
Sugar, confectioners	Indefinitely		
	18-24 months*		
Sugar, granulated	Indefinitely		
	18-24 months*		
Tea bags	18-36 months		
	6-12 months*		
Tea, instant	2-3 years		
	6-12 months*		
Vegetable oils	6 months	4 months*	
	3-5 months*		
Vegetable shortening	1-2 years		
	6-12 months*		
Vinegar	2 years		
Water, bottled	Indefinitely		
Yeast, dry	2 years [^]	4 months*	6 months

Table 5. Recommendations for storing vegetables

Food	Pantry (Room Temperature)	Refrigerator (33°F to 40°F)	Freezer (32°F)
Asparagus		3-4 days	5 months
Beets	1 day	1-2 weeks	6-8 months
Broccoli		3-5 days	10-12 months
Brussels sprouts		3-5 days	10-12 months
Cabbage		1-2 weeks	10-12 months
Carrots, parsnips		2-3 weeks	10-12 months
Cauliflower		3-5 days	10-12 months
Celery		1-2 weeks	10-12 months
Corn (on the cob)		1-2 days	8 months

Cucumbers		4-6 days	
Eggplant	1 day	4-7 days	6-8 months
Green beans		3-5 days	8 months
Green peas		3-5 days	8 months
Lettuce		1-2 weeks	
Lima beans		3-5 days	8 months
Mushrooms		3-7 days	10-12 months
Onions, yellow, white, red, etc.	1 month	2 months	10-12 months
Onions, spring, green, etc.	1 month	1 week	10-12 months
Peppers	4-14 days	4-14 days	6-8 months
Pickles, canned	1 year	1-3 months*	
Frozen potatoes			1 year
Sweet potatoes	2-3 weeks		
White potatoes	1-2 months	1-2 weeks	10-12 months ⁺
Potato chips	Package use-by date		
	1-2 weeks		
Radishes		10-14 days	
Rhubarb		3-7 days	
Rutabagas	1 week	2-3 weeks	8-10 months
Snap beans		3-5 days	8 months
Spinach		3-7 days	
Squash, Summer	1-5 days	4-5 days	10-12 months
Squash, Winter	2-6 weeks	1-3 months	10-12 months
Tomatoes	Until ripe		2 months
Turnips		2 weeks	8-10 months
Commercial baby food, jars		2 days	
Canned vegetables	2-5 years	3-4 days	
Canned vegetables, pickled	1 year	1-2 months*	
Dried vegetables	1 year		
Frozen vegetables		3-4 days⁺	10-18 months
Vegetable soup	2-5 years	3-4 days	

Table 6.	Recommendations	s for	storing	fruits
----------	-----------------	-------	---------	--------

Food	Pantry (Room Temperature)	Refrigerator (33°F to 40°F)	Freezer (32°F)
Apples	3 weeks	4-6 months	8 months ⁺
Apricots	Until ripe	2-5 days	
Avocados	Until ripe	3-4 days	

Bananas	Until ripe	3 days	2-3 months
Berries		3-6 days	1 year
Canned fruit and fruit juices	12-18 months	5-7 days*	
Cherries		1 week	1 year
Citrus fruit	10 days	10-21 days	
Dried fruit	6 months	6 months*	
	1 month		
Frozen fruit			10-18 months
Fruit juice concentrate			2 years
Fruit, pre-cut, fresh		Package use-by date	1 year
		4 days [*]	
Grapes	1 day	1 week	1 month
Melons	Until ripe	2 weeks	1 month
		2-4 days	
Nectarines	Until ripe	3-5 days	2 months
Peaches	Until ripe	3-5 days	2 months
Pears	Until ripe	3-5 days	2 months
Pineapple	Until ripe	5-7 days	10-12 months
Plums	Until ripe	3-5 days	2 months

Table 7. Recommendations for storing dairy products

Food	Pantry (Room Temperature)	Refrigerator (33°F to 40°F)	Freezer (32°F)
Butter	1-2 days	1-2 months	6-9 months
Buttermilk		1-2 weeks	3 months
Cottage cheese		2 weeks	
		1 week [*]	
Cream cheese		2 weeks	
Cream, heavy		10 days	3-4 months
Cream, light		1 week	3-4 months
Eggnog commercial		3-5 days	6 months
Half-and-half		3-4 days	4 months
Margarine		6 months	1 year
Milk, Canned condensed or evaporated	1 year	4-5 days	
Milk, fresh		Package use-by date	3 months
Milk, powdered	3-5 years		

