

BEANS

Why Store and Eat Beans?

Great Nutrition!

Beans are one of the most nutritionally complete foods available. Beans are:

- High in complex carbohydrates, protein (including lysine), dietary fiber, vitamins, and minerals.
- Low in fat (only 2-3% fat), sodium, and are cholesterol free.

Eating beans with grains or small amounts of animal products such as meat, eggs, or cheese, makes a “complete” source of protein, but they don’t have to be consumed together at the same meal.

Long Storage Life

Beans can store for 30 years when packaged for long-term storage (in a nitrogen-packed air-tight container) and kept in a cool dry place. Once opened or if purchased in short-term packaging, beans can be stored on the shelf and should last 1 + years at room temperature.

Economical

Beans are inexpensive! They cost just pennies a serving, especially when bought in bulk.

Widely Available

Many varieties can be found in any local grocery store, health food stores (i.e., Whole Foods, Good Earth, etc.), at the Church Cannery, and packaged for long-term storage from bulk food sources (Walton Feed, Emergency Essentials, Azure Standard, Honeyville Grain, etc.).

Tasty

Beans add flavor and texture and complement many foods.

Versatile

Eating beans every day does not mean you have to eat the same thing every time. Beans can be used to make a variety of hearty soups and stews, creamy soups, sauces, gravies, patties, salads, breads, main dishes, side dishes, casseroles, desserts, & dips. Use mashed beans to extend meat in patties and meat loaf. You are only limited by your imagination!

Bean Counting – How to Measure Beans

- 1 pound of beans = 2 cups dry = 6 cups cooked beans (drained) or 5 cups bean flour
- 1 - 15 1/2 oz can beans = 1 2/3 cups cooked beans drained or about 2 cups undrained
- Beans triple in volume when soaked and cooked (1 cup dry beans yields 3 cups cooked)
- 1 1/3 cups cooked beans = 1 cup mashed beans
- Use 3 cups of water per cup of dry beans for soaking
- 1 pound of dry beans will make about 9 servings of baked beans
- 1 pound of dry beans will make about 12 servings of bean soup

Types of Beans



Adzuki – These small, dark red beans are native to the Orient. They can be used interchangeably with other beans in casseroles, soups, and baked goods. Often used sprouted. They have a lighter flavor than small red beans.



Anasazi – These red and white speckled beans were originally grown by Native Americans. One advantage to these beans is that they cook in less time than similar beans their size. They can be substituted for pinto or red kidney beans in your favorite dishes.



Black Turtle – These small, black, oval shaped beans are very popular in Mexican and Southwestern cooking. They tend to break up when cooked and because they easily lose their skins, they are not good candidates for the pressure cooker.



Black-Eyed Peas – Also known as cow peas, they are a southern staple. They are medium-sized oval-shaped, with black dot on white colored skin. On New Year's Day in the South there's a tradition of black-eyed peas being made into Hoppin' John which has the reputation of bringing good luck.



Garbanzo (Chick Peas) – These round, pale yellow legumes are a staple food in the Middle East. They are the main ingredient in hummus and falafel. They cook in 1 to 1 ½ hours and go well in soups, salads, and Mexican dishes.



Great Northern – These white, oval shaped medium-sized bean are twice the size of navy beans and black-eyed peas. They are often used in soups, stews, and casseroles. Because of their mild flavor, they are perfect for flour gravies.



Kidney – These medium-sized red beans get their name from their distinctive shape. Kidney beans are a mainstay in Mexican meals, and they work equally well in soups, stews, chili, salads, and rice dishes.



Lentils – Are a separate branch of the legume family tree and look like small, flat round disks. They are available in brown, red, and green varieties. Lentils cook in only 45 minutes. They have a pleasant, peppery flavor. Great for soups, side dishes and sprouts.



Lima (Large and Baby) – Are flat-shaped, white-colored beans with a smooth, creamy texture. They are popular as a side dish or added to soups and casseroles. They are different enough from other beans they can seem like a nice break from “beans” when eating a large variety of different legumes in the diet.



Mung – These small, dark green round beans are grown in India and the Orient. Sprouted, they are the mainstay of stir-fries and make a wonderful addition to salads. They can also be cooked and added to soups, etc. They are also low on the gas producing scale.



Navy – This small white oval bean is mild flavored and when cooked has a powdery texture. They are most often used when making pork and beans or baked beans. They are perfect for soups, stews, in salads, and make a great substitute for great northern or baby lima beans.



Peas (whole, split green and yellow) – Whole peas need to be soaked, split peas do not. Whole peas are often eaten sprouted. Delicious in flavor, peas and split peas go well in soups and casseroles. Yellow split peas have a milder flavor than green split peas.



