



“Bee Prepared”

Lone Peak Pantry Cookbook

The Bee Prepared Cookbook was created in 2003 in response to requests for information about and effective use of the commodities suggested for family home storage. An effort has been made to select recipes using these commodities in familiar food preparation. It is our hope that the book will grow as the reader gathers additional recipes, information and enthusiasm.

Compiled by:
Claudia Erekson and Christine Van Wagenen
Sandy Utah Lone Peak Stake

Quotes from Church Leaders

We have been counseled:

- ◆ Prepare for times of need
- ◆ Store basics to sustain life for one year
- ◆ Learn to use what we store
- ◆ Keep a year's supply and stay out of debt
- ◆ Grow food when possible
- ◆ Those who faithfully follow the counsel will be blessed
- ◆ The time to disregard this counsel is over

"We want you to be ready with your personal storehouses filled with at least a year's supply. You don't argue why it cannot be done; you just plan to organize and get it done." (Spencer W. Kimball, August 1976)

"A year's supply of food storage is beneficial in several ways:

1. It provides peace of mind as we obey the counsel to store.
2. It helps ensure survival in case of personal or natural disaster.
3. It strengthens skills in preparing and using basic foods."

(Home Storage: Build on the Basics, *Ensign*, June 1989, 40)

"As long as I can remember, we have been taught to prepare for the future and to obtain a year's supply of necessities....I believe the time to disregard this counsel is over. With the events in the world today, it must be considered with all seriousness....Create a plan if you don't already have one, or update your present plan...We are not in a situation that requires panic buying, but we do need to be careful in purchasing and rotating the storage that we are putting away. (L. Tom Perry, *Ensign*, November 1995, 36)

"Recent surveys of Church members have shown a serious erosion in the number of families who have *a year's supply* of life's necessities. Most members plan to do it. Too few have begun.....It is our sacred duty to care for our families, including our extended families." (Thomas S. Monson, *Ensign*, Sept. 1986, 4)

"Many more people could ride out the storm-tossed waves in their economic lives if they had their year's supply of food and clothing and were debt-free. Today we find that many have followed this counsel in reverse: they have at least a year's supply of debt and are food-free". (Thomas S. Monson, "That Noble Gift - Love at Home," *Church News*, 12 May 2001, 7)

"We encourage you to follow this counsel with the assurance that a people prepared through obedience to the commandments of God need not fear."

(First Presidency letter, 24 June 1988)

“Church members can begin their home storage by storing the basic foods that would be required to keep them alive if they did not have anything else to eat. When members have stored enough of these essentials to meet the needs of their family, for one year, they may decide to add other items that they are accustomed to using day to day.” (The First Presidency letter, January 20, 2002)

SUGGESTED AMOUNTS OF BASIC FOODS FOR HOME STORAGE PER ADULT FOR ONE YEAR

- Grains 400 lbs (Includes wheat, flour, rice, corn, oatmeal and pasta)
- Legumes 60 lbs. (Legumes include dry beans, split peas, lentils, etc.)
- Powdered Milk . . . 16 lbs.
- Cooking Oil 10 quarts
- Sugar or Honey . . 60 lbs.
- Salt 8 lbs.
- Water (2 weeks) . . 14 gallons (suggested for a 2 week emergency reserve)

Basic Food Storage

Suggested amounts per adult for one year. This list may vary according to location.

Item	Number** in Family	Amount Needed per Adult	Total Amount Suggested	Amount on Hand	Additional Purchases Needed
Grain <i>400 lbs.</i>					
Wheat					
Flour					
Rice					
Corn					
Oatmeal					
Pastas					
Milk, Dry <i>16 lbs***</i>					
Nonfat, Regular or Instant					
Canned (5 cans = 1 lb.)					
Sugar <i>60 lbs</i>					
Sugar					
Honey					
Salt <i>8 lbs</i>					
Fats <i>20 lbs</i>					
Shortening					
Vegetable oil					
Legumes <i>60 lbs</i>					
Pinto beans					
Navy beans					
Red beans					
Split peas or lentils					
Soybeans					
Medical					
Fuel and Light					
Water * <i>14 gals</i>					

*It is impractical for most families to store a year's supply of water. 14 gals./person is a suggested minimum reserve.

**Children's % of adult portion, except milk: 0-3 yrs.=50%, 4-6 yrs.=70%, 7-10 yrs.=90%

***Provides approximately one glass of milk per day. Children and pregnant or nursing mothers will require more.

Adapted from: *Essentials of Home Production and Storage*, "Update on Milk Storage," *Ensign* March 1997, and "Food Storage & Children," *Ensign* March 1998

“Use It or Lose It.....” Stored Wheat, Rice, Dry Milk, Beans

Practical Use of Stored Items

It is more practical to incorporate something new into the familiar (practical application) than abandon the familiar and switch to the new. Following is a method for incorporating basic life sustaining storage items into the diet.

Idea 1: Plan Menus. We eat the same main dishes about 80% of the time because of taste, awareness, familiarity, etc. using a menu helps to remind one of the choices that are available. Knowledge and skill create choice. A menu need not be a rigid plan of what to eat fro Monday or Tuesday lunch and what to eat for Wednesday dinner. It can be as simple as creating a list of dishes eaten and liked by the family. Keep the list handy and refer to it when deciding what to fix tonight for supper.

Create a master menu:

- A. List foods eaten in the past week.
- B. Create (brainstorm) a list of dishes the family likes and will eat (part of choice is knowing what the choices are).
- C. Break list into categories preferred by family (main dish, lunches, side dishes, etc.)
- F. Post list on refrigerator for at least 2 weeks - add to list as dishes are remembered.
- G. Involve family members in creating the list.
- H. The created list should be at least 10-20 dishes long (length will add variety).
- G. Evaluate current diet pattern. Is it storable? Is it realistic? Will the family eat it? (Fast food and TV dinners are not ideal long term storage items and they are more difficult to incorporate basic items into.)
Should the items that do not store well be reduced? Does it reflect foods that are liked, but because of time required to prepare the dish it is unlikely to be used? Are the items on the list too expensive? Make the list practical and realistic.
Could the poor storing items (fast food and TV dinners) be replaced by a similar dish made from scratch at home?
- H. Determine the number of dishes needed each week (month) to rotate a specific item out of storage in 3-5 years. For example, plan 1/5 of all meals eaten to be from food storage. In other words, if master menu has 20 meals listed, four meals should be from basic storage or at least include basic food storage items.

1. Evaluate the list of foods created in A. Which of the dishes could include the addition of basic storage items? (For example, meatloaf could be adapted to include wheat or beans with little or no change in the familiar quality of the dish.) Write the addition of the basic item to the side of the dish. By making a list of foods (or menu) and keeping it handy as a reference, and by adding the basic storage items to the list it will serve as a reminder of what meals food has been stored for and what storage items may be included in the normal diet.

- ◆ Keep the dish familiar to and liked by the family.
- ◆ Make small adjustments in recipes and increase changes as taste preference allows.
- ◆ Avoid creating abnormal dishes. The further from a "normal" dish the recipe becomes, the more inclined the dish will be rejected and classed as undesirable.
- ◆ Add new dishes and recipes to the master menu which use basic storage.
- ◆ Make a conscious effort to use the master menu and basic storage items.

Idea 2: Prepare convenient forms of basic item and store reasonable amounts. For example: home canned dry beans, prepare bulgur, cook and freeze items, etc.

- A. Pre-cook: Cooked wheat will store in the refrigerator for about 1 week.
- B. Bulgur (dried form of cooked wheat) will last several months. Bulgur may be re-hydrated quicker than cooking wheat in the first place.
- C. Freeze cooked wheat: Placed cooked wheat in a thin layer on cookie sheet. Partially freeze, then place in freezer bags and store in freezer. Freezing it in this manner will allow you to remove amount desired for use without thawing the entire container.

Idea 3: Place basic storage items in convenient places and in a convenient location. Put it in sight, make it hand to get at and use. Avoid large awkward containers in hard to reach places. Clearly label and date contents of pantry storage.

WHEAT

Wheat is categorized into several types - hard red or white varieties are best for breadmaking, and the soft red or white are better for making pastries and crackers. The Home Storage Center provides hard red and white with the desired protein and moisture amounts.

Wheat for storage should have low moisture (less than 10%) and a protein content of 12-15%. Wheat can be stored in the #10 cans for 20 years or more....if you are using older wheat you may need to add some gluten flour when baking bread, available at health food stores (about 1/4 cup for every 4 cups of flour). Gluten flour should be stored in a cool, dry place and used within a year.

Whole wheat flour goes rancid, so treat it as a dairy product....refrigerate and use quickly! Freezing doesn't change the stored grains, and it may be helpful to freeze the wheat you will be grinding to keep the flour from getting too hot.

The following amounts may be helpful...

1 cup wheat grinds to approximately 2 cups flour

#10 can of wheat holds 5.8 pounds (13 cups)
and will produce more than 20 cups of flour

Wheat Terms

BULGUR is the term used for wheat kernels that have been softened by soaking or steaming. To steam, put 1 cup wheat in a small pot on a rack inside a larger pan with 1 cup water and 1/2 tsp. salt. Cover and cook until all the water has been absorbed. Bulgur can be stored in the refrigerator for 2 weeks and used in many recipes. (See detailed bulgur wheat recipe in recipe portion of this section of the cookbook.)

CRACKED WHEAT is wheat that has been ground with the stones not as close together, creating a coarser product. Boil for 10 minutes and add sweetener for a great cooked cereal.

WHEATMEAT is made from flour and water that has been "worked" in cold water and "washed" until it is the texture of bubble gum. It is then baked and run through a meat grinder for ground beef casseroles, or formed into "roasts" or "tube steaks", even chicken roasts and fish cakes! Instructions and recipes will follow.

Using whole wheat flour

- ◆ Use wheat in recipes your family already likes.
- ◆ Try wheat in desserts first - who can turn down a cookie?
- ◆ You do not have to use 100 percent whole wheat. Using half white flour and half whole wheat flour gives excellent results.
- ◆ 1 cup minus 2 T. wheat flour equals 1 cup white flour.
- ◆ If possible, grind wheat just before you use it to retain its full nutrition. It is rich in vitamin E and wheat germ, both of which are soon lost after grinding.
- ◆ Wheat flour is heavier than white flour and needs more leavening. In yeast breads, use more yeast or let it rise longer. In products leavened with baking powder, increase baking powder by 1 tsp. for every 3 cups of whole wheat flour. Recipes using baking soda do not need to be adjusted.
- ◆ In baked products such as waffles and cakes which require eggs, separate the eggs and beat the whites until stiff. Then fold in just before baking. For extra lightness, add an extra separated egg.

Bulgur Wheat

Wash wheat in cool water and discard water. Simmer wheat in excess water until all water is absorbed and wheat is tender. Spread wheat evenly on cookie sheet or shallow pan and dry in oven at 200 degrees until very dry so that it will crack easily.

Wet surface of dried wheat slightly and rub kernels between hands to loosen and remove chaff. Crack wheat in moderate size pieces, using a mill or grinder, or leave whole.

This processed bulgur, when thoroughly dried, is easily stored and may be used in many wheat recipes. If the recipe calls for cooked wheat or bulgur, simply boil in water for 10-15 minutes - it will approximately double in volume. It makes an excellent meat extender when used in meat loaves, meatballs, chili and recipes where rice is used. Soaked overnight in salt water, it may be added to yeast bread recipes to give a nut-like taste.

Making Raw Wheat Meat

Wheat Meat may be used in any recipe requiring ground beef. If the texture doesn't seem quite right, remember -- the form is not as important as the flavor. Be patient and continue to practice.

Method 1

10 cups whole wheat flour
5 cups cold water

Combine the flour and water in a mixing bowl and use the dough hook to knead for 5 minutes. Cover and let rest in refrigerator for 20 minutes while the gluten further develops. If desired, it may be covered in cold water and refrigerated overnight. Divide the dough into fourths and work with one at a time, keeping the others covered. Immerse the dough in a deep bowl of cold water and squeeze and stretch, keeping it intact while working out the bran and starch. After several minutes you will feel the sandy texture leaving (bran) and the dough will resemble bubble gum. Place in a fresh bowl of cold water and repeat the procedure with the other fourths in the same water. Save this water after you are done for other uses. This milky water contains most of the vitamins and minerals found in the wheat and is too valuable to throw away!! Refrigerate overnight and you will see 3 layers..the top clear layer of water can be used for anything from mixing drinks to watering plants. The next layer is starch and can be used for thickening gravies and soups (use 4-7 tablespoons starch per 2 cups liquid). The starch should be used in 2 days. The last layer is the bran. Rinse in water until it runs clear and use in 4-6 days or freeze, or dry it by spreading on a greased cookie sheet and bake for 20-25 minutes at 300 degrees.

For "ground beef", form the "globs" into orange-sized balls and bake on a greased cookie sheet at 350 for 45 minutes until firm and leathery. Remove from oven and cool, then tear into smaller pieces and run through a food or meat grinder. The coarse product resembles ground beef and can now be flavored, pressed into a cookie sheet and baked at 300 degrees for 15-20 minutes. Tear apart and use as "ground beef", adding at the last minute to recipes to keep from getting soggy.

Method 2

8 cups whole wheat flour
1½ -2 cups water

Combine the flour and water into a ball-like mass and knead, pound or thoroughly beat for 1-15 minutes! Cover with cold water and let rest for 1 hour. Wash out the starch and bran by holding under hot running tap water until dough is firm and the "sand" texture is gone. Let drain 30 minutes or longer. Grind as above for ground beef, or roll flat and cut into strips and season by boiling in meat juices for 30 minutes. Fry in oil for 5-10 minutes as is or battered.

Ground Beef Flavoring

2 T. beef soup base
2 T. oil
2 eggs
2 T. white flour

¼ tsp. garlic powder
¼ c. finely minced onion
(or 2½ T dry onion flakes)
2 ½ c ground wheatmeat

Mix and press onto a cookie sheet and bake at 300 degrees for 15-20 minutes. Cool and tear apart to resemble cooked ground beef.

Here are some ways to use Wheat in recipes!

Farina (similar to Cream of Wheat)

Breakfast Cereal

Bring to a boil 4 cups water and 1/2 tsp salt. While water is boiling, gradually stir in 1/2 cup + 1-2 tablespoons Farina depending on the consistency desired. Add a little milk and 1/4 cup sugar and simmer 1 minute. Yield: 4 cups hot cereal. (when deciding how often to serve this, keep in mind babies and older people.)

Cracked Wheat

Breakfast Cereal

Bring to a boil 4 cups water and 3/4 tsp salt. While water is boiling, stir in 1 cup cracked wheat. Simmer 5-8 min. and sweeten to taste. Yield: 4 cups.

9-Grain Cracked Cereal

Breakfast Cereal

Bring to a boil 4 cups water and 3/4 tsp salt. While water is boiling, stir in 1 cup 9-grain cracked cereal. Simmer 8-10 min. and sweeten to taste. Yield: 4 cups.

6-Grain Cereal

Breakfast Cereal

Bring to a boil 4 cups water and 3/4 tsp salt. While water is boiling, stir in 1 cup 6-grain cereal. Simmer 8-10 min. and sweeten to taste. Yield: 4 cups.

