

## FOOD STORAGE FOR EMERGENCIES

Emergencies can happen at any time of the year for many reasons. Flooding, wind storms, earthquakes, fire, and even loss of income from major accident and illness can be considered an emergency. In general, people do not prepare until the emergency has happened. Planning ahead can save a lot of pain and headaches. Food, water and shelter are basic needs that come first when there is an emergency.

### Decision Making Considerations

Every family will have different needs in time of emergency. Your goal should be to have at least a 72 hour supply of food and water on hand. This will usually be enough to tide you over until outside help is available or the emergency is over. You can stock this gradually rather than all at once.

Keep the following questions in mind as you plan your emergency food supply. All family members should be involved in the decision-making.

#### **What foods are you going to store?**

Plan menus, take an inventory of foods that you already have on hand, and then decide how much you will need. There are three key elements to consider: variety, balance and moderation. All family members should have some input into the type of foods to be stored. Store foods that your family will eat.

#### **Where you will store the food?**

Food will keep longer in a cool, dry, dark location. Remember to use containers that are made for food use. Otherwise harmful chemicals may migrate into the food.

#### **What is your budget for both food and supplies?**

If you buy a little extra each time you shop, you'll soon have an adequate emergency food supply. An average 72 hour supply of food will cost about \$25 per person. The amount will vary with the kind of foods you select and what you have on hand.

#### **What resources do you already have on hand?**

This not only includes foods, but also heat sources for cooking in case of power outages. Do you have a wood stove, gas or charcoal barbecue, propane camp stoves, or cookers?

You can be resourceful about the equipment you use to cook the food. For example, you might fill a large (#10) tin can with charcoal and put a cooling rack on top. You'll need to poke some holes near the bottom of the can for venting. You can heat water on top of the can or use the heat source to cook your food. (Don't put food directly on the rack.) Just remember that you need to use this heat source outside. Never burn charcoal or propane indoors. The fumes can be very toxic.

After you know your resources, then decide how much and what kind of food and equipment you'll need to purchase to meet your family needs.

### **Cautions**

Beware of scams in times of emergency. There are always people trying to take advantage of the situation. Weigh all the pros and cons before deciding to purchase items and foods that you normally don't use. Evaluate whether there are other alternatives and whether you'll need the item to survive.

Don't hoard food. Making an emergency food plan part of your every day life can save you money and you will have security when an emergency occurs.

## **Things to consider when planning an emergency food supply**

- Consider what kind of preparation will be necessary. Is the food ready to eat or will it need to be cooked? How will you cook it?
- Consider whether water will be needed to prepare the foods. If so, how much will you need to store?
- Consider the shelf life of the food you're storing. Foods should be rotated every few months to maintain optimum quality.
- Consider how much you'll eat in one meal. Buy food in those quantities. You probably won't have refrigeration for leftovers and you don't want to waste food.
- Consider dietary restrictions of members of your family. Also consider likes and dislikes.
- Consider storing some favorite treats like peanut butter, jelly, crackers, granola bars, trail mixes and candy. These foods will keep up your spirits and give you quick energy.

## Ideas for foods that store well

These foods will keep well without refrigeration.

### **Grains and Cereals**

Ready to eat breakfast cereal.

Quick cooking cereals like oatmeal. (Individual packets are handy and stay fresh.)

Instant rice.

Noodle dishes like macaroni and cheese, Oriental-style noodles.

Crackers, pretzels, vacuum packed chips and cookies.

Dried bread products like rice cakes.

Dried peas, beans, lentils and grains. (You'll need to have a heat source to cook them.)

Loaves of bread (These can be stored in the freezer in case of emergency. Even if the power goes off, they'll maintain their quality for several days.)

### **Vegetables**

Canned vegetables.

Dried vegetables/soup mixes.

Instant mashed potatoes, dried scalloped, Au gratin potatoes, and potato buds.

Canned vegetable juices.

Fresh root vegetables like potatoes, carrots, yams, onions, and winter squash. (These vegetables will keep their quality for several months if stored in a cool basement cellar.)

Instant and canned vegetable soups.

### **Fruits**

Canned fruits.

Dried fruits.

Canned and bottled juices.

Dried fruit drink mixes like hot cider, cranberry, orange and grapefruit drink mixes.

Apples, oranges and grapefruit. (These will keep for several months in a cool basement, cellar or garage. Be sure to protect them from freezing.)

### **Meat/Meat Alternatives**

Peanut butter.

Canned meat, sausages, chicken, and fish.

Canned prepared foods like chili beans, baked beans, stews, pasta dishes and hearty soups.

Jerky.

Dried eggs.

Nuts and seeds.

### **Dairy Products**

Dried milk.

Hot drink mixes like cocoa.

Canned milk and milk drinks.

Canned cream soup mixes.

Process cheese spreads.

Dried buttermilk.

Puddings.

## **Other**

Trail mixes.

Staples like salt, peppers, favorite spices and herbs, sugar, honey, flour, baking powder and soda, creamers, soda pop, other bottled drinks, coffee and tea.

Candy bars and energy bars.

Liquid formula meals.

Pet food.