Pink – Small, pale, and pink-colored, this bean has a rich, meaty flavor and slightly powdery texture. It turns reddish brown when cooked. It is a favorite for “old west” recipes including chili and refried beans and can substitute for kidney beans or pinto beans in any recipe.



Pinto – This popular bean is widely used, partially because of its lower cost and versatility. It is well known for making refried beans and Mexican dishes. It is perfect for making chili, soups, baked beans, and as a substitute for recipes calling for kidney, red, or anasazi beans.



Red – Small red beans are dark red in color and are smaller than pinto and kidney beans. They hold their shape and firmness when cooked. They are most often used in soups, salads, chili and Creole dishes.



Soybeans – This bean is not recommended for storing and eating unless prepared and consumed in a fermented form such as miso, soy sauce, and tempeh—as it has been used for centuries in the orient.

Storing Beans

Long-Term Storage

Beans should be kept in nitrogen-packed air-tight containers and kept in a cool, dry place. The cooler the temperature, the longer they store. Stored properly, they can store up to 30 years.

Short-Term Storage

Store in dry, airtight container on the shelf. (1+ years)

Cooked Beans

Store in covered container in refrigerator (3-5 days), or in the freezer (3-6 months). Freeze in 1-2 cup portions in zip-lock freezer bags. Freezing tip: flatten bean-filled bag, squeezing air out, then seal and lay flat in freezer.

Sprouting

Beans can be sprouted (in place of the soaking process) and then cooked, or eaten raw. Anything sprouted first will provide greater nutrition and will be more easily assimilated by the body.

To sprout:

- Wash and sort beans.
- Place in a large bowl with 3 cups of water per cup of beans. Let stand overnight (10-12 hours).
- Drain and rinse, then put beans into sprouting container. (Do not overcrowd the container—they need some air circulation.) Keep at room temperature (next to sink is most convenient).
- Rinse and drain thoroughly at least twice a day.
- Within 2 days, most will have sprouted as long as the seed. Older seeds may take up to 5 days.
- To store: Keep thoroughly drained sprouts in a covered container in refrigerator for up to 6 weeks.
- Enjoy!

Bean Cooking Myths

Before we talk about cooking beans, let's talk about a few controversial bean myths.

- Myth #1: Beans have to be soaked before cooking. No, they don't—it will just take longer to cook them (by up to 30 minutes). (What mostly affects cooking time is how fresh your beans are.) Soaking can, however, increase the absorption of minerals (by reducing phytic acid), and may help reduce the gas causing effects (by breaking down sugars).
- Myth #2: Salt needs to be added after the beans are cooked because it will slow down the softening process or toughen the beans. The truth is that studies have shown that it has little or no affect on cooking time or bean texture.
- Myth # 3: Lemon juice, vinegar, tomato or other acidic products need to be added at the end because it will slow the softening process. The truth is that it can slow down the cooking process, but the cooking liquid has to be pretty acidic to have a noticeable effect. So adding a few Tbsp of vinegar or tomato paste won't interfere in any way, but cooking your beans in pure tomato sauce might be slightly detrimental. Some acid can actually help beans keep from falling apart.

Cooking Beans in 3 Easy Steps!

1) Sort and Rinse Dry Beans

Before soaking and/or cooking, remove damaged beans, small stones, and any foreign materials (this concern is greatly reduced with today's cleaning process). Rinse beans in cold water.

2) Soaking Dry Beans (optional)

It is recommended that you soak beans, but it isn't a requirement. If you don't soak, it will take longer to cook them (by up to 30 minutes). (What mostly affects cooking time is how fresh your beans are.) Soaking can, however, increase the absorption of minerals (by reducing phytic acid), and may help reduce the gas causing effects (by breaking down sugars). So, if you forget to soak, it's OK to cook them anyway.

To soak your beans, use one of the following methods:

Overnight soak

Place 3 cups of water to 1 cup beans in large pan or bowl. Let stand overnight (8 to 12 hours) or as long as 24 hours in the refrigerator. Rinse and drain.

Quick soak

Place 3 cups of water to 1 cups bean in large pan. Bring beans and water to boil and cook 2 minutes. Remove from heat, cover, and let stand 1-2 hours. Rinse and drain.

Softening Hard Beans

Try one or more of these ideas to soften hard beans:

- Do not soak in hard water.
- Add 1 cup beans and 2 tsp baking soda to 2 ½ cups hot water and soak overnight. Rinse twice before cooking.
- Cook in a pressure cooker.
- If all else fails, grind them into flour.

3) Cook Dry Beans

Cook your beans using one of the following methods. Add spices and flavorings as desired while cooking. Beans are fully cooked when you can easily mash them with a fork.