Grape Nuts

Toppings on Ice Cream, Puddings, Muffins and Brownies or Breakfast Cereal.

Mix 6 cups whole wheat flour, 1 1/2 cups brown sugar, 1 tsp salt, 2 cups sour milk (2 tablespoons vinegar in Moo's milk tm or buttermilk, 1 teaspoon soda. Press or roll onto 2 cookie sheets (it's easier if you spread what you can & then let it sit for awhile and then flatten out.) Bake at 300 degrees for 1 hour, or until dry. Grind with a meat grinder to the size of grape nuts and put in oven at 400 degrees until golden brown, about 8 minutes. After grinding, the crumbs maybe sifted from the cereal. Yield: about 4 cups.

Wheat Waffles

2 c. flour (1 c. white and 1 c. wheat)
4 tsp. baking powder
2 T. honey or sugar
6 T. oil
½ tsp. salt
1 ¾ c. milk
2 eggs

Mix dry ingredients together. Stir in remaining ingredients. For lighter waffles, separate eggs, then beat egg whites and carefully fold in. Makes 8 waffles.

Whole Wheat Pancake Mix

8 c. whole wheat flour
½ c. sugar
4 tsp. salt
2 ½ c. powdered milk
2 c. oil
5 T. baking powder

Mix all dry ingredients, then add oil. Store in airtight container. Keep in refrigerator or freezer.

To use mix:

1 ½ c. mix
¾ c. water
1 egg

Beat egg and water, then add mix. Cook, then serve with Creamy Cinnamon Syrup (in sugar and honey section of this cookbook).

Graham Crackers

½ c. evaporated milk or
¼ c. dry skim milk
½ c. water
2 T. lemon juice or vinegar
1 c. dark brown sugar
½ c. honey
1 c. vegetable oil
2 tsp. vanilla
2 eggs, slightly beaten
1 tsp. salt
1 tsp. baking soda
6 c. whole wheat flour, approx.

Mix together milk, water and lemon juice or vinegar. In a large bowl, beat well brown sugar, honey, oil, vanilla and eggs. Combine with milk, then add salt, baking soda and approximately 6 cups wheat flour. Divide into four equal parts. Place each on a greased and floured cookie sheet and roll to about 1/8" thick. Prick with a fork. Bake at 375 degrees for about 15 minutes or until light brown. Remove from oven and cut in squares immediately.

Honey Wheat Variety Muffins

1 c. all purpose flour
½ c. whole wheat flour
2 tsp. baking powder
¼ tsp. salt
1 beaten egg

½ c. milk
½ c. honey
¼ c. cooking oil
½ tsp finely shredded lemon peel

In a mixing bowl stir together flour, baking powder and salt. Make a well in the center.

In another bowl combine beaten egg, milk, honey, oil, and lemon peel. Add egg mixture all at once to dry mixture. Stir just until moistened (batter should be lumpy). Spoon batter into greased or lined muffin cups and fill 2/3 full. Bake at 400 degrees for 18-20 minutes or until golden. Makes 12.

Sunflower-Nut Wheat Muffins: Prepare as above, except stir ½ c. sunflower seeds into flour mixture. (If using salted nuts, reduce salt to 1/8 tsp.)

Fruit Wheat Muffins: Prepare as above, except fold ½ c. fresh or frozen blueberries, raisins, snipped pitted whole dates, or chopped apple into batter.

Honey-Nut Wheat Muffins: Prepare as above, except fold ½ c. chopped walnuts, pecans, peanuts or toasted almonds into batter.

Homemade Noodles

1 beaten egg
½ tsp. salt

3 T. milk
1 c. whole wheat flour (or white)

Combine all ingredients. Place dough on heavily floured counter and press out with hands. Sprinkle more flour on top of dough and then roll out with rolling pin until very thin. Let dry for 1-3 hours. Roll up heavily floured dough loosely and slice thin (1/4") and unroll. Drop into boiling soup or salted water and cook 10-15 minutes. Yield: 3 cups cooked noodles

Wheat Thins

1 ¾ c. whole wheat flour
1 ½ c. white flour
1 c. water

1/3 c. oil
¾ tsp. salt

In large mixing bowl, mix whole wheat flour and white flour. In a blender, mix together oil, salt and water. Add liquid mixture to dry, mixing well, but as little as possible. Roll as thin as possible on unoiled cookie sheet - not more than 1/8" thick. Mark with knife for size of crackers desired, but do not cut through. Prick each cracker a few times with a fork. Sprinkle lightly with salt or onion salt if desired. Bake at 350 degrees until crisp and light brown, about 30 minutes.

Whole Wheat Chocolate Chip Bars

½ c. butter or margarine
1 c. oil
2 c. brown sugar
4 eggs
1 tsp. vanilla

1 tsp. salt
2 c. whole wheat flour
2 c. quick oats
1 c. nuts
1 c. chocolate chips

Cream together margarine, oil, sugar, eggs and vanilla. Add dry ingredients and mix well. Add nuts and chocolate chips. Place in 9x13 cake pan and bake at 350 degrees for 30 minutes.

Whole Wheat Snickerdoodles

1 c. shortening, butter or margarine
1½ c. sugar
2 eggs
2 ¾ c. whole wheat flour
2 tsp. cream of tartar

½ tsp. salt
1 tsp. baking soda
2 T. sugar
1 tsp. cinnamon

Cream together 1½ c. sugar and shortening. Add eggs and beat well. Combine flour, cream of tartar, salt and soda. Add to sugar mixture and mix well. Roll into approximately 1 inch balls. Combine 2 T. sugar and cinnamon. Roll dough balls in cinnamon/sugar. Place on ungreased cookie sheet about 3 inches apart. Slightly flatten. Bake at 400 degrees for 8-10 minutes. Remove from cookie sheet and cool on rack. Makes about 4 dozen cookies.

Peanut Butter Cookies

1 c. softened butter
1 c. peanut butter
1 ¼ c. honey
2 eggs

1 tsp. vanilla
4 c. whole wheat flour
½ tsp. salt
2 tsp. baking soda

Blend butter until smooth. Add peanut butter and blend again. Add honey and blend again. Add eggs one at a time and beat until well mixed. Add vanilla. Add dry ingredients and mix well. Roll into balls and put onto ungreased cookie sheet. Use a fork dipped in cold water to flatten and make a criss-cross pattern. Bake at 350 degrees for 10 minutes on the top rack of the oven. Remove from pan immediately and cool.

Perfect Whole Wheat Bread

2 T. yeast
½ c. warm water
5 c. hot water
2 T. salt

2/3 c. oil
2/3 c. honey or raw sugar
12 c. whole wheat flour

Combine yeast and warm water. Add remaining ingredients. Knead for 10 minutes. Form into loaves. Place in bread pans and let raise until double. Bake at 350 degrees for 40-45 minutes.

Whole Wheat French Bread

4 ½ c. hot water
1/3 c. oil
½ c. honey or raw sugar

1 T. salt
2 T. yeast (add dry)
8-10 c. whole wheat flour

Mix hot water, oil, honey and salt. Add 4 c. flour. Then add yeast and remaining flour. Let rest 15 minutes, then knead for only a few seconds. Repeat this 2 more times. Put dough on floured board and knead until smooth. Divide and roll into rectangle ½ inch thick. Roll dough diagonally (roll tightly). Place on cookie sheet sprinkled with seeds or corn meal. Brush with beaten egg or water, sprinkle with seeds and slash top of loaves diagonally. Raise until double. Bake at 450 degrees for 10 minutes, then turn oven down to 350 degrees and bake 35 minutes more.

Harvest Chili

- | | |
|---|---------------------------------------|
| 1 c. hard red wheat | 2½ c. water |
| 1 lb. ground beef, extra lean | 1 medium onion, chopped |
| 1 medium green pepper, chopped | 1 c. celery, finely chopped |
| 3 (15 oz.) cans chunky tomatoes with peppers and onions | 1 (10 oz.) hot and spicy tomato drink |
| 2 (4 oz.) cans mushrooms | 2 T. chili sauce |
| 1 (.25 oz.) pkg chili seasoning | 1/3 c. low salt soy sauce |
| 1/4 c. dried parsley flakes | 3 medium carrots, coarsely chopped |

Place wheat in microwave dish with 2½ cups water. Microwave on high 40 minutes, then drain. Brown hamburger with green pepper and onion. Add all other ingredients in large soup pot. Bring to a boil. Reduce heat to low and simmer for 2-2½ hours, stirring occasionally. Garnish with red, yellow and green pepper rings and shredded Parmesan cheese. Yield: 8 servings (1½ c.) May be frozen.

Chicken and Tomato Salad

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|--|--------------------------|
| 1 c. bulgur | |
| 1 c. chopped, seeded, peeled tomatoes (about 2 medium) | |
| 2 c. boneless, skinless cooked chicken pieces | |
| 3 T. chopped fresh basil | 2 cloves garlic, minced |
| 1 T. chopped fresh mint | 1/3 c. olive oil |
| 3 T. red wine vinegar | Salt and pepper to taste |

Cook the bulgur in a large pot of boiling salted water until tender, 20-25 minutes. Drain and set aside to cool. In a large bowl, combine the cooled bulgur, tomatoes, chicken, basil, mint and garlic. Lightly toss, then add the oil, vinegar, and salt and pepper. Sprinkle with parsley. Serves 4-6.

Boston Baked Whole Wheat

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|-----------------------------|----------------------|
| 4 c. whole kernel wheat | 10 c. water |
| 1 lb. bacon, cut in fourths | 1 large onion, diced |
| 1/4 c. molasses | 1/3 tsp. pepper |
| 1/3 c. catsup | 2 tsp. salt |
| ½ tsp. dry mustard | |

In a large roaster or Dutch oven, combine wheat, water, bacon and onion. Combine remaining ingredients in bowl and pour into pan with wheat. Cover and bake at 200 degrees for 6 hours. Remove cover the last ½ hour of baking. Add a little boiling water if mixture becomes a dry. Serve with hot bread. Makes 14 cups.

CORN

Corn may be stored in a variety of ways: as whole dried corn, as popcorn, in cans and jars, or as cornmeal. Corn is a good source of carbohydrates, as well as other important vitamins and minerals. Corn is the only grain that is eaten as a fresh vegetable.

Varieties of Corn

SWEET CORN: The corn-on-the-cob variety, as well as corn that is used for canning and freezing. There are about 100 different varieties.

FIELD CORN OR DENT CORN: Corn that is usually dried right in the fields, creating a dent in the top of the kernel. This is mostly used for animal feed, but is also used in processed breakfast foods, cornstarch, corn oils and corn syrups.

BLUE CORN: Corn cultivated by Native Americans which has a unique color, texture, and intense corn flavor. This was possibly one of the earliest forms of sweet corn.

POPCORN: This unique type of corn contains a very hard hull and about 13-14% internal moisture. Besides being one of the healthiest snack foods available (it not popped in oil and drenched in butter!). It is higher in protein than regular dried corn and is a great way to add variety to your storage.

Forms of Corn

WHOLE CORN, DRIED: White, yellow or blue corn used for home grinding into meal or flour or for parching or preparing whole hominy. Whole corn can also be soaked and cooked for use in various dishes when fresh corn is not available.

CORNMEAL: A term referring to dried corn kernels that have been finely ground. Cooked cornmeal has a corn-like taste and can be used in a variety of ways. Serve it as a cooked breakfast cereal, or use it as a coating for fried foods. It is also the main ingredient in corn breads and certain pancake, pudding, and muffin recipes.

CORN GERM: The central core of the kernel and the part where the new plant sprouts or germinates. This is used much the same as wheat germ - as an extender for meat, sprinkled on cereal or yogurt, in making bread or muffins, as well as on salads. Corn germ is highly perishable and should be refrigerated.

CORN BRAN: The bran layer of the kernel, used the same as wheat or oat bran. It is a good source of soluble fiber.

WHOLE HOMINY: Kernels of corn that are processed. When it is dried and ground, it is called "masa harina" and is the only cornmeal that can be used to make tortillas.

HOMINY GRITS: Made from under-germinated, coarsely ground white and yellow corn.

CORN FLOUR: This is a finer consistency than cornmeal and can be used for breading foods, waffles, pancakes, wheat-free pastas and breads. It can also be mixed with wheat flours where gluten is needed for rising.

CORNSTARCH: Made from a high-starch variety of corn called 'indentata'. It is a finely milled silken powder made from the endosperm layer of the grain. It is usually used as a thickening agent for sauces, soups, or puddings, but also has a long history as a folk medicine.

PUFFED CORN: Round, airy, light puffs of corn used as breakfast cereal.

CORN OIL, CORN SYRUP: Other products made from corn.

Facts about Cornmeal (the most used type of dried corn)

- ◆ A cup of cooked cornmeal is high in carbohydrates, as well as containing thiamine, riboflavin, niacin, potassium and magnesium.
- ◆ Yellow cornmeal contains a high degree of beta carotene (one of the substances that maintains the balance of the body's immune system).
- ◆ Regular cornmeal contains a little less than half the protein of wheat, while cornmeal made from popcorn contains a little over half the protein.
- ◆ Cornmeal is not considered a "whole food" because it lacks two essential amino acids, lysine and tryptophan. However, when it is combined with other grains, legumes, and judicious amounts of animal protein—even butter, milk, and cheese products—cornmeal acquires enough of the aforementioned amino acids to provide a good source of nutrition.
- ◆ Because of its high oil content, stoneground cornmeal has a relatively brief shelf life. It may be kept in airtight, self-seal plastic bags in the refrigerator for up to three months, and twice that time in the freezer. Enriched-degerminated cornmeal has somewhat longer staying power. Unfortunately the cool temperature of refrigerator and freezer, while inhibiting insect infestation and retarding rancidity, also increases vitamin loss and encourages oxidation.

DRIED CORN

The most common forms of dried corn include 'dent' or 'field' corn (yellow and white varieties), sweet corn, and popcorn. Sweet corn is generally eaten as a vegetable, while yellow or white dent corn is commonly ground into meal or processed and eaten as hominy. Corn contains many B vitamins, minerals, phosphorus, magnesium, iron, zinc, linoleic acid, vitamin A (the highest of any cereal grain). Because of corn's 72% starch content, it is a high energy food.

One of the best uses of dried corn is to grind it for use as cornmeal. Unlike cornmeal purchased at the grocery store, home ground cornmeal contains the outer skin (a great source of fiber), as well as the germ which contains most of the nutrients, vitamins and minerals in the grain.

Polenta

3 ½ c. water
1 c. cornmeal

1 ½ tsp. chicken bouillon

Combine cornmeal with ½ c. water. Bring 3 c. water to a boil with bouillon. Add cornmeal and stir until lumps dissolve and mixture comes to a boil. Reduce heat to medium-low; cover and simmer for 15 minutes. Serve mounded like mashed potatoes. Serves 5-6.

Variations: Add ¼ tsp. onion powder and 1/3 to ½ c. Parmesan cheese.