## **Storage Tips**

When food is stored too long, there's a risk of a few things happening:

- Color, flavor, aroma, texture, or appearance will deteriorate.
- Some nutrients will be lost (such as vitamin C).
- Insects and rodents may get into the food and make it unfit for human consumption.

These adverse changes can be minimized by storing food properly.

- ✓ The storage area should be located where the average temperature can be kept above 32°F and below 70°F. Remember that the cooler the storage area, the longer the foods will retain quality and nutrients.
- ✓ The storage area should be dry and adequately ventilated to prevent condensation of moisture on packaging material. Food should not be stored on the floor.
- ✓ Store some of your food in portable containers in case you have to leave your home. This way you can easily take your food and supplies with you. Large ice chests with wheels or a garbage can with wheels are good choices.
- ✓ Store foods in food-grade containers. This will prevent contamination of your food with harmful chemicals. For information about the safety of packaging material, contact the manufacture.
- ✓ Remember to rotate the foods that you store. Don't expect them to maintain their quality for a year or two. Products that aren't canned or dried should be rotated every six months. Rotate canned and dried foods at least once a year. Only store top quality foods.

## **Canned Foods**

Store commercially-canned food in a cool, dry place that will stay above freezing temperatures.

Inspect cans for signs of spoilage before eating (such as bulging, leaking, off-odors, and abnormal appearance).

Follow up-to-date recommendations for home-canning foods. (Contact the OSU Extension Service.) Remove rings after jars have sealed. Store jars in a cool, dry, dark place that will stay above freezing temperatures. Inspect jars for spoilage before eating. For an extra margin of

safety, boil low acid foods (vegetables, meat, poultry and fish) for 10 minutes before tasting. Never taste any product that looks or smells suspicious.

For best quality, use canned foods within one year. Foods that are properly canned and stored will last for many years, however quality changes may occur during long-term storage above 70° F. For example, the food may become soft or mushy. Light can fade the color of canned foods in glass jars.

### **Dried Foods**

The length of time you can store dried food depends on the type of food, the drying process (pretreatment), the level of moisture in the food, the way it is packaged and where it is stored.

The ideal storage place for dried food is cool, dry and dark. The cooler the storage area, the longer the shelf life. Dark areas are ideal because light fades the color of fruits and vegetables and decreases the amount of vitamin A.

You don't have to have a fancy place to store dried foods. A dark, unheated closet or drawer can be used. Metal containers have an advantage over glass or plastic because they keep the food in the dark.

Dried foods can be kept in the refrigerator or freezer. These cool temperatures help maintain high quality. Be sure they are well wrapped so that they do not pick up refrigerator and freezer flavors. If the power goes out, these foods will not spoil.

The most common storage problem with dried food is mold. Mold will grow on foods that are not completely dry or have absorbed moisture from their storage surroundings. Never eat dried foods that have molded. Some toxic molds can grow at room temperatures.

Loss of nutrients, general discoloration, and changes in the food structure can occur during storage. This can lead to poor rehydration, causing toughness in the cooked product.

### **Vacuum sealed food**

Vacuum packaging is not a substitute for refrigeration of perishable food. Don't store vacuum-packaged raw or cooked low acid foods (meat, fish, poultry, or vegetables) at room temperature. *Clostridium botulinum* spores could grow and produce a deadly toxin in the food. (This toxin is odorless and colorless.) Store moist vacuum packaged foods in the refrigerator for no more than 3 weeks or else freeze them.

Vacuum sealers should never be a substitute for canning.

Vacuum sealers can be safely used to package dried foods. These foods will stay fresh and safe as long as they are completely dried. Vacuum sealers are also great for packaging food for freezing (especially fish). Consider the cost of the equipment and bags before purchasing a vacuum sealer.

## Food Spoilage

### **Contamination**

Stored foods that come into contact with harmful substances can become unsafe to eat. Don't store non-food items next to food. For example, keep food separate from cleaning supplies. Also, don't package foods in non-food approved containers (such as storing grains in plastic garbage bags).

### **Insects and Rodents**

Rodents and insects love stored grains and dried foods. Buy insect-free foods and store them in tightly closed containers. Don't store foods in open containers on shelves. Keep food storage areas free from spilled food and food particles. To prevent insect infestation in bulk foods, keep all stored foods in tight, clean, metal, plastic or glass insect-proof containers that have tight fitting lids and no open seams or crevices. Store food off the floor and away from damp areas.

It's a good idea to freeze bulk grains and dried foods. Put 1 to 15 pounds of grain in a heavy plastic bag and freeze for 3-4 days. Remove from the freezer and leave at room temperature for a week. Then refreeze for several more days. This will kill the insect eggs as well as the larvae. Store the food in tight containers.

Large quantities of grains can be fumigated with dry ice. For 5 gallon containers, spread about 2 ounces crushed dry ice on 3-4 inches of grain in the bottom of the container (or use ½ pound dry ice for 100 pounds of grain). Then fill the container with the desired depth of cleaned grain. Wait about 30 minutes for the dry ice to vaporize (evaporate) before placing the lid on tightly. Caution: Wear gloves when handling dry ice.

Source: Family Food Education Program

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