Stovetop Method

For each cup of beans, add 3 cups water. Bring the water to a boil, then reduce heat and simmer until the beans are tender. Add water as needed to keep beans covered.

Crock Pot

Place beans in crock pot and add enough water to cover beans by 2 inches (or 3 cups water to 1 cup beans). Add seasonings to taste. Cook on low until tender (about 8 - 12 hours).

Oven

Place beans, water (3 cups water to 1 cup beans) and spices in covered dutch oven and cook at 350° until tender.

Pressure Cooker

Pressure cooking is safe and easy and saves a lot of time and work. Read and follow your pressure cooker instructions. After a couple of tries, you will get over your fear (if you have any) and you will see how easy it is.

Most beans require 3-5 minutes of cooking per cup. Navy beans and pinto beans may require up to 10 minutes. Peas, lentils, and small lima beans usually are not pressure-cooked.

Soaked beans:

- Place previously soaked and rinsed beans in pressure cooker, filling no more than 1/3 full to allow for expansion.
- Add water, covering beans by at least 2 inches.
- Add any other ingredients and seasonings.
- Add 1 Tbsp of oil to reduce foaming.
- Following manufacturers instructions, cover and seal the cooker, and bring it up to 15 pounds of pressure.
- Reduce heat and start timing. Maintain heat and pressure for the length of time indicated for the type of beans you are cooking.
- Remove from heat and let pressure drop gradually.
- If more cooking time is needed, return to pressure for an additional 3 minutes. Remove from heat and let pressure drop gradually. Check for doneness again. Repeat if necessary.

Unsoaked beans:

- Place sorted and washed beans in pressure cooker with 3 times as much water as beans and 1 Tbsp oil.
- Following manufacturers instructions, cover and seal the cooker, and bring it up to 15 pounds of pressure.
- Reduce heat and start timing.
- Maintain heat and pressure 30 minutes for small beans, 40 for large beans.
- Remove from heat and let pressure drop gradually.

Microwave

Using the microwave to cook beans is not recommended as boil overs are common, it makes beans tough, and it does not save any cooking time. Other methods are better.

Pressure Canning

Home canning only costs about .30 cents per quart of beans and have a shelf life of at least 1 year. Water plays an important part in the final quality of canned beans. The harder the water used for soaking and blanching, the harder and firmer the finished beans. Excessive alkalinity will cause the

beans to disintegrate somewhat, becoming soft and mushy. However, this will not be recognized until after processing.

- Place soaked beans and enough water to cover beans in a large pan and boil 30 minutes.
- Add 1/2 teaspoon of salt per pint or 1 teaspoon per quart to jars, if desired.
- Fill jars with beans and then cover with cooking water, leaving 1-inch headspace. Adjust lids.
- Process in pressure canner according to canner instructions. Otherwise, process pints for 1 hour and 15 minutes and quarts for 1 hour and 30 minutes at 13 pounds pressure (at 4000-6000 feet elevation). (Pressure required depends on the altitude where canning is being done.)

Dry Beans Cooking Chart

Dried Beans	Soak?	Stovetop Cooking Time
Adzuki	Either way	45-50 Minutes
Anasazi	Yes	45-55 Minutes
Black (Turtle)	Yes	1 – 1 ½ hours
Black-Eyed Peas	Either way	1 – 1 ½ hours
Garbanzo	Yes	2 - 2 ½ hours
Great Northern	Yes	1 ½ - 2 hours
Kidney	Yes	1 ½ - 2 hours
Lentil	No	30 – 45 minutes
Lima	Yes	1 – 1 ½ hours
Lima, baby	Yes	50 – 60 minutes
Mung	Either way	45-60 minutes
Navy	Yes	1 – 1 ½ hours
Pea, Split	No	35-45 minutes
Pink	Yes	1 ½ - 2 hours
Pinto	Yes	1 ½ - 2 hours
Red	Yes	1 ½ - 2 hours

Bean Cooking Helpful Hints

- Adding one Tbsp of oil to the water may reduce foaming during cooking.
- At high altitudes or in hard water areas, you may need to increase both soaking and cooking times.

Using Bean Flour

Bean Flour is the fastest and easiest way to use beans! Bean flour can be purchased in stores, or be ground in a grinder.

- Old beans- this is a great way to put them to use—grind them into flour!
- Add to baked goods – you can add up to 25% of flour in recipes with bean flour, adding greater nutrition to your food.
- Quick meals - Make creamy soups in minutes with bean flour!
- Versatile – Bean flour can be used in sauces, dips, patties, casseroles, gravies, etc.
- White bean flour (navy, baby lima, etc.) make the mildest tasting flour.