Mexican Polenta

3 T. butter
2 c. corn kernels
¼ c. onion, finely chopped
1 large jalapeno chili, stemmed
and finely chopped
½ tsp. dried sage

1 c. yellow cornmeal or polenta
3 c. water
¾ tsp. salt
Enchilada sauce
½ c. grated Monterey Jack cheese

Melt butter in a large microwave-safe dish or heavy pot. Stir in the corn kernels, onion, jalapeno, and sage, and microwave or saute' until the corn softens, about 4 minutes. Stir in the cornmeal, water, and salt, and cook uncovered until the mixture barely begins to thicken, about 20 minutes on stovetop, stirring frequently, or 4 minutes in the microwave. Stir to mix and smooth out the lumps. Cook until the mixture is thick, but still pourable, 10-15 minutes on stovetop, 5 minutes in microwave.

Spoon sauce over the top, sprinkle with cheese and serve right away.

Note: With the microwave, time spent is significantly shorter and it is not necessary to stir constantly to prevent sticking. Microwave directions are for high setting.

Corn Bread Mix

5 c. yellow cornmeal
4 ½ c. all purpose flour
2 c. nonfat dry milk powder
1 ¼ c. sugar

1/3 c. baking powder
1 T. salt
1 ¼ c. shortening

Combine cornmeal, flour, nonfat dry milk powder, sugar, baking powder and salt in large mixing bowl. Cut in shortening until mixture resembles coarse crumbs. Store in a covered airtight container up to 6 weeks. Stir mix lightly before measuring. To use, spoon mix lightly into measuring cup, level off with straight-edged knife. Makes 15 cups.

Corn Bread

2 ½ c. Corn Bread Mix
2 eggs

1 c. water or milk

Place Corn Bread Mix in a bowl. Beat together eggs and water or milk. Add to mix; beat just until smooth. Pour into a greased 9x9x2 inch baking pan. Bake at 425 degrees for 20-25 minutes or until done. Makes 9 servings.

Confetti Corn Bread

2 ½ c. Corn Bread Mix
1 tsp. minced dried onion
1/4 tsp. dried thyme, crushed
2 slightly beaten eggs

1 c. water
2 T. chopped pimento
2 T. chopped canned green chilies

In a mixing bowl stir together Corn Bread Mix, onion and thyme. In a small mixing bowl combine beaten eggs, water, pimento and green chilies; add all at once to dry ingredients, stirring just until moistened. Turn batter into a well-greased 9x9x2 inch baking pan. Bake at 400 degrees for 20-25 minutes or until golden. Cut into squares. Makes 9 servings.

Cornmeal Muffins: Fill prepared muffin cups 2/3 full of cornbread batter. Bake at 400 degrees for 15-20 minutes or until golden brown. Makes 12 muffins.

Surprise Muffins: Fill prepared muffin cups 1/3 full of cornbread batter. Put 1 teaspoon of jam or jelly on top of batter. Spoon additional batter on top of jam or jelly to fill muffin cup 2/3 full. Bake at 400 degrees for 15-20 minutes or until golden brown. Makes 12 muffins.

Brunch Muffins: Gently fold 6 slices of cooked, crumbled bacon into the prepared cornbread batter. Fill prepared muffin cups 2/3 full. Bake at 400 degrees for 15-20 minutes or until golden brown. Makes 12 muffins.

Tortillas

1 c. cornmeal
1 c. white flour
(Ground corn may be substituted for cornmeal and flour)

½ c. water
½ tsp. salt

Mix ingredients together and knead well. Add a small amount of water, if necessary. Let stand for 10 minutes. Knead and pat or slap into the shape of a thin pancake. Add more water or flour as needed. Cook on top of stove in ungreased heavy iron or coated skillet, turning so as to cook through, but not burn. Serve with your favorite filling.

Tamale Pie

¾ c. oil
2 eggs
2 ½ T. chili powder
½ c. water
1 small can tomatoes
1 can yellow whole kernel corn
2 medium onions, chopped

¾ c. melted butter
1 can pitted olives
1 ½ c. milk
1 ¾ T. salt
1 ½ c. yellow cornmeal
1 ½ lbs. ground beef
Garlic powder to taste

Brown ground beef and onions in oil. Add spices. In a very large bowl combine with other ingredients. Pour into a large greased casserole and bake at 350 degrees for 30 minutes (fills 9x13 pan almost to overflowing). Serves at least 15.

Cornbread Stuffing

10 c. day-old cornbread, crumbled or cut into ½ inch cubes
1 c. butter, melted
1-4 T. sage (to taste)
3 c. celery, chopped

2 c. onions, chopped
3 T. parsley
4 (10½ oz. cans chicken broth or equal amount of water)

Mix melted butter to crumbled cornbread. Add sage, celery, onions and parsley. Pour broth or water over mix. Depending on how dry the cornbread crumbs are, more water may be added a little at a time until cornbread is very moist. Pour into a greased 9x13 inch baking pan and also a greased 8 inch baking dish. Do not pack down. Bake at 375 degrees for 35 minutes or until top is brown. Serves 8-10.

POPCORN

Popcorn is a type of flint corn. It's kernels have a hard outer shell with a hard starchy inside. Popcorn contains substantial amounts of carbohydrates, fiber, many of the B vitamins, potassium, phosphorus, magnesium, iron, zinc, pantothenic acid, copper, manganese, linoleic acid and all the essential amino acids.

Popcorn Facts and Popping Hints

- ◆ Yellow popcorn pops into crunchy, big kernels with a nutty taste. White popcorn has a crispy, tender texture and a slightly sweet flavor
- ◆ Popcorn pops best in temperatures of 400-460 degrees.
- ◆ Pre-salting kernels toughens popcorn. Salt popcorn after it has been popped, or add salt-free spices instead.
- ◆ Do not pop popcorn in butter (as it burns before it gets hot enough).
- ◆ Store popcorn in airtight containers to avoid moisture loss. Do not store in the refrigerator as it can dry out the kernels.
- ◆ Popcorn needs 13-14% moisture to pop. If it doesn't pop well, it may lack moisture. To rejuvenate popcorn, place 3 cups unpopped corn in a quart bottle with 1 tablespoon water. Shake the jar several times over the next several hours. Allow it to sit for 2-3 days until moisture is absorbed. If it still doesn't pop correctly, repeat the process (but only once). If it still doesn't pop, grind it!!
- ◆ To color popcorn, try adding food coloring to oil before popping. This produces faint traces of color. Or add food coloring or gelatin to your base recipe.
- ◆ To add your favorite seasonings to popcorn, drizzle popped corn with melted butter or spray the popped corn with butter substitute and sprinkle with spices, being sure to mix well. Suggestions for seasonings include garlic salt, Parmesan cheese, dehydrated cheese, or any variety of your favorite herbs and spices. Or if using the range top method of popping corn, add seasonings directly to the oil.
- ◆ Top soup or salads with plain or seasoned popped corn.

Popcorn Trivia

- ◆ The average American eats 59 quarts of popcorn annually.
- ◆ One cup of popped popcorn contains 48 calories
- ◆ Anthropologists found popcorn ears in bat caves in New Mexico that were 5,600 years old.
- ◆ On average, 2 tablespoons of unpopped kernels produce a quart of popcorn for about 25 cents.
- ◆ There are 1,600 popcorn kernels in one cup.
- ◆ According to the Guinness Book of World Records, the world's largest popcorn ball weighed 2,000 pounds.

RICE

Rice is a good source of energy and can supply vitamins and minerals to the diet. Its edible seed is the staple cereal grain for more than half of the world's population. Rice is generally classified as a grain, but in family meals it can be used as a cereal, a vegetable (substitute for potatoes, as a base for meat or in soups), or as a dessert (puddings and custards).

There are 7,000 varieties of rice in the world, but generally only three different lengths of rice grain and five different kinds. Long grain white rice is the only rice recommended for long term food storage. Thus, the recipes in this cookbook are made using this type of rice. However, feel free to experiment with your favorite type of rice.

Lengths of Rice

LONG GRAIN RICE is distinguished because its length is 4-5 times its width. The grains are clear and translucent. They remain separate after cooking, and are light and fluffy

MEDIUM GRAIN RICE is about 3 times as long as it is wide. This type is less expensive than long grain rice because it requires a shorter growing season and produces a higher yield per acre. It is easier to mill than the long grained variety. When cooked, it is moister and more tender than long grain rice.

SHORT GRAIN RICE is only 1½ -2 times as long as it is wide. It is generally the least expensive of the three lengths. It tends to cling together when cooked.

Kinds of Rice

BROWN RICE is the whole, unpolished grain of rice with only the outer fibrous, inedible hull removed. Brown rice requires more water and longer cooking time than white rice. It has a delightful, chewy texture with a distinctive nut-like flavor. Brown rice shelf life is very short, thus it is not good for long term storage.

REGULAR MILLED WHITE RICE is rice from which hulls, germ, outer bran layers and most of the inner bran are removed in the milling process. The grains are bland in flavor and are fluffy and distinct when cooking directions are followed.

PARBOILED RICE, sometimes called processed or converted rice, has been treated to keep some of the natural vitamins and minerals the whole grain contains. It has been cooked before milling by a special steam pressure process. It requires longer cooking time than regular milled white rice, but after cooking the grains are fluffy, separate and plump.

PRE-COOKED OR INSTANT RICE, quick type, is completely cooked. It needs only to stand in boiling water to be ready for serving. Cooking this product will result in a gummy, indistinguishable mass.

FORTIFIED OR ENRICHED RICE is a combination of highly fortified rice and ordinary milled rice. A coating of vitamins and minerals - thiamine, niacin, iron and sometimes riboflavin - is used to fortify rice. This coating adheres to the rice and does not dissolve with ordinary washing or cooking.

WILD RICE is not rice at all, but the seed of a wild water grass found around the Great Lakes region. It is much more expensive than the types of rice described above. The demand for this rice is almost greater than the supply.

Cooking Rice

Some rules are a must in preparing rice. Due to the fact that the B vitamins are added to rice in the form of powder, much of the valuable nutrients are lost if the product is not handled properly.

- ◆ Do not wash rice before cooking or rinse after cooking. Nutrients on the surface are washed away if it is washed or rinsed before cooking.
- ◆ Do not use too much water when cooking rice. Any water drained off means wasted food value. Too much water makes soggy rice. Too little water results in a dry product.
- ◆ Do not stir rice after it comes to a boil. This breaks up the grains and makes the rice gummy.
- ◆ Do not leave rice in the pan in which it has been cooked for more than 5-10 minutes or the cooked rice will pack.
- ◆ To save time later, cook up some extra rice and save it. Simply store the cooked rice in an airtight container in the refrigerator for up to 1 week or in the freezer for up to 6 months. To reheat chilled or frozen rice, in a saucepan add 2 tablespoons liquid (water, broth, etc.) for each cup of rice. Cover and heat on top of the range about 5 minutes or till the rice is heated through.

Using Rice

- ◆ Cook rice in beef or chicken broth instead of water.
- ◆ Mix cooked rice with a variety of things — sliced mushrooms, sauteed onions, crumbled piece of bacon, slivered almonds or grated cheese.
- ◆ Try sour cream and chives mixed into cooked rice.
- ◆ For rice breakfast cereal, cook rice as usual. Drizzle with honey for sweetener. Then add chopped fruit, fresh or canned. Serve with warm milk.
- ◆ Substitute ½ c. fruit juice (orange, apple, cherry) for ½ c. water when cooking. Vegetable juice cocktail or tomato juice may also be exchanged for 1 c. of water used in cooking.
- ◆ Add one of the following herbs to the cooking water when preparing rice: ½ tsp. dried thyme, oregano, sage, rosemary, basil or savory; ½ tsp. celery seeds or dried dill; seasoned salt instead of salt; ¾ tsp. dried marjoram; 1 small bay leaf.

Storing Rice

- ◆ Rice should always be stored in a cool, dry and if possible, semi-dark place. Coolness inhibits insect infestation, dryness wards off mold, and darkness limits vitamin loss.
- ◆ Dry packed rice has a shelf life of 3 to 4 years.
- ◆ By contrast with regular milled white rice, brown rice is not a pantry perennial. The oxidation of the oil in the bran cause rancidity and dictates a highly abbreviated shelf life: six months, if you're lucky.
- ◆ Refrigerating or freezing brown rice in self-seal plastic bags will extend that storage time considerably, but make sure to check the contents regularly. The bags must be completely airtight or moisture buildup will occur inside the packet.

Cooking long-grain white rice

Stove-top Method: Bring 2 parts water to one part grain to a boil. Reduce heat to simmer and cover. Simmer for 20 minutes. Remove from heat, let stand for 5 minutes, fluff with fork, and serve.

Slow Cooker Method: Pour 4 c. long grain rice, 10 c. water and 4 tsp. salt into slow cooker that has been greased with 1 T. butter. Cover. Cook on high 2-3 hours, or until rice is tender, but not overcooked. Stir occasionally. Makes 10 servings.

Microwave Method: In a 2-3 quart microwave dish blend together 2 c. rice, 1 T. oil, 3 ½ c. water and 1 tsp. salt. Cover and microwave on high for 17-19 minutes. Do not stir or open lid during cooking time. Let stand 5-10 minutes. Fluff with a fork.

Flavored Rice Mixes

To make flavored rice mixes:

Combine all ingredients and stir until evenly distributed. Place in airtight container(s). Store in cool, dry place. Use within 6-8 months. Yield: 4 cups.

Chicken-Flavored Rice Mix

4 c. uncooked long grain rice
4 T. instant chicken bouillon
1 tsp. salt

2 tsp. dried tarragon
2 tsp. dried parsley flakes
1/4 tsp. white pepper

Dill-Lemon Rice Mix

4 c. uncooked long-grain rice
5 tsp. dried grated lemon peel
4 tsp. dill weed or dill seed

2 tsp. dried minced chives
2 tsp. salt
8 tsp. instant chicken bouillon

Onion-Flavored Rice Mix

4 c. uncooked long grain rice
2 pkgs (1 1/4 oz) onion soup mix

1 T. parsley flakes
1 tsp. salt

To make rice from mixes:

Use 1 1/3 c. rice mix, 2 c. cold water and 1 T. butter or margarine. Combine all ingredients in medium saucepan. Bring to a boil over high heat. Cover, reduce heat and cook 15 minutes, until liquid is absorbed. Yield: 4-6 servings.

Brown Rice

1 c. rice, unwashed
1 pkg. onion soup mix
6 T. butter or margarine

1 small can mushrooms
2 c. water
Handful of slivered almonds, optional

Brown rice in melted butter in frying pan. Grease casserole and add browned rice and other ingredients. Cover and cook in 300 degree oven for about one hour. Sprinkle almonds on top.

Broccoli Rice

½ c. rice (or 1 ½ c. precooked rice)
¼ c. margarine
1 onion, chopped

2 c. chopped broccoli, cooked & drained
⅔ c. grated cheese
½ c. milk

Cook rice (or use precooked rice). Saute' margarine and onion in a small skillet. Add broccoli, cheese, milk and cooked rice. Bake in covered casserole at 350 degrees for 35 minutes. Serves 4.