	3 months		
Milk, shelf-stable	6-12 months	5-7 days	
Milk, ultra-pasteurized		1-3 months	
		7-10 days*	
Ice cream and sherbet			6 months
Hard natural cheese (e.g. cheddar, Swiss)	6 months	6 months	6 months
	3-4 weeks*	3-4 weeks*	
Non-dairy milk (almond, coconut, rice, soy, etc.)		Package use-by date	
		7-10 days*	
Processed cheese		3-4 weeks	
Soft cheese (e.g. brie)	1-2 weeks	1-2 weeks	6 months
Pudding		Package use-by date	
		2 days*	
Snack dips		2 weeks	
Sour cream		Package use-by date	
Non-dairy whipped cream, tub		2 weeks	14 months
Real whipped cream, canned		3-4 weeks	
Yogurt		1-2 weeks	1-2 months

Table 8. Recommendations for storing meats

Food	Pantry (Room Temperature)	Refrigerator (33°F to 40°F)	Freezer (32°F)
Fresh beef and bison steaks		3-5 days	
Fresh beef and bison roasts		3-5 days	
Fresh pork chops		3-5 days	
Fresh lamb chops		3-5 days	
Fresh veal		3-5 days	
Fresh ground meat (e.g. beef, bison, veal, lamb)		1-2 days	
Cooked meat and meat dishes		3-4 days+	2-3 months+
Ham, whole bone-in fully cooked		1 week	1-2 months
Ham, canned	6-9 months	5-14 days*	
Ham, canned "keep refrigerated"		6-9 months	

Shelf-stable unopened canned meat (e.g. chili, deviled ham, corn beef)	2-5 years	3-4 days [*]	
Ham, cook before eating		1 week	1-2 months
Ham, uncured, cook before eating		3-5 days	6 months
Ham, uncured, cooked		3-4 days	3-4 months
Ham, dry-cured		1 week	1-2 months
Ham salad, store prepared or homemade		3-4 days	
Bacon, raw		1 week	1 month
		1 week*	
Bacon, fully cooked	6 months	5-14 days*	
Corned beef, uncooked		5-7 days	1 month
Sausage, fresh		1-2 days	1-2 months
Smoked breakfast sausage links, patties		1 week	1-2 months
Sausage, smoked (e.g. kielbasa)		1 week	1-2 months
Sausage, semi-dry (e.g. Summer sausage)		2-3 weeks*	6 months
Sausage, dry smoked (e.g. Pepperoni, jerky, dry Salami)		2-3 weeks	1-2 months
Frankfurters, bologna		2 weeks	1-2 months
		1 week*	
Luncheon meat		2 weeks	1-2 months
		3-5 days*	
Meat gravies		3-4 days	6 months
TV beef and pork dinners	18 months [#]		6 months
Meat based casseroles		3-4 days	
Variety meats (giblets, tongue, liver, heart, etc.)		1-2 days	3-4 months

Table 9. Recommendations for storing fish and seafood

Food	Pantry (Room Temperature)	Refrigerator (33°F to 40°F)	Freezer (32°F)
Breaded fish			18 months
Canned fish	2-5 years	3-4 days [*]	
Cooked fish or seafood		3-4 days	

Lean fish (e.g. cod, flounder, haddock)		1-2 days	
Fatty fish (e.g. bluefish, salmon, mackerel)		1-2 days	
Smoked fish		14 days	2 months
Seafood, crab		1-2 days	
Seafood, lobster in shell		1 day	1-2 months
Seafood, clams, mussels, and oysters		5-10 days	6-8 months
Seafood, shrimp		3-4 days	2-3 months
Seafood, shucked clams, mussels, and oysters		3-10 days	
Tuna salad, store prepared or homemade	3-4 days		

Table 10. Recommendations for storing poultry

Food	Pantry (Room Temperature)	Refrigerator (33°F to 40°F)	Freezer (32°F)
Chicken nuggets or patties		1-3 months	
Chicken livers		1-2 days	
Chicken and poultry TV dinners			3-4 months
Canned poultry	5 years	3-4 days [*]	3-4 months
Cooked poultry		3-4 days	
Fresh poultry		1-2 days	
Frozen poultry parts			9 months
Poultry pies, stews, and gravies		3-4 days⁺	6 months ⁺
Poultry salads, store prepared or homemade		3-5 days	
Poultry stuffing, cooked		3-4 days	4-6 months

Table 11. Recommendations for storing eggs

Food	Pantry (Room Temperature)	Refrigerator (33°F to 40°F)	Freezer (32°F)
Eggs, in shell		3-5 weeks	1 year
Eggs, hard-boiled, peeled and cooked		1 week	
Eggs, pasteurized, liquid		10 days	1 year
		3 days [∗]	

Egg substitute	10 days	1 year
	3 days*	
Egg yolks (covered in water)	2-4 days	1 year
Egg whites (For each cup of egg yolk add 1 Tbs. of sugar or salt)	2-4 days	1 year

Table 12. Recommendations for storing wild game

Food	Pantry (Room Temperature)	Refrigerator (33°F to 40°F)	Freezer (32°F)
Game birds		2 days	6 months
Small game (rabbit, squirrel, etc.)		2 days	1 year
Venison ground meat		5 days	6 months
Venison steaks and roasts		1 week	1 year