Grinding

- Before grinding, sort for broken, dirty beans or rocks (unnecessary if “triple cleaned”).
- Only grind beans in an impact or burr grinder—not a stone grinder.
- Check your mill’s grinding direction for beans. Otherwise, set mill to grind on medium-fine. For the Nutrimill, turn the motor speed to low and set the other dial all the way over to coarse grind (the flour will still be fine).
- When you are done grinding, always grind 1 cup of grain to clean out the internal parts. Thoroughly brush away any remaining flour residue.
- Store in air-tight container.

Grinding Hints and Tips

- Large beans may need to be cracked in a blender before adding to the mill.
- You may only be able to grind 2 cups of beans at a time, and then clean the grinding stones or electric mill parts by running 1 cup of hard wheat or other grains through the mill.
- Flours will last 6 months at room temperature. Refrigerate or freeze to prolong shelf life.

Using Bean Flour

Baked goods: replace up to ¼ of wheat flour with bean flour. (2 cups flour = 1 ½ cup wheat flour + ½ cup bean flour).

Basic bean flour soup:

	White Bean Flour	Pea or Lentil Flour
Thin soups	2 Tbsp	1 Tbsp
Medium-thick soups	3 Tbsp	2 Tbsp
Thick soups, stews or gravies	4-5 Tbsp	3 Tbsp

Using Bean Butter

You can replace the fats in baked goods with mashed white beans. Bean butter can be any white bean that has been canned or has been soaked and cooked. 1 cup mashed or blended cooked beans = 1 cup of butter, shortening, oil, or margarine.

Puree beans in a blender, food processor, or mash with a fork until you have the consistency of shortening. Liquid may be added to adjust the consistency.

Batters using bean butter will be more gooey and sticky, and baked goods will be more cake-like. Replacing only half the fat will give you a better consistency in your recipes. You can use black bean puree to replace ½ the fat in brownies.

Ways to Reduce Gas

- Eat beans more often! This helps the body create more digestive enzymes. Also, the soluble fiber in beans forms strong bonds with bile so more is carried out of the body rather than recirculating through the digestive system. Recirculated waste-laden bile can contribute to unpleasant flatulence.
- Sprout beans before cooking.
- Pureeing and grinding beans into flour help break down the fiber and makes it easier to digest.
- Discard soaking water, rinse, and replace before cooking.
- Chew your food slowly and thoroughly.
- Build friendly flora in your digestive system for better digestion by eating yogurt or supplementing with probiotics (such as acidophilus).
- Short-term help: Try Beano, Gas-X or other over the counter enzyme supplement before eating beans to aid in breaking down the complex carbohydrates that cause gas.

Spices

Eating beans and grains on a daily basis could get very tiresome and boring without different spices. An important part of your food storage should be to have a large variety of spices and flavorings to help diversify your menu plan. Some suggested spices to have on hand include:

- Salt
- Pepper
- Bouillon (beef, chicken, ham, or veg.)
- Onion (powder, granules, chopped)
- Garlic (powder, granules, chopped)
- Oregano
- Basil
- Cinnamon
- Parsley
- Thyme
- Sage
- Cumin
- Bay leaf
- Cayenne Pepper
- Cocoa
- Chili powder
- Taco seasoning
- Italian seasoning
- Seasoning salt
- Curry powder
- Soy sauce
- Liquid smoke
- Vanilla extract
- Maple extract
- And/or any other individual spices, blends, or flavorings that you use often and your family love

How Can You Make Beans Part of Your Regular Diet?

- Information x Experience = Knowledge !! The more you try, the easier it will become and the more confident you will be in using beans!
- Add beans to recipes your family already knows and loves.
- Cook beans in large quantities and freeze in 1-2 cup quantities. They will be ready to add to soups, casseroles, etc.
- Grind bean flours in advance and keep them in your freezer, or buy packaged bean flour.
- Make a 30-90 day meal plan that incorporates beans. You are more likely to make it if it is planned in advance.
- What if your family doesn't like beans? Use pureed or mashed beans and bean flours—they may never know they are there! Add them to their favorite dishes. Add them gradually and in small amounts until they get used to them.
- Obtain several good cookbooks with bean recipes and ideas. There are many books available. A few suggestions include:
 - Cooking with Home Storage by Vicki Tate
 - Country Beans by Rita Bingham
 - Eating Off the Grid by Denise Hansen
 - Emergency Food in a Nutshell by Leslie Probert and Lisa Harkness
 - The Essential Food Storage Cookbook by Tami Girsberger and Carol Peterson
 - Natural Meals in Minutes by Rita Bingham