Pizza Rice Casserole

⅔ c. rice (or 2 c. precooked rice)
¾ lb. ground beef
1 onion, chopped
2 c. tomato sauce
¼ tsp. garlic salt
1 tsp. sugar

1 tsp. salt
Dash pepper
¼ tsp. oregano
1 tsp. parsley flakes
1 ½ c. cottage cheese
½ c. shredded cheese

Cook rice (or use precooked rice). Brown ground beef and onion in a large skillet. Add tomato sauce, garlic salt, sugar, salt, pepper, oregano and parsley flakes. Cover and simmer 15 minutes. Combine cottage cheese and cooked rice. Put ⅓ of rice mixture in a buttered 2 quart casserole. Top with ⅓ of meat-tomato sauce. Continue to alternate layers, ending with tomato sauce. Sprinkle with shredded cheese. Bake at 325 degrees for 30 minutes, or until hot and bubbly. Serves 6.

Fried Rice

3 c. cooked rice
3 strips bacon, chopped fine
3 eggs, slightly beaten
1 1/4 c. cooked meat, diced fine

2 T. green onions, minced
1/2 c. sliced mushrooms, sauteed
2 T. soy sauce
Salt to taste

Fry bacon until slightly brown. Remove bacon from skillet. Empty grease from pan - set aside. Scramble eggs in skillet used to fry bacon. Remove eggs and set aside. Use bacon drippings to fry cooked rice for approximately 5 minutes, stirring constantly. Add remaining ingredients and combine well. Continue cooking for 10 minutes. Serve hot.

Ham Fried Rice

6 unbeaten eggs
1 onion, diced
4 T. butter or margarine
2 c. frozen peas, cooked

1 c. diced ham
6 c. prepared rice
2-3 T. soy sauce

Cook rice according to package directions. In a large skillet, melt butter and cook onions until tender, but not brown. Add eggs and scramble. Add rice and soy sauce. Stir in peas and ham. Heat through.

Rice Pudding

1 c. rice
3/4 c. sugar
1/2 tsp. nutmeg

3/4 c. raisins
1 quart milk (reconstituted canned or powdered)

Mix all ingredients together in a 1 1/2 quart ovenware casserole. Bake at 300 degrees for 1 hour. Serve hot or cold. Serves 8.

ROLLED OATS

Oats are the edible cereal grain produced by the cereal grass of the same name. Oats are light tan in color. They have a nutty flavor and a chewy texture and are high in vitamin B1. They also contain vitamins B2 and E. Oats must be hulled before they can be eaten. Whole oats minus the hulls are called groats.

Market forms

ROLLED: Oat groats that have been steamed then flattened by steel rollers into flakes. They are also known as old-fashioned cut.

QUICK COOKING: Oat groats that are cut into several pieces before rolling to shorten the cooking time. Quick-cooking and rolled oats are interchangeable in recipes.

INSTANT OATMEAL: Oat groats that are cut into very small pieces and specially processed so that they need no cooking, just the addition of boiling water. Some brands of instant oatmeal are flavored with sugar, spices, or fruits, and usually salt.

STEEL-CUT: Oat groats that have been sliced by steel blades. Also known as Scottish or Irish oatmeal, steel-cut oats have a firm texture when cooked. It is usually found in specialty markets.

OAT FLOUR: The finely ground grain. Usually found in health food stores, oat flour sometimes is used in baked goods.

OAT BRAN: The ground outer layer of the oat. Used in cooking and as a hot cooked breakfast cereal, oat bran is considered a good source of fiber.

Cooking Oats

Measure the amount of water into a medium saucepan and bring to a full boil. If desired, add ¼ teaspoon salt to the water. Slowly add the grain and return to boiling. Cover and simmer for the time specified or till most of the water is absorbed and grain is tender.

Oats, rolled, quick cooking -- 1 ½ cups, 3 cups water. Simmer for 1 minute. Let stand, covered, for three minutes. Yield: 3 cups

Oats, rolled, regular -- 1 2/3 cups, 3 cups water. Simmer for 5-7 minutes. Let stand, covered, for 3 minutes. Yield: 3 cups

Oats, steel cut -- 1 cup, 2 ½ cups water. Simmer for 20 to 25 minutes. Yield: 2½ cups

Hot Oatmeal Cereal

	<u>1 serving</u>	<u>2 servings</u>	<u>6 servings</u>
Water	1 cup	1 ½ cups	4 cups
Salt	1/8 tsp.	1/4 tsp.	3/4 tsp.
Oats	1/3 cup	2/3 cup	2 cups

Bring water and salt to a boil. Add oatmeal and stir. Cook 2 minutes, stirring occasionally. Serve with milk and sugar.

Variations: Add brown sugar, cinnamon, berries, sliced bananas, etc. Or add raisins to boiling water while cooking.

If using regular oats, increase cooking time to 5-7 minutes. For steel cut oats, cook 20-25 minutes.

Instant Oatmeal Packets

Blend ½ c. oats until powdery. Into each of 10 zip-lock sandwich bags combine:

1/4 c. regular oats

2 T. powdered oats

1/4 tsp. salt

To use: Empty packet into bowl and add ½ c. boiling water and stir until thick.

Variations - To each packet add:

Apple Cinnamon: 1 T. sugar, 1/4 tsp. cinnamon, 2 T. chopped, dried apples

Cinnamon-Spice: 1 T. sugar, 1/4 tsp. cinnamon, 1/8 tsp. nutmeg

Raisins and Brown Sugar: 1 T. packed brown sugar, 1 T. raisins

Wheat Germ: 2 T. any kind of wheat germ

Banana-Walnut Oatmeal

2/3 c. nonfat dry milk + 2 c. water*

pinch of salt

3/4 c. water

2 c. quick oats

2 very ripe bananas, mashed

2 T. maple syrup

2 T. chopped walnuts

*Or substitute 2 cups skim milk for the reconstituted nonfat dry milk.

In a small saucepan combine reconstituted nonfat dry milk, salt, and additional water. Heat over medium heat until steaming hot, but not boiling. Add oats and cook, stirring until creamy, 1-2 minutes. Remove the pan from heat and stir in mashed banana and maple syrup. Divide between 4 bowls, garnish with walnuts, and serve.

LEGUMES

Legumes are an inexpensive and nutritious protein food which are high in fiber, low in fat, a good source of protein, carbohydrates, folate, and many trace minerals. Beans store well, cost little, and provide a punch for the nutrition dollar.

Varieties

There are many different beans in the legume family. While the following is a partial list of legumes and a suggested cooking hint, beans may be interchanged in most recipes. Often names are interchanged.

Baby Lima - Mild flavored. Serve as a vegetable or in casseroles.

Light Red Kidney - Excellent in any recipe calling for cooked beans.

Blackeye Peas - Dry form of the popular pea. Cook with pork or chicken.

Navy - Medium-sized white pea bean. Great for baked beans and soup.

Dark Red Kidney - Colorful salad bean mainly sold in canned form.

Pink - Great barbecue style or cooked with other spicy seasonings.

Turtle or Black Bean - A favorite in southern Mexico and Caribbean. Great with rice.

Garbanzo or Chick Peas - Nut-like flavor. Ideal for salads and appetizers.

Pinto - Popular in chili, refried beans, and other Mexican dishes.

Great Northern - Larger than small white or navy beans. Good for baking.

Red - Dark red, pea-shaped. Use in any colored bean recipe.

Large Limas - Rich, buttery flavor. Cook with smoked meat or cheese.

Small White - Firm texture holds up under long slow baking.

Anasazi or Ancient Ones - Cooks in about half the time, sweeter flavor, mealier, less gas.

Cooking Guidelines & Equivalents for Beans

Black beans.....2 hours

Black-eyed peas.....½ hour

Great Northern beans.....1 ½ hours.....2 1/3 c. = 1 lb. = 6 c. cooked

Kidney beans.....2 hours.....1 ½ c. = 1 lb. = 9 c. cooked

Lentils.....½ hour.....2 ½ c. = 1 lb. = 5 c. cooked

Lima beans, large.....1 hour.....2 1/3 c. = 1 lb. = 6 c. cooked

Pinto beans.....2 hours

Navy beans.....2 hours

Split peas.....½ hour.....2 c, = 1 lb. = 5 c. cooked

Cooking Beans and Legumes

- ◆ Rinse all beans and legumes in cold water. Remove all dirt, rocks or bad beans.
- ◆ Soak the beans in 3 times the amount of water as beans. They can be soaked overnight. Lentils and split peas do not need to be soaked. Discard soaking water before cooking.
- ◆ Quick soaking method: For each pound of beans, bring 8 cups of water to boiling. Wash the beans, add them to boiling water, and boil for 1 minute. Remove from heat, cover, and soak for 1 hour. Discard soaking water.
- ◆ Add 1/8 tsp. baking soda and 1 T. cooking oil to each cup of beans while soaking. This will shorten the cooking time and decrease foaming.
- ◆ If you need to add liquid to your beans while cooking, use *boiling* water or the beans will be tough.
- ◆ To avoid toughened beans, add salt midway through cooking.
- ◆ The slower the beans are cooked, the easier they are to digest.
- ◆ Add meat, onions, celery, and herbs during cooking to add more flavor. Add tomatoes, catsup, vinegar and other acid foods after the beans are tender. The acid prevents softening of the beans.
- ◆ Beans will increase double to triple during soaking and cooking (1 cup dry beans will produce 2-3 cups cooked).
- ◆ One pound of dry beans equals 6-7 cups of cooked beans.
- ◆ Cooked beans freeze well and will keep up to 6 months in the freezer.
- ◆ Stored beans should be rotated regularly. They continue to lose moisture and will not reconstitute satisfactorily if kept too long.
- ◆ Beans can also be cooked in the crock pot - you may need to experiment with your crock pot for exact cooking times.
- ◆ Dehydrated refried beans are now available at the Home Storage Center.
- ◆ Soybeans can be used as a meat substitute (see recipes below).

Protein Compliments

Animal protein contains all the essential amino acids and can stand alone as a protein choice. Due to the lack of one or more amino acids in plant proteins they need to be paired with either an animal protein or another plant protein to improve their quality. For example: Legumes or dry beans may be paired with seeds and nuts or with a grain (wheat, cornmeal, rice, oats, etc.) The combination of one of these grains along with the beans provides a complete protein. This is called protein compliments or protein pairs.

Food Safety

Dry legumes must be cooked completely before eating. For this reason it is not recommended you grind dry beans and then simply mix with hot water to make instant retriend beans. Also, if grinding beans into flour, thoroughly cook the dish made with flour or it stops the digestion of the protein from the beans.

Digestive Distress

Digestive distress is an undesirable side effect of eating legumes. *The body lacks enzymes to digest some sugars in the beans.* Since the sugars are not digested, they ferment in the digestive tract creating gas. Following are a few ways to help alleviate undesirable gas:

- ◆ Soak beans a minimum of 3 hours (8-12 hours better); discard soaking water.
- ◆ Sprout beans - soak beans 2-3 days, changing water 3-4 times, until beans begin to sprout.
- ◆ Add the lacking enzyme to the diet in the form of tablets or liquid; one commercial product is called "Beano."

Softening Old Beans

The older the bean, the tougher it is and less digestible. Following are a few tips to soften old beans.

- ◆ Cook and freeze. The freezing moisture in the bean helps to rupture the cell wall and create a more palatable product.
- ◆ Pressure cook. Follow manufacturer's directions for using pressure pan. Increase cooking time as needed to produce a desired texture.
- ◆ Pressure "can" beans. This method makes a readily usable product as well as softening beans. Follow USDA canning instructions for pressuring.

Increasing Consumption of Beans

- ◆ Plan menus.
- ◆ Puree cooked beans and add to baked goods (bread, cake cookies, etc.). (See instructions below on how to puree beans)
- ◆ Prepare convenience foods such as home canned dry beans or cook and freeze for later use.
- ◆ Add whole or mashed beans to meatloafs, soups, stews, casseroles (in small amounts to begin with, then increase as desired, and as allowed by family taste preference).

Beans as a Fat Substitute

Dry cooked beans may be pureed and used in place of part of the fat in baked goods. Beans will help provide moisture to the recipe, but since pureed beans will not act the same way as fat in baking, the final product will be changed. Do not replace all fat with pureed beans. Begin by replacing 1/4 to 1/2 and test the quality of the product.

Sprouting

Beans can also be used for sprouting (see sprouting information in Bzzzz section of this cookbook).

Pureed Beans

Large lima beans and Great Northern beans are soft and mealy enough when well cooked to puree easily. These two kinds of beans make light-colored, bland purees that come in handy for hurry-up meals. Two cups of uncooked beans make about 4 cups of puree.

To make puree by boiling: Soak beans, then boil gently for 1-2 hours, stirring occasionally. Put beans and cooking water through a sieve or food mill.

To make puree by pressure cooking: Soak beans, then put soaked beans and soaking water into pressure cooker. Bring to boiling, then bring pressure to 15 pounds and cook for 20 minutes. Remove from heat. Let pressure come down gradually. Put beans and cooking water through a sieve or food mill.

Cooling and storing: Cool puree quickly by setting the pan in cold water or crushed ice and stirring frequently. Store at once in refrigerator or freezer.

Bean Flour

Grind dry beans to make fine flour. Freeze flour. Then use 2 T. per cup of liquid for thin soups, 3 T. for medium soups, and 4-5 T. for thick soups, stews or gravies. Whisk into soup stock or use boiling water flavored with 1 tsp. meat or vegetable base per cup. Cook and stir 3 minutes. Blend after cooking, if desired, for a creamier soup.

To thicken soups containing vegetables, noodles, etc: For 6 c. soup, blend 1 c. bean flour and 2 c. hot strained soup broth in a blender on high speed for one minute. Whisk into hot soup mixture and cook 4-5 minutes over medium high heat, stirring occasionally.

White Bean Gravy

2 c. boiling water

3-4 T. white bean flour

2 tsp. chicken or vegetable soup base

Whisk bean flour (adding flour to desired thickness) into boiling water with chicken or vegetable soup base in a small saucepan.

Cook over medium heat for 3 minutes. Blend, if desired. Makes 2 cups.

Creamy White Bean Soup

(without a grinder)

Cook 1 c. dry white beans in 3 c. boiling water for 20 minutes. Drain and rinse. Blend approximately 1 c. beans at a time with 2 c. hot water on high speed. Repeat until all beans are blended, straining out any large pieces. Return to saucepan, adding 2 T. chicken or vegetable soup base. Add salt and pepper to taste. Cook 5 minutes over medium heat. Use as a cream soup or as a creamy soup base, adding veggies in season.

Cream of Chicken Soup Substitute

1 3/4 c. water

4 tsp. chicken bouillon or soup
base

5 T. white bean flour

Bring water and base to a boil. Whisk in bean flour. Mixture will be thick in 1 minute. Reduce heat and cook over medium low for 2 more minutes. Blend 2 minutes on high speed. Mixture thickens as it cools.

This mixture can be refrigerated up to one week and used in place of canned soup. Up to 1/4 c. chicken chunks can be added, if desired, after blending.

Note: If dry ingredients are made in bulk, 6 Tbs. plus 1 tsp. would be used with 1 3/4 c. water to equal one can of soup.

Refried Beans

from pinto beans

2 c. pinto beans, sorted and rinsed

1 clove garlic

1 T. shortening or oil

1 small onion

Oregano and salt to taste

Place beans in 6 quart crock pot. Fill with hot water until crock pot is 3/4 full. Cook beans until tender (approximately 4 hours on high). Add more boiling water if needed during course of cooking time. In a saucepan, saute' garlic and onion in shortening or oil. Mash beans and add to garlic and onion. Add oregano and salt to taste. Can be frozen.

Pinto Bean Casserole

1 pkg. corn tortillas

1 lb. hamburger

1 15 oz. can pinto beans (use juice)

1 15 oz. can Italian style marinara
sauce

1 c. grated cheese

Butter tortillas and place in layers to cover bottom of oblong cake pan. Brown hamburger and drain. Put beans over tortillas, and then add sauce, hamburger and grated cheese. Bake at 350 degrees until hot and bubbly (20-30 minutes).

Chili

1 lb. chili beans (about 2 1/4 cups)

1 can tomato juice (46 oz.)

2 lbs. hamburger

1 large onion, chopped

3-4 ribs celery

3-4 tsp. chili powder

1/2 tsp. cumin

Soak beans overnight. Bring beans to a boil and simmer until tender. Leave the beans in the pot and keep them covered with water. Add tomato juice. Brown hamburger and add to beans, along with celery, chili powder and cumin. Simmer until flavors blend. Adjust amount of chili powder to taste.

Bean Soup Mixes

These seasoning mixes may be made in bulk and stored in an airtight container for 6-8 months.

Rainbow Bean Soup

2 T. dried minced onion	½ tsp. chili powder
2 T. beef bouillon granules	1 tsp. pepper
2 T. dried parsley flakes	1 tsp. dried oregano
2 tsp. powdered lemonade mix w/sugar	2 tsp. dried basil

Cook 4 c. dried beans. Add seasonings and 1 28 oz. can crushed tomatoes. Simmer for 1 hour.

Black Eyed Pea Soup

½ c. dried, minced onion	1 tsp. chili powder
6 T. chicken bouillon granules	1 tsp. onion powder
2 T. dried parsley flakes	½ tsp. pepper
1 T. sugar	½ tsp. garlic powder
2 tsp. dried, minced garlic	

Cook 3 ½ c. black-eyed peas. Add seasonings and two 14 oz cans diced or crushed tomatoes. Simmer for 1 hour.

Calico Bean Soup

½ c. dried minced onion	½ tsp. ground cumin
4 tsp. chicken bouillon granules	½ tsp. garlic powder

In a pot, cook 2/3 c. each yellow split peas, green split peas, lima beans, pinto beans, kidney beans, and great Northern beans. Add seasonings, 4 diced carrots, 4 ribs celery, diced, and 4 lbs. smoked ham hocks. Simmer 1 hour.

Black Bean Soup

1/4 c. dried minced onion	2 pkg (1.25 oz) chili seasoning
2 pkg (0.87 oz) brown gravy mix	½ c. dried parsley flakes

Cook 3 c. black beans. Add seasonings and 2 cans (10 oz) diced tomatoes and green chillies. Simmer 1 hour.

Lentil Soup

6 chicken bouillon cubes, crumbled	1 tsp. dried thyme
1 tsp. garlic powder	

Cook 4 c. lentils. Add 4 carrots, diced; 4 ribs celery, diced; 1 c. chopped onion; and seasonings. Simmer 1 hour.

POWDERED MILK

Nonfat powdered milk, instant or regular, is an excellent storage item. It contains all the nutrients, except fat, found in fresh milk. It is one of the richest sources of absorbable calcium. It is also high in protein, potassium riboflavin and vitamins A, D, and B12, all essential to optimal health.

Recent studies have shown that smaller quantities of milk than previously recommended are adequate if people store and eat larger quantities of grains. Additionally, evaporated milk and hot cocoa mix may be stored.

Nonfat Dry Milk

Regular and instant nonfat dry milk are made from skim milk that has been dried by spraying into hot air. Instant milk is regular milk which has been further processed, causing it to clump together, which results in a product that is easier to reconstitute with water than is regular nonfat dry milk. They both have the same nutrient composition. Regular nonfat dry milk is more compact, therefore will require less storage space, however, it is harder to reconstitute. The most common type of dried milk to be found in grocery stores is instant nonfat dry milk.

Powdered Milk Storage

The following storage times and temperatures are based on nonfat dry milk (instant or regular) stored at different temperatures and in unopened packages with either nitrogen or carbon dioxide to replace the air in the package. Storage times will be shorter for products stored in paper or cardboard packages.

50 degrees - 48 months

70 degrees - 24 months

90 degrees - 3 months

Making Fluid Skim Milk

Dry milk can be mixed quickly with water to make fluid skim milk. Measure the powdered milk into a bowl and add about half of the water needed. Stir, shake, beat with wire whip or beat with mixer on slow speed to disperse milk. Add enough water to make the amount of milk desired. Non-instant milk powder is easier to disperse if the water is slightly warm, but not hot.

Drinking Powdered Milk

The best way to use your powdered milk is to reconstitute it and drink it. To accustom your family to dry milk, start by mixing a small amount of reconstituted milk with fresh, whole milk. Gradually increase the amount of reconstituted milk until you're mixing it half and half (or more).

Hints for Using Powdered Milk

- ◆ Mix the milk the night before you use it.
- ◆ Try adding 1½ tsp. sugar or 1 tsp. vanilla to enhance the flavor.
- ◆ Be sure the milk is well chilled.

Substitutions Using Powdered Milk

Whole Milk : 1 c. water, 1/3 c. powdered milk

Buttermilk : 1 c. water, 1/3 c. powdered milk, 1 T. vinegar or lemon juice

Evaporated Milk and Whipped Topping: 1 c. water, 2/3 cup powdered milk . This milk can be chilled and whipped into a topping by adding ½ tsp. lemon juice. After it is whipped, fold in 1 T. sugar to taste.

Condensed Milk: ½ c. hot water, 1 c. sugar, 1 c. powdered milk. Blend thoroughly in blender. Can be stored in refrigerator or frozen.

"Eagle Brand" Sweetened Condensed Milk: 1 c. hot water, 2 c. sugar, 4 c. powdered milk, 1/4 c. butter. Blend in blender very well. Can be stored in refrigerator or frozen.

Cooking With Powdered Milk

Keep a container of reconstituted milk in your refrigerator. Whenever a recipe calls for milk, use your powdered milk instead of fresh. Or, extra nutritive value can be added to your cooked foods by using powdered milk in its dry form as follows:

GROUND MEATS:

Use ½ to ¾ cup instant nonfat dry milk to each pound of meat. Mix with meat, fluids or crumbs.

COOKED CEREALS:

Before cooking, add 1/4 to ½ cup of instant nonfat dry milk to each cup of cereal.

MASHED VEGETABLES:

6 to 8 T. of instant nonfat dry milk may be beaten into each 2 cups of mashed, cooked vegetables (such as potatoes, squash, sweet potatoes, turnips or rutabagas). Add enough cooking liquid or water to make them light and fluffy.

SAUCES, GRAVIES, SOUPS, CUSTARDS:

Add 4 T. instant nonfat dry milk to each cup of milk or add ½ cup instant nonfat dry milk to each cup of water or broth.

TO SUBSTITUTE FOR ONE CAN CONDENSED SOUP:

Combine 1/3 cup dry milk and 1 1/4 cups cool water or liquid from vegetables. Cook over medium heat, stirring until thickened. Add thickened mixture to casseroles as you would a can of soup.

MILK SHAKES OR DRINKS:

Add 2 T. instant nonfat dry milk to each cup of fresh fluid milk.

Buttermilk

½ c. buttermilk

3 c. warm water

1 c. nonfat dry milk or 1 1/3 c. instant nonfat dry milk

Put buttermilk, water and nonfat dry milk in a big, clean jar and stir or shake until powder is dissolved. Cover the jar with a lid or clean cloth. Let stand at warm room temperature until it clabbers, about 10 hours in the winter and 5 hours in the summer. After it clabbers, store in the refrigerator. Save ½ cup to mix buttermilk next time. Buy commercial buttermilk occasionally for a fresh "start".

Yogurt

1 quart lukewarm water

2 T. plain yogurt or dry yogurt starter

2 c. dry milk powder

Mix all ingredients together. Pour into a thermos bottle and let stand overnight.

To make cream cheese: Hang the finished yogurt in a cheesecloth bag overnight. Add salt to taste.

To make salad dressing or sour cream substitute: Add salt and seasonings.

To serve as a dessert: Add sugar to taste.

Yogurt

1 3/4 c. regular nonfat dry milk (3 c. instant)

4 c. water, very warm (not over 120 degrees)

1/3 c. plain yogurt, with active cultures, no additives

Combine dry milk and water. Stir with wire whisk until dissolved. Add yogurt and whisk. Pour into containers, cover and incubate in a warm area for 6-8 hours. Do not disturb during incubation.

During incubation period the cultures multiply and thicken the milk. Refrigerate after yogurt has formed. Set aside 1/3 cup plain yogurt for starting next batch. Add fruit, jams, juice concentrate, chocolate milk mix, etc., for flavoring before eating.

Hot Chocolate Mix

1 1/2 c. instant dry milk ** 1 jar (6 oz) instant coffee creamer
1 1 lb. can instant chocolate drink mix 1/2 c. powdered sugar

Mix well. Store in airtight container for up to 5 months.

To use:

Mix 3-4 T. mix with 1 cup of hot water. This recipe will make about 50 servings.

**It is very important that a high quality dry milk be used for optimum taste.

"Evaporated" Milk Substitute

1 c. hot water 1/2 c. dry milk powder
1/2 tsp. oil 1/4 tsp. honey

Blend all ingredients well. If thicker milk is desired, add 1 1/2 tsp. Quick Thick (tapioca starch) and blend an additional 30 seconds. Makes 1 1/3 cups.

Note: This keeps up to 1 week under refrigeration.

Whipped Non-Fat Dry Milk

1/2 c. cold water 1/2 c. non-fat dry milk
2 T. lemon juice 1/4 c. granulated sugar
1 tsp. vanilla

Place water, lemon juice and vanilla in a 1 quart bowl. Sprinkle non-fat dry milk over top of water. Beat with electric mixer until stiff (about 4 minutes). Gradually beat in sugar until it dissolves and mixture is smooth and creamy. Chill 30 minutes before using.

Mock Mozzarella

4 c. warm water
1 3/4 c. white vinegar

2/3 c. vegetable oil
3 c. dry milk powder

Blend all ingredients, pour into hot, Pam-sprayed saucepan and heat to 115 degrees to form curds. Rinse in warm water, drain and salt to taste. Place in cheesecloth bag and hang to drain or squeeze out excess liquid. Cool and grate or crumble. Use as you would commercial mozzarella. For a firmer texture, use only 1/4 to 1/3 cup oil.

Note: This has the texture and meltability of commercial cheese, but not the flavor. You could mix 1/2 grated Mock Mozzarella with 1/2 c. commercial Mozzarella for an authentic flavor.

Yellow Cheddar Cheese

4 c. warm water
2/3 c. vegetable oil
6 T. cheddar cheese powder

3 c. dry milk powder
1 3/4 c. white vinegar

Blend all ingredients except cheese powder. Pour into hot, Pam-sprayed saucepan and heat to 115 degrees to form curds. Rinse and drain curds in warm water and salt to taste. Add cheese powder and mix well. Put into cheese press or hang in cheesecloth bag and press out excess whey. After 15 minutes, remove from press or cloth, wrap in plastic, write date on package and refrigerate. Grate or slice as you would regular cheddar. If desired, grate and mix with 1/2 grated commercial cheddar.

Bakers Cheese

1/4 rennet tablet (Junket)
3 c. non-instant (5 1/3 c. instant dry milk)
1/2 c. buttermilk

2 quarts warm water

Dissolve rennet tablet in warm water. Thoroughly mix in dry milk. Cover and allow to stand at room temperature until set (5-10 hours). Pour into cheesecloth covered strainer, close the cheesecloth and squeeze out as much whey as possible. The whey may be saved for use in bread. Place the cheese in the refrigerator until well chilled (usually overnight). Knead cheese until the texture is smooth. Cheese will freeze well for up to 6 months. (Makes about 1 pound.)

Tastes like Ricotta or cream cheese, may be used in any recipe calling for either cheese.

No-Cook Cottage Cheese

1 quart warm water
1 junket rennet tablet dissolved in 2 T. cold water

2 c. dry milk powder

Mix or blend and pour into a quart container. Let stand in warm place 8-10 hours, until set and slightly soured. Stir with a fork to break into curds. Pour into a strainer and rinse gently in hot, then cold water, then drain for about 30 minutes and salt to taste.

OR, for a firmer curd, put blended ingredients into medium-sized bowl and let sit 20 minutes. Then cut or stir to break into small curds and drain. Cover drained curds with boiling water. Cover and let stand 10 minutes. This can be used to replace cottage cheese in recipes, or can be pressed in a cheesecloth bag to make a delicious, mild cream cheese.

For more firm curds to eat plain, cut or break set curds into $\frac{1}{2}$ " pieces and heat to 140 degrees in salted water until rubbery and squeaky, about 20 minutes. Remove from heat. Drain and refrigerate.

Cottage Cheese Scramble

$\frac{1}{3}$ c. instant nonfat dry milk
 $\frac{1}{4}$ c. water
3 eggs
 $\frac{1}{2}$ c. cottage cheese

$\frac{1}{2}$ tsp. salt
Dash of pepper
2 T. butter
1 T. chopped chives

Blend together nonfat dry milk, water, eggs, cottage cheese, salt, pepper and chives. In medium-size skillet melt butter; when hot, add egg mixture and cook over low heat until set. Serve immediately. Yield: 3-4 servings.

Biscuit Mix

10 c. flour

1 2/3 c. nonfat dry milk

1/3 c. baking powder

2 1/2 tsp. salt

1 2/3 c. shortening

Mix dry ingredients thoroughly in a large container (6-8 quart capacity). Cut in shortening with pastry blender or mixer until fine crumbs are obtained and shortening is evenly dispersed.

Store, tightly covered, in refrigerator. Use within 3 months.

Variation: Use 5 c. whole wheat flour and 5 c. white flour. No other adjustments necessary.

To make biscuits: Preheat oven to 425 degrees. Place 3 cups biscuit mix into bowl. Gradually stir 2/3 cup water into the mix, adding only enough water to make a dough that is soft, but not too sticky to knead. Knead dough 15 times on a lightly floured surface. Pat or roll dough into a square about 7x7 inches; cut into 16 pieces and place on ungreased baking sheet. Bake until lightly browned, about 12 minutes. Yield: 16 biscuits

To make muffins: Preheat oven to 400 degrees. Lightly grease muffin tins. Stir together 2 3/4 c. biscuit mix and 1/4 cup sugar. Thoroughly mix 1 cup water and 1 egg; add to mix and sugar. Stir until dry ingredients are barely moistened. Batter will be lumpy. Fill muffin tins two-thirds full. Bake until lightly browned, about 20 minutes. Yield: 12 muffins

To make pancakes: Stir together 2 cups biscuit mix and 1 tablespoon sugar. Mix 1 egg, slightly beaten, with 1 cup water. Add to dry ingredients and stir until barely moistened. Batter will be lumpy. Pour batter onto hot griddle and cook until top is bubbly and edges dry, then turn and brown on other side. Yield: 12 pancakes

To make fruit cobbler: Preheat oven to 400 degrees. Mix 1 tablespoon cornstarch and 1/8 teaspoon cinnamon in saucepan. From a 16 oz. can of fruit (peaches, pears, apricots, cherries), stir in a little of the fruit liquid until smooth. Stir in remaining liquid and fruit. Cook over low heat, stirring occasionally, until thickened, about 4 minutes. Pour into a 1 quart casserole. Stir 1 tablespoon sugar and 3/4 cup biscuit mix together. Then stir in 1/4 cup water until dry ingredients are barely moistened. Spread on top of fruit mixture. Bake until top is lightly browned, about 30 minutes.

To make cinnamon coffee cake: Preheat oven to 375 degrees. Grease an 8x8 inch baking pan. For cake: Stir together 2 cups biscuit mix and 1/3 cup sugar. Mix 1 egg and 1/2 cup water thoroughly; add to mix and sugar. Stir until dry ingredients are barely moistened. Batter will be lumpy. Spread into pan. For topping: Mix 1/4 cup sugar, 2 tablespoons flour and 1 1/2 teaspoons cinnamon. Add 2 tablespoons margarine and mix until crumbly. Sprinkle over batter. Bake until toothpick inserted into the center comes out clean, about 20 minutes.

HONEY

Honey is one of nature's best energy foods because it contains many carbohydrates. It is different from cane sugar, which is also an energy food, because honey also contains small amounts of protein, minerals and vitamins. Honey is the only form of sugar food that does not need to be refined. About four-fifths of extracted honey by weight is sugar, mostly in the form of simple sugars, which are easy to digest because they are already in the form that can be absorbed by the body.

Extracted and comb honey keep best in covered containers in a dark, dry place at room temperature (70 to 80 degrees F.) Because honey loses aroma and flavor and absorbs moisture and odors readily when exposed to air, a cover is necessary.

Creamed honey may be kept at room temperature or in the refrigerator. Keep in the refrigerator if the temperature of the room is very warm. Freezing or refrigeration will not harm the honey, but may hasten granulation. Creamed honey may partially liquify if stored at too high a temperature.

Keep the honey covered in the refrigerator if it has been diluted with water or other liquid.

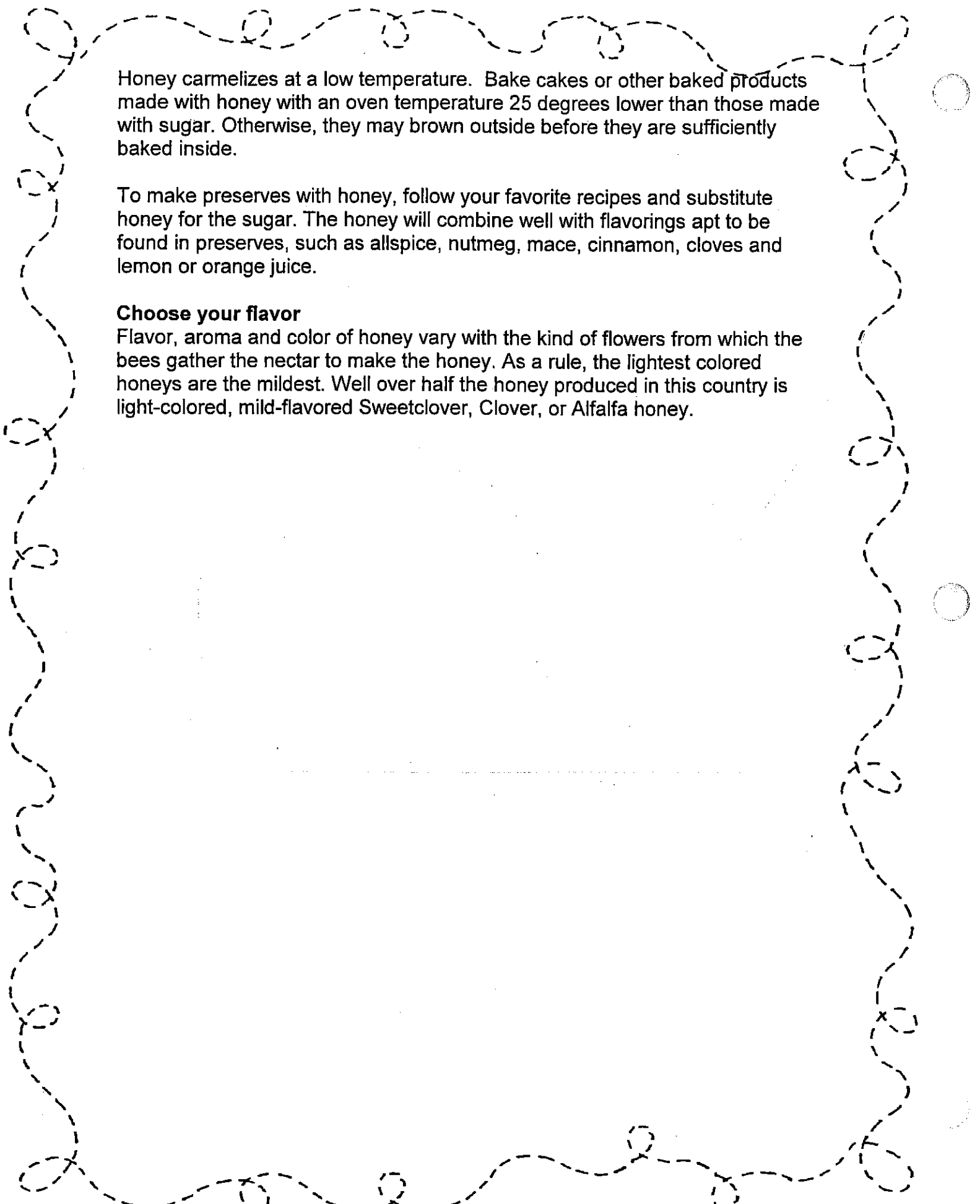
Honey kept for many months may darken slowly and become stronger in flavor, but will still be usable.

Honey may crystallize as it gets older, or if kept at refrigerator temperatures.

Crystallization is a natural process and does not injure the honey in any way. To bring crystallized honey back to liquid form, place the container of honey in a pan of warm water until the crystals disappear. If further heating is necessary, raise the container of honey off the bottom of the pan by putting a rack under it, and set the pan over low heat. Be careful not to overheat; too much heat causes the honey to change color and flavor.

If your recipe calls for 1 cup of white sugar, substitute $\frac{3}{4}$ cup of honey, and reduce the liquid in the recipe by $\frac{1}{4}$ cup. This is necessary because honey contains liquid. If the recipe does not contain liquid, add 4 T. of additional flour for each $\frac{3}{4}$ cup of honey used.

The moisture in honey will soften cookie batters. This is a favorable feature if the cookie is a soft, chewy type. However, if it is a crisp variety, add 4 extra tablespoons of flour for each $\frac{3}{4}$ cup of honey used.



Honey carmelizes at a low temperature. Bake cakes or other baked products made with honey with an oven temperature 25 degrees lower than those made with sugar. Otherwise, they may brown outside before they are sufficiently baked inside.

To make preserves with honey, follow your favorite recipes and substitute honey for the sugar. The honey will combine well with flavorings apt to be found in preserves, such as allspice, nutmeg, mace, cinnamon, cloves and lemon or orange juice.

Choose your flavor

Flavor, aroma and color of honey vary with the kind of flowers from which the bees gather the nectar to make the honey. As a rule, the lightest colored honeys are the mildest. Well over half the honey produced in this country is light-colored, mild-flavored Sweetclover, Clover, or Alfalfa honey.

Honey Butter

½ c. butter or margarine, softened
¼ tsp. vanilla

1 egg yolk
½ c. honey

Whip softened butter or margarine. Add vanilla and egg yolk. Add honey gradually while whipping. Makes 1 cup.

Flavored Honey Butter

Orange Honey Butter

¼ c. honey
½ c. soft butter
2 T. Tang or orange juice concentrate

Honey Nut Butter

4 T. softened butter
⅔ c. honey
¼ c. walnuts or pecans
cinnamon or maple extract if desired

Whip softened butter with honey. Add the rest of the ingredients and stir until well blended. Store in the refrigerator.

Honey Dressing

⅔ c. sugar
½ tsp. salt
1 tsp. dry mustard
1 tsp. grated onion, or the juice
dash paprika

1 tsp. celery seed
5 T. vinegar
⅓ c. honey
1 T. lemon juice
1 c. salad oil

Mix all ingredients except the salad oil thoroughly. Add salad oil very slowly, beating all the time. Beat until thick. Put in a pint jar and keep in the refrigerator. Good on raw fruits.

FATS & OILS

Fat is essential in every diet. Fats and oils play an important role in our perception of taste and texture and their absence would make many foods more difficult to prepare and consume. A small amount of dietary fat is necessary for our bodies to properly absorb fat soluble vitamins like A, D, E and K. Shortening, cooking oil, margarine, peanut butter and mayonnaise are suggested for storage.

All oils are fats, but not all fats are oils. They are very similar to each other in their chemical makeup, but what makes one an oil and another a fat is the percentage of hydrogen saturation in the fatty acids of which they are composed. The fats and oils which are available to us for culinary purposes are actually mixtures of differing fatty acids - saturated fats are solid at room temperature (70 F) and the unsaturated fats we call oils are liquid at room temperature. For dietary and nutrition purposes, fats are generally classified as saturated, monosaturated, and polyunsaturated, but this is just a further refinement of the amount of saturation of the particular compositions of fatty acids in the fats.

Oxygen is eight times more soluble in fats than in water and it is the oxidation resulting from this exposure that is the primary cause of rancidity. The more polyunsaturated a fat is, the faster it will go rancid. This may not, at first, be readily apparent because vegetable oils have to become several times more rancid than animal fats before our noses can detect it.

Storing Fats and Oils

- ◆ Exposure to oxygen, light and heat are the greatest factors to rancidity. Transparent glass and plastic containers should be stored in the dark, such as in a box. They should be stored at as cool a temperature as possible and rotated as fast as is practical. Oils and fats with preservatives added by the manufacturer will have a greater shelf life than those without them, provided they are fresh when purchased.
- ◆ Cooking oils have a shelf life of about a year or two. Once opened, refrigerate cooking fats. If it turns cloudy or solid, the fat is still perfectly usable and will return to its normal liquid, clear state after it has warmed to room temperature. Left at room temperatures, opened bottles of cooking oils can begin to become rancid in anywhere from a week to a couple of months, though it may take several more months to reach such a point of rancidity that it can be smelled.
- ◆ The culinary fat with the most shelf life as it comes from the store is hydrogenated shortening. Solid shortening is usually composed of partially hydrogenated vegetable oils, but there are some that also contain animal fats.

SALT & SEASONINGS

Seasonings and spices are especially important when it comes to basic food storage. Items in this category might include iodized salt, dry yeast, baking soda, baking powder, vinegar, bouillon, herbs, spices and seasoning mixes.

Using Seasonings and Spices

- ◆ Beef, chicken, or ham bouillon granules are excellent secondary storage items.
- ◆ Wheat and rice, either brown or white, cooked in bouillon take on wonderful new flavors, as does barley. Bouillon is an excellent base for many soups, sauces, and casseroles.
- ◆ Soy sauce, with its oriental flavor, is another excellent seasoning. It enhances the flavor of fried wheat or rice with fresh vegetables and sprouts. It also adds good flavor to a stir-fry or even to some stews or chicken or fish dishes.
- ◆ Legumes (peas, beans, soybeans, lentils) respond well to seasoning salts and spice blends like chili powder, curry powder, poultry seasoning, and celery, garlic, and onion salts.
- ◆ It is important to keep some "sweet" spices on hand, such as cinnamon, nutmeg, cloves, ginger, and allspice. Simple rice pudding, for example, is dependent on such spices for its unique flavor. These spices can also enhance the simplest cookies and cakes.
- ◆ Cocoa, sweet cocoa mix, or a cereal drink like Postum are good supplementary items to store along with basic nonfat dry milk. Punch powder is a welcome flavor in lean times. Vanilla, almond, lemon, or maple extract are useful in making pancake syrup.
- ◆ Try cutting the sugar by half the amount called for in a recipe and replacing the sugar with potato flakes (potato pearls canned at the cannery will not work). If you do this with cookies, however, they will not brown as well. In chocolate chip cookies, use all of the brown sugar called for in the recipe, but replace the granulated sugar. This also works well with oatmeal cookies, applesauce cookies, and brownies.
- ◆ A year's supply of flavorings your family enjoys could make the difference between stark and satisfying eating.

Salad Dressing Mixes

To make salad dressing mixes, combine all ingredients until evenly distributed. Place in foil packet or airtight jars. Store in cool, dry place.

Caesar Salad Dressing Mix

1½ tsp. grated lemon peel
1 tsp. oregano
1/8 tsp. instant minced garlic

2 T. grated Parmesan cheese
½ tsp. pepper

Makes 3 T. salad dressing mix, enough for ¾ c. Caesar salad dressing. Use within 2-4 months.

For dressing combine mix, ½ c. vegetable oil, and ¼ c. lemon juice in glass jar. Shake, chill. Yield: ¾ cup

French Dressing Mix

¼ c. sugar
1½ tsp. paprika
1 tsp. dry mustard

1½ tsp. salt
1/8 tsp. onion powder

Variation: Sweet Italian Dressing: Increase sugar to ½ cup. Substitute 1 T. celery seed for paprika.

Makes about 5 tablespoons mix. Use within 6 months.

For dressing, combine dressing mix, ¾ c. vegetable oil and ¼ c. vinegar. Shake well, chill. Yield: 1 ¼ cups.

Sweet Salad Dressing Mix

1/3 c. sugar
1 tsp. instant minced onion
1 tsp. salt

1 tsp. dry mustard
1 tsp. paprika
1 tsp. celery seed

Makes about 1 cup mix, enough for 1 ¼ cups dressing. Use within 6 months.

To make dressing, combine dressing mix, ¾ c. vegetable oil and ¼ c. vinegar. Shake, chill. Yield: 1 ¼ cups.

Super Salad Seasoning Mix

2 c. grated Parmesan cheese
2 tsp. salt
½ c. sesame seeds
½ tsp. garlic salt
1 T. instant minced onion
2 T. parsley flakes

½ tsp. dried dill seed
2 T. poppy seeds
3 T. celery seed
2 tsp. paprika
½ tsp. fresh ground pepper

Use within 3-4 months. Yield: 3 cups.

Super Salad Seasoning Mix can be used as a topping over tossed green salads, baked potatoes, and buttered French bread before toasting. It can also be used as a garnish for potato salads, macaroni or egg salads. Or combine 1 cup sour cream with 2 tablespoons seasoning mix for a sour cream dip.

Dry Onion Soup Mix

4 T. beef bouillon granules
8 tsp. dried onion

1 tsp. onion powder
¼ tsp. Bon Appetit

Mix together to make 1 package dry onion soup mix.

Note: If made in bulk, approximately 7 Tbs. equals 1 pkg dry soup mix.

Chicken Gravy Mix

1 1/3 c. nonfat dry milk powder
3/4 c. flour
3 T. chicken bouillon granules
1/2 c. butter or margarine,

1/4 tsp. ground sage
1/8 tsp. ground thyme
1/8 tsp. ground pepper

In a medium bowl combine milk powder, flour, bouillon granules, sage, thyme and pepper. Stir with a wire whisk until blended. Use a pastry blender or knives to cut in butter or margarine until evenly distributed. Spoon into a 3 cup container with a tight-fitting lid and attach lid. Store in refrigerator. Use within 4-6 weeks. Makes about 2 2/3 c. chicken gravy mix.

Chicken Gravy

1 c. cold water

1/2 c. Chicken Gravy Mix

Pour water into a small saucepan. Use a wire whisk to stir gravy mix into water. Stir constantly over medium heat until gravy is smooth and slightly thickened, 2-3 minutes. Makes about 1 cup.

Beef Gravy Mix

1 1/3 c. nonfat dry milk powder
3/4 c. flour
3 T. beef bouillon granules
1/8 tsp. ground thyme

1/4 tsp. onion powder
1/8 tsp. ground sage
1/2 c. butter or margarine
3 tsp. brown sauce for gravy

In a medium bowl combine milk powder, flour, bouillon granules, thyme, onion powder and sage. Stir with a wire whisk until blended. Use a pastry blender or knives to cut in butter or margarine until evenly distributed. Drizzle brown sauce for gravy over mixture. Stir with wire whisk until blended. Spoon into a 3 cup container with a tight-fitting lid and attach lid. Store in refrigerator. Use within 4-6 weeks. Makes about 2 2/3 c. beef gravy mix.

Brown Gravy

1 c. cold water

1/2 c. Brown Gravy Mix

Pour water into a small saucepan. Use a wire whisk to stir gravy mix into water. Stir constantly over medium heat until gravy is smooth and slightly thickened, 2-3 minutes. Makes about 1 cup.

POTATO PEARLS

Use potato pearls as a side dish of mashed potatoes. Additionally, they may be used as a thickening in soup, stew or gravy by simply adding a handful to your dish and stirring until dissolved. They can also be used as the crust for shepherd's pie or similar casseroles.

Potato Pearl Bread

5 c. milk
½ c. shortening
½ c. sugar
½ c. potato pearls

2 T. salt
2 T. yeast
9-11 c. flour

Microwave milk until hot. Place shortening, sugar, salt and potato pearls in large bowl. Pour hot milk over shortening mixture and stir until potato pearls are dissolved. Cool. Add yeast. Mix in enough flour to form a soft dough, then knead 6 minutes. Cover and let rise. Form into loaves and place in four loaf pans. Raise. Bake at 350 degrees for 35 minutes.

Potato Rolls

Dissolve:

2 pkg. yeast (5 tsp.)
1/4 c. warm water
2 c. milk
3/4 c. sugar
½ c. shortening

1/3 c. potato pearls
2 eggs
2 tsp. salt
8 c. flour (approximately)

Dissolve yeast in warm water. Scald milk, sugar and shortening and set aside. Mix potato pearls with hot water to equal one cup. When milk mixture has cooled to lukewarm, mix with potato water, yeast, eggs and salt. Add about 8 cups flour. Knead until smooth and elastic. Raise until double. Punch down, roll out ½ inch thick. Cut in 3 to 3½ inch circles. Fold in half, pinch edges together. Place on greased cookie sheet. Raise until double (approximately 45 minutes). Bake at 375 degrees for 10-15 minutes. Makes 3½ dozen.

For cinnamon rolls: Roll dough into a rectangle. Spread with butter. Sprinkle with brown sugar, cinnamon, raisins, nuts. Roll dough up into a roll and pinch the seam closed. Cut in 1½ inch slices. Place in greased 9x13 pan and bake at 375 degrees for 10-15 minutes.

EGGS

Dried Eggs

How to Store

Store unopened bags or cans in the refrigerator or in a cool, dry place. Once opened, dry egg products should be stored in the refrigerator or other cool place (32-40 degrees). They should have a tight-fitting lid or be stored in a resealable bag. Good quality eggs can be stored up to one year after being opened if proper conditions are maintained. Unless eggs are kept in a tightly covered container, they will pick up odors and moisture from the air and become lumpy, or absorb flavors from other foods. They are still usable even if this happens. The recommended shelf life of dried eggs (unopened) is 3-5 years. Rotation is preferred. However, length of time may be increased if they are kept below 40 degrees and if the atmosphere in the can is nitrogen instead of oxygen.

To Reconstitute Dried Eggs

Method #1: Measure dried egg, level off the top with a knife. Put warm water in the bowl and sprinkle the egg over the water or sift it in and whip until smooth. Reconstitute only the amount needed. Throw away any leftovers

Method #2: Combine all dry ingredients; sift and measure dried egg before combining with other ingredients. The water needed to reconstitute the dried egg is added to all other liquid.

<u>Amount of Eggs</u>	<u>Whole Egg</u>	<u>Warm Water</u>
1 egg	2 ½ T.	2 ½ T.
2 eggs	5 T.	5 T.
3 eggs	½ c.	½ c.
4 eggs	2/3 c.	2/3 c.
5 eggs	¾ c.	¾ c.
6 eggs	1 c.	1 c.

Egg Substitute

Before starting recipes for cookies or cake, or other recipes calling for egg, combine 1 tsp. unflavored gelatin with 3 T. cold water and 2 T. plus 1 tsp. boiling water. This mixture will substitute for 1 egg in a recipe.

Homemade Egg Noodles

1 $\frac{1}{3}$ c. sifted dried whole egg
2 c. sifted flour (wheat or white)
1 $\frac{1}{2}$ tsp. salt

$\frac{3}{4}$ c. water
 $\frac{1}{2}$ c. spinach (optional)

Sift dry ingredients together. Add water to the dry ingredients and mix well. (The spinach can be added at this time.) Knead the dough lightly. Divide into 6 pieces. Roll each piece very thin on a floured board. Cut rolled out dough into strips 3 inches wide. Stack the strips and slice into shoestring widths. To store noodles, spread out on wax paper and dry thoroughly at room temperature. When dry, store in a covered container in the refrigerator, or freeze. Makes about 1 pound dry noodles.

To cook noodles: Cook dry noodles in boiling salted water, or broth. Cover and cook slowly for 12 minutes.

LEAVENING

A years's supply of dry yeast, baking powder, and baking soda are essential in preparing baked foods. At high altitudes, less leavening is needed. Everlasting yeast/sourdough starter can help extend your yeast supply.

Everlasting Yeast

- 1 qt. warm potato water (strain excess water after boiling potatoes; refrigerate water in air-tight container)
- ½ yeast cake or ½ T. dry yeast
- 1 tsp. salt
- 2 T. sugar
- 2 c. white or whole wheat flour

Stir all ingredients together. Place mixture in a warm place to rise until you are ready to use it for baking. Leave a small amount of everlasting yeast for a start next time. Between uses, keep leftovers in a covered jar in the refrigerator until a few hours before you are ready to use them again.

For the next baking, add the same ingredients, except yeast, to the everlasting yeast start. By saving some everlasting yeast each time you use it, you can keep yeast on hand indefinitely.

Basic Sourdough Starter

2 c. all purpose flour
1 T. active dry yeast
2 c. warm water

3 T. sugar
½ tsp. salt (if desired)

In a 4-6 cup plastic container or large bowl, combine all ingredients. Beat with a plastic or wooden spoon. Fermentation will dissolve small lumps. Cover with a lid, plastic wrap, or cloth (with vent holes to allow starter to breathe). Set in a warm place free from drafts (85 degrees). Let ferment 2-3 days. Stir mixture several times each day.

Quick overnight starter: 2 c. warm water, 1 T. active dry yeast, 2 c. flour

Whole wheat starter: 1 c. warm water, 1 tsp. yeast, 1 c. whole wheat flour

Honey starter: 1 T. yeast, 2½ c. warm water, 2 T. honey, 2½ c. flour

Peasant starter: 1 T. yeast, 1 T. nonfat dry milk powder, 1 c. whole wheat flour,
1½ c. warm water

Rye starter: 1 c. rye flour, 1 c. warm water, 1 tsp. active dry yeast

To use: Remove start needed for recipe. Refrigerate remaining start in pitcher or plastic container that has an air vent or hole in it. Replenish every 7-10 days by stirring in equal amounts of water or milk and all-purpose flour. After replenishing, let stand at room temperature overnight. Return to refrigerator after use. If a clear liquid forms on top, stir back into starter. Makes 3-4 cups.

To add to starter batter: 2 c. warm water, 2 c. flour, 1 c. starter batter.

Combine water, flour and starter batter in large bowl. Cover and place in a warm place overnight.

Using the same principles as above (allowing to sit overnight), you may make many variations of the starter.

Sourdough Pancakes & Waffles

The night before mix together in a non-metal bowl:

2 c. flour
2 c. warm water
½ c. starter

Let stand overnight. In the morning add:

2 T. sugar
1 tsp. salt
½ tsp. baking powder
5 T. oil

Beat in 3 eggs. Dissolve ½ tsp. baking soda in 1 T. water. Fold into mixture. Do not stir after baking soda is added. Serves 4-6. Serve with Buttermilk Syrup (recipe in sugar section of this cookbook).

SPROUTING

Sprouting is a fun way to gain nutrition. Your grains become a vegetable when eaten as sprouts. All you provide is moisture, warmth and air, and the dormant kernels come to life.

Recommended grains to use for sprouting:

Alfalfa	Garbanzo beans	Peas
Mung beans	Pinto beans	Soybeans
Lentils	Red beans	Rye
Peas	White beans	Wheat

Seeds sprouting in 2 days: (Use 2 cups per quart)

Rye	Rice	Oats
Wheat	Wheat	

Seeds sprouting in 3-5 days: (Use the following quantities per quart)

Alfalfa - 1 tablespoon
Lentils - 2 tablespoons
Clover - 2 tablespoons
Mung beans - 2 tablespoons
Garbanzo beans - ½ cup

Tray Method

Soak seeds in a glass of warm water overnight. Seeds will grow from 6-8 times during the sprouting process. After soaking overnight, put the seeds in a sprouter tray and rinse thoroughly, tilting the tray to allow the water to run down (sprouts should be moist, not wet).

Rinse sprouts in warm water 3-4 times a day depending on the weather. There are two methods of rinsing:

1. Fill your sink with several inches of water and agitate the tray up and down.
2. Hold tray under tap and allow the water to run over the seeds.

Most sprouts are ready to eat after the third day.

Bottle Method

When sprouting, place proper amount of seeds and water in a wide-mouthed bottle and soak at least 8-12 hours.

After soaking, cover bottle with a piece of nylon stocking, net, or fiberglass window screening. Hold in place with an elastic band or a regular bottle ring so air and water can pass through freely. Pour off water in jar and gently shake. Pour off water, and lay jar on its side in a dark place. Repeat this 2-3 times a day. After 2-3 days your sprouts will be ready to use.

Sprouting Hints

- ◆ Rotate your seed storage, as fresh seeds tend to be more viable than those stored for long periods of time.
- ◆ All seeds, with the exception of tomato seeds, can be sprouted.
- ◆ After rinsing beans, do not use or drink the water.
- ◆ Store sprouts in the refrigerator for 10-15 days.
- ◆ Sprouts can be dried by letting them dry in the sprouter, placing them in a low oven (100 degrees), or setting them out on a warm day.

Sprouting "Do Nots":

- ◆ Do not leave seeds in water for over 20 hours or under 10 hours, 12 hours is best.
- ◆ Do not let seeds set in water while sprouting. They will drown and sour. Be sure they drain well.
- ◆ Do not use chemically treated water. Heavy amounts of chlorine can kill the sprouts.
- ◆ Do not use hot or cold water - hot water will cook them, cold water will retard the growth. Keep them between 50-80 degrees.
- ◆ Do not sprout over 4 days. After that, they become plants, not sprouts.
- ◆ Do not let seeds or sprouts dry out. Wash them morning and night, and 2-3 times a day. In hot weather, rinse more often. They will turn brown if they dry out.
- ◆ Do not buy cheap seeds or old, hard seeds. They take longer to sprout and may already be dead.
- ◆ Do not buy treated seeds that have poison on them to kill insects. It could do the same to you!
- ◆ Do not sprout large amounts of seeds unless you know what you are doing and intend to give them away after they start to grow. Generally, 1/4 cup of seeds to sprout is enough.
- ◆ Do not get discouraged if you forget to water them and they die or if you give them too much water and drown them. Start over and build a regular habit of taking care of them and they will take care of you better than most pills.

Suggestions for using sprouts:

Mix sprouts into casseroles, nut loaves, meat loaves, poultry dressing, vegetable salads, gelatin salads, soups, stews, egg dishes, souffles, scrambled eggs. For bread dough, use sprouts from wheat, rye or oats.

In soups, stews and omelets, add sprouts just before serving.

Most sprouts make a fine crisp salad or sandwich filling when served with a dressing made from cream cheese, cottage cheese, yogurt, avocados, cooked sprouts, mashed beans or cheese spread. Alfalfa and lentil sprouts make an exceptional salad when used alone or with leafy salad vegetables and the dressing of your choice.

Sprouting Beans: Beans require different methods of sprouting. Navy bean, soybean and pinto bean sprouts should be cooked.

Pinto beans: Fill a 2 quart pan with water and soak one pint of beans for 12 hours. After 12 hours, spread beans out on sprouter or in tray that has a towel or several sheets of cotton cloth on the bottom. Be sure to rinse them every 4-5 hours and drain. Do not sprout for more than 3 days. If sprouts are more than 1/4 inch long, the beans become mushy and have an odor.

Soybeans: It is best if these beans have several changes of water, about 3-4 times, while soaking them in their 12 hour swelling period because they have an antidigestant enzyme in them that must be leached out.

Mung beans: These beans have 500% more vitamin C when sprouted. They are commonly known as Chinese bean sprouts and are best when sprouted 2-3 inches long. Be sure they are fresh seeds. They taste like sweet peas and can be used as such.

Other beans: Sprout as you would pinto beans. Changing water during soaking is a good practice on all types of beans, not just soybeans. Other beans may include red, navy, lentils, lima, black-eyed or kidney.

Nutritional facts: Sprouting enhances the nutritional value of beans and also eliminates gas problems in your system. Beans have practically no vitamin count in the dry stage, but after they are sprouted, the nutritional assets multiply countlessly.

Sprouted soybeans: Sprouted for only 3 days, the vitamin count jumps up around 700 mg and the vitamin B complexes increase tremendously. Vitamin B1, niacin and pantothenic acid double; vitamin B2 and folic acid increase to 500%. When sprouted, soybeans have 8 times more vitamin C than oranges and lemons.

Sprouted wheat: Though wheat has very little vitamin C, this quantity increases 5 times, 600%, during early sprouting. Vitamin C reaches its peak of potency at 50 hours of sprouting, then starts to decline. Sprouted wheat, after drying, will retain its increased nutritional values. These sprouts also freeze well.

Sprouted oats: Sprouted oats increase 600% in folic acid and 1,350% in riboflavin compared to dry oats.

Sprouted alfalfa: Chlorophyll, enzymes, minerals and vitamins found in alfalfa serve as an aid in digestion and stimulate lagging appetites.

Wheat grass: Wheat grass is known as a blood purifier. To obtain wheat grass, let sprouts grow for more than 3 days into very thin grass blade, approximately 6-7 days. Then clip the grass with scissors and utilize them with liquids.

VINEGARS

Basil & other single herb vinegars

A pattern to follow - you can use any fresh herb. Dill, for instance, is always enjoyed, as is chervil. Tarragon is one of the greatest vinegars of all. Chive blossoms make a subtle vinegar - be sure to use a lot of them in the bottles. For small-leaved herbs such as thyme, use an extra sprig or two.

4 large sprigs fresh basil
2 c. white wine vinegar

Put the basil sprigs into a pint bottle and pour in the vinegar (or divide everything into 2 smaller bottles). Seal. Store for 2-3 weeks before using.

Rosemary-Tarragon Vinegar - (and other herb-combination vinegars)

Rosemary and tarragon are a terrific flavor combination, and the sprigs of the two herbs look fascinatingly exotic together. But there are other good combinations. Any herb goes well with any other herb. You could use several herbs in combination, too. Oregano and dill are interesting together, as are basil and savory.

2 large sprigs rosemary
2 large sprigs tarragon
2 c. white wine vinegar

Put sprigs of rosemary and tarragon in a pint jar and pour in the vinegar. Seal. Store for 2-3 weeks before using.

Thyme, Lemon Peel and Black Pepper Vinegar - (and other combination vinegars)

This vinegar is good-tasting, as well as appealing to look at. Other flavoring ingredients to combine with herbs include dill seeds, whole allspice, white peppercorns, cinnamon sticks, orange peel, tiny hot dried red peppers, and celery seed. This mixture known as pickling spice makes an unusual vinegar, too.

1 large sprig of fresh thyme
1 long spiral lemon peel
2 heaping tsp. black peppercorns
2 c. white wine vinegar

Put the thyme, lemon peel and peppercorns into a one pint jar or two 8 oz. bottles. Add the wine vinegar and seal. Store for a month before using, giving the bottle a gentle shake every day or two.

Provençal Vinegar

- 1 small sprig thyme
- 1 small sprig rosemary
- 1 small bay leaf
- 1 large clove garlic, peeled
- Orange peel, strip about 1" by 4"
- 1 pint white wine vinegar

Put the thyme, rosemary, bay leaf, garlic and orange peel into a 1 pint bottle. Add wine vinegar. Seal. Store for a month before using, giving the bottle a very gentle shake every day or two.

Mint Vinegar

- 4 c. cider vinegar
- 1 c. sugar
- 1 c. loosely packed spearmint leaves and young stem tips

Bring vinegar to a boil; stir in sugar and mint leaves, stir and crush. Simmer 5 minutes. Strain into hot jars and cool to room temperature. Use sparingly in fruit punches, mint tea and mint sauce.

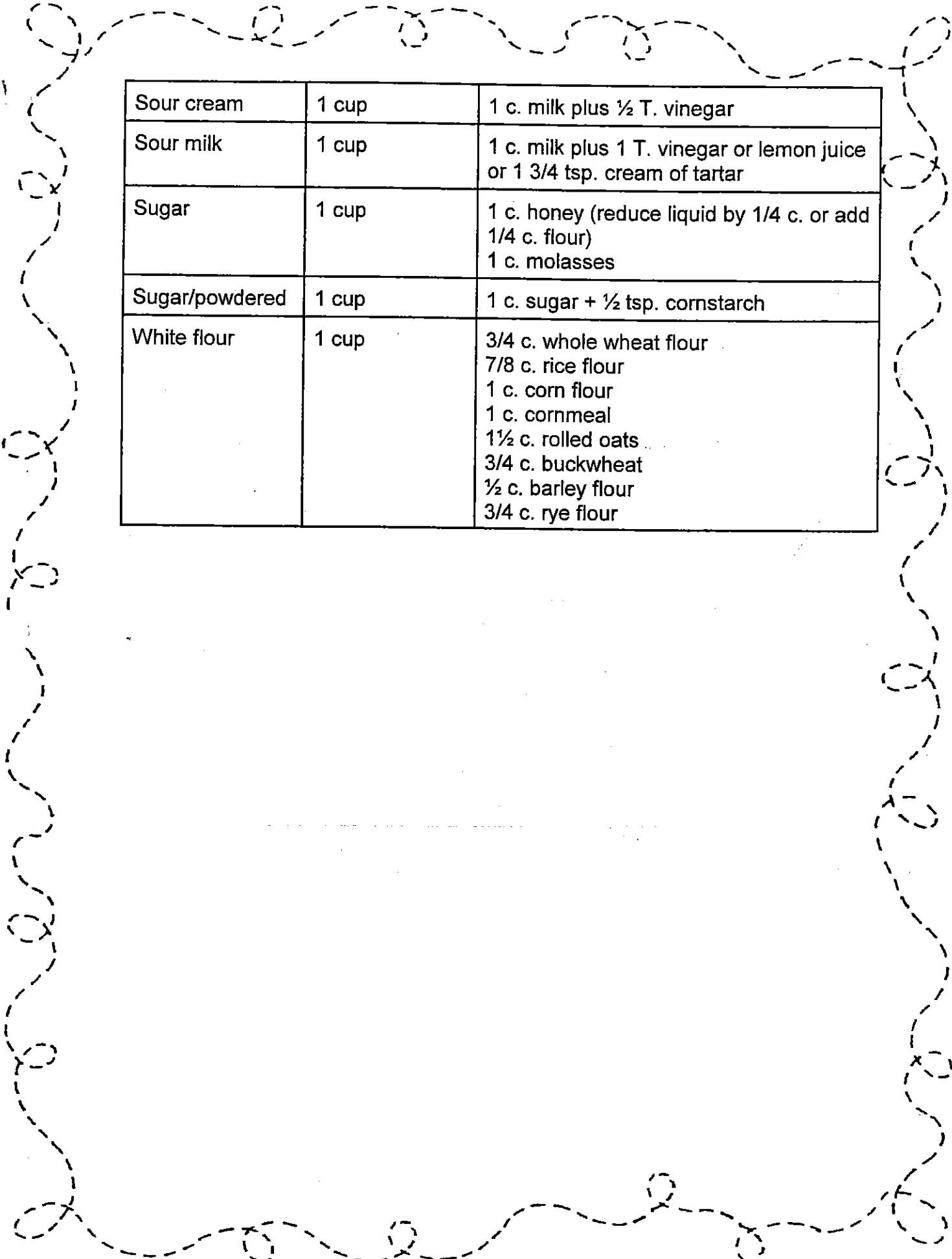
Dill Vinegar

- 1/3 c. chopped fresh dill weed
- 1 t. dill seed
- 1 quart cider vinegar

Combine all ingredients in a quart jar with a tight-fitting lid. Cover and let stand in a warm place at least 2 weeks. Strain and use in salad dressing or fish dishes.

SUBSTITUTIONS

Item	Amount	Substitute
Baking Powder	1 teaspoon	1/4 tsp. soda + 1/2 tsp. cream of tartar. Mix just before use, cannot be stored
Butter (for use in recipes)	1 cup	2 sticks softened margarine, 1/3 c. vegetable oil & 1/2 c. buttermilk. Beat until liquid is absorbed. Refrigerate.
Butter (for use in recipes)	1 cup	1 c. vegetable shortening + 1/2 tsp. salt
Buttermilk	1 cup	1 T. vinegar or lemon juice + milk to make 1 cup. Let stand for 5 minutes.
Catsup	1 cup	1 c. tomato sauce, 1/2 c. sugar, 2 T vinegar + spice
Chocolate (unsweetened)	1 square	1 T. cocoa plus 1 T. butter
Cornstarch	1 1/2 tsp.	1 T. flour
Corn syrup	1 cup	1 c. sugar + 1/4 c. liquid
Egg (whole)	1 whole egg	2 egg yolks plus 1 T. water, or 2 T. dehydrated eggs plus 2 1/2 T. water
Flavored gelatin	3 oz. package	1 T. plain gelatin + 2 c. fruit juice
Half and half	1 cup	7/8 c. milk + 1 T. butter, or 1/2 c. coffee creamer and 1/2 c. milk
Honey	1 cup	1 1/4 c. sugar + 1/4 c. liquid
Milk, whole	1 cup	1/2 c. evaporated milk + 1/2 c. water, or 1 c. reconstituted milk plus 2 T. butter
Mustard		1/3 c. flour, 1/2 c. sugar, 1 T. salt, 3/4 c. dry mustard, 1 1/2 c. white vinegar, 1 green onion, dash sugar. Blend.
Onion	1 medium	1/4 c. dehydrated onion
Shortening or butter	1 cup	2/3 c. vegetable oil



Sour cream	1 cup	1 c. milk plus ½ T. vinegar
Sour milk	1 cup	1 c. milk plus 1 T. vinegar or lemon juice or 1 ¾ tsp. cream of tartar
Sugar	1 cup	1 c. honey (reduce liquid by ¼ c. or add ¼ c. flour) 1 c. molasses
Sugar/powdered	1 cup	1 c. sugar + ½ tsp. cornstarch
White flour	1 cup	¾ c. whole wheat flour 7/8 c. rice flour 1 c. corn flour 1 c. cornmeal 1½ c. rolled oats ¾ c. buckwheat ½ c. barley flour ¾ c. rye flour



Blue chip Group, Inc.

1641 South 700 West
Salt Lake City, Utah 84104
801-908-MOOS (6667), Fax 801-908-6668
www.bluechipgroup.net

RECONSTITUTING DEHYDRATED PRODUCTS

You can substituted shortening, butter, margarine, fruit, vegetables, eggs, etc. in your favorite recipe using dehydrated products by following these dehydrating guidelines.

Product	Amount of dehydrated product	Amount of Water	Resulting Amount
Whole Egg	2 Tablespoons	3 Tablespoons	1 Fresh Egg
Egg Whites	2 Teaspoons	2 Tablespoons	1 Egg White
Egg Mix	2 Tablespoons	3 Tablespoons	1 Egg for Scrambling, ect..
Butter, Margarine or Shortening	1 Cup	1/4 Cup (or oil)	1 Cup
Tomato Crystals	1/4 Cup (for paste add more)	1/2 Cup	1/2 Cup Tomato Sauce
Juices	2 Teaspoons	1/2 Cup	1/2 Cup (4 oz)
Juices	1 Cup	2 Quarts	2 Quarts
Cheese Powder	1 Tablespoon at a time until desired consistency	2 Tablespoons powder & 2 Tbs. cream base	1 Mac & Cheese packet
Cream Soup Base	1/4 Cup	1 Cup	1 Cup Medium White Sauce
TVP * (rehydrated overnight)	1/2 Cup	1 Cup	1 Cup
Fruits ** & Vegetables *** Rehydrated Overnight	1/3 Cup	1 Cup	1 Cup

* TVP is textured vegetable protein that can take the place of meat products. It can also be used dry on salads or casseroles

**Rehydrated fruit flavored flakes and applesauce are good when used in granola or on hot cereal. Any of the rehydrated fruits are good in pies, gelatin, etc.

***When rehydrating vegetables, try adding 1/2 teaspoon of sugar and salt per cup. Vegetable are especially good in soups, stew, sauces, etc.

Fruit and vegetables, when ground into a powder, can be reconstituted into baby food!

#10 Can Equivalents

<u>PRODUCT</u>	<u>WEIGHT/ CAN</u>	<u>CUPS DRY</u>	<u>SERVINGS</u>
Apple slices	1.38 lbs		25 1 oz. servings
Beans, pinto	5.25	13.5	30 cups cooked
Beans, pink	5.25	13.5	30 cups cooked
Beans, white	5.25	13.5	30 cups cooked
Carrots	2.5	13.5	41.5 c. rehydrated
Flour, white	4.25 lbs.	13	
Fruit drink mix	6.31 lbs.	14	7 gal. @ ½ c. per quart
Hot cocoa	4.5 lbs.	14	3.5 gallons
Macaroni, elbow	3.38 lbs.	13.2	30 cups cooked
Milk, nonfat regular	4.13 lbs.	14	7 gal. @ ½ c. per quart
Onions	2.44 lbs.	13	18 lbs. fresh
Potato pearls	3.10 lbs.	14	28 cups cooked
Pudding, vanilla or chocolate	5 lbs.	15	60 servings @ 1/4 c. per servings
Refried beans	3.0 lbs	13	20 cups
Rolled oats, quick	2.75 lbs.	16.5	44 cups cooked
Rolled oats, regular	2.75	16.5	44 cups cooked
Rice, white	5.69 lbs.	13.75	44 cups cooked
Soup mix	5.19 lbs.	14	32 cups cooked
Spaghetti	4.5 lbs.		35.2 cups cooked
Sugar, white	6.14 lbs.	13	
Wheat, whole	5.8 lbs.	13	20 cups wheat flour

Food Storage Planning Guide

Water Storage Guidelines

Commercially bottled water in PETE (or PET) plastic containers may be purchased. Follow the container's "best if used by" dates as a rotation guideline. Avoid plastic containers that are not PETE plastic.

If you choose to package water yourself, consider the following guidelines:

Containers

- Use only food-grade containers. Smaller containers made of PETE plastic or heavier plastic buckets or drums work well.
- Clean, sanitize, and thoroughly rinse all containers prior to use. A sanitizing solution can be prepared by adding 1 teaspoon (5 ml) of liquid household chlorine bleach (5 to 6% sodium hypochlorite) to one quart (1 liter) of water. Only household bleach without thickeners, scents, or additives should be used.
- Do not use plastic milk jugs, because they do not seal well and tend to become brittle over time.
- Do not use containers previously used to store non-food products.

Water Treatment

- Water from a chlorinated municipal water supply does not need further treatment when stored in clean, food-grade containers. AF's water is chlorinated.
- Non-chlorinated water should be treated with bleach. Add 1/4 of a teaspoon (16- drops) of liquid household chlorine bleach (5 to 6% sodium hypochlorite) for every gallon (4 liters) of water or 4-drops per quart; 1-TBS per 55 gallon barrel. Only household bleach without thickeners, scents, or additives should be used.

Storage

- Containers should be emptied and refilled regularly.
- Store water only where potential leakage would not damage your home or apartment.
- Protect stored water from light and heat. Some containers may also require protection from freezing.
- The taste of stored water can be improved by pouring it back and forth between two containers before use.

Additional Information

Note: The following links are not to official Church publications but are provided as additional resource material:

www.fema.gov/plan/prepare/water
www.redcross.org/services/prepare