NUTRITIONAL INFORMATION
FOR FARMERS
Good Nutrition

Good nutrition is important at all stages of life. Food enables us to:

**Grow**

*Image 1: Food enables growth*

**Learn**

*Image 2: Food enables our brains to function (learning)*

**Work**

*Image 3: Food gives us energy to work*

**Stay healthy**

*Image 4: Adequate and nutritious food provide good health*

Health and nutrition are closely linked – a person must be wellnourished to be healthy, fight diseases and infections, while poor health can affect nutritional status.

A poorly nourished pregnant woman is likely to give birth to an underweight and unhealthy child who will have a poor start in life and is likely to have an underweight child herself.
The foetus and children under the age of two have high nutrient needs because their bodies are growing and changing quickly, even before birth.

Families that do not eat the right food in the right quantities become under nourished or because their bodies are not getting the nutrients to function well, this affects their farm productivity as well, leading to poor food stock and consumption
  • Children growth is poor
  • Families have less energy to do farm work or any other work
  • Their immune system becomes weak, and they become sick often

*Image 5: Cycle of Malnutrition*
While well-nourished families, are healthy and able to produce more food and make more income.

Eating too much food than the body requires result in the body becoming obese.

A poor diet does not contain all the right food in right quantities; this diet does not meet family nutrition needs.

A good diet is the one that supplies our body with the right nutrients in right amounts. A good diet is formed from diverse food sources.
Beans, lentils, and chickpeas are packed with nutrients that are important for maintaining a healthy diet that can reduce the risk of developing chronic diseases. Check out the nutritional benefits of adding beans to your next meal!

**Protein**
Proteins are the building blocks for many parts of our body including our organs, muscles, hair, nails, and skin. Beans are found in the MyPlate protein group and are classified as a plant-based protein. They contain a similar amount of protein per serving as other foods in the MyPlate protein group such as meat, poultry, and fish. People who limit the amount of meat, poultry, and fish they consume, such as vegetarians and vegans, may use beans as a major source of protein in their diet.

**Fat**
Beans are naturally low in fat and because they are a plant-based protein, they do not have any cholesterol or trans-fat. Fat provides more than double the amount of calories per gram than protein, so eating beans in place of other foods high in fat may help to reduce the amount of calories eaten overall.

**Fiber**
Fiber is found in all foods that come from plants, including beans, peas, and lentils. The body is not able to digest or absorb fiber to the same way as protein, carbohydrates, and fat. Fiber is found in two forms: soluble fiber and insoluble fiber. Soluble fiber breaks down in water to create a gel-like material that may help to lower cholesterol and blood glucose levels. Beans, oats, fruits, and vegetables all have soluble fiber. Insoluble fiber does not break down in water but instead promotes digestion by increasing the movement of “bulk waste” out of the body’s digestive system. Insoluble fiber helps to reduce constipation and...
is found in beans as well as fruits, vegetables, nuts, and whole-grain products. Foods that are high in fiber, like beans, also make you feel full for a longer time.

**Vitamins and Minerals**

Beans are rich in many vitamins and minerals such as B vitamins, potassium, iron, and magnesium. B Vitamins such as folic acid, riboflavin and Vitamin B6 are important for maintaining normal cell growth and energy production. Potassium helps maintain a healthy blood pressure and iron is necessary for carrying oxygen to the cells in your body. Magnesium is needed for many functions in the body and can help to regulate nerve function, blood sugar levels, and making protein, bone, and DNA. Beans pack a powerful punch and are filled with nutrients that are important for maintaining proper growth and development. Reach for beans the next time you want to add a nutrient powerhouse to your next meal!

**Different ways of processing and utilizing beans**

Dry beans are an incredibly nutritious, versatile and inexpensive ingredient. Communities and families can use various recipes to prepare and consume all types of beans. The use of various recipes is vital in promoting the consumption of bean. Beans can be prepared in form of bean purees of various types, bean flour for preparing porridges and other products. The purees and porridge are good for children and other population groups that are not able to eat solid food. Bean snacks such as mandazis, Bean dishes and Bean soups can also be made out of beans.

To prepare dry beans, follow the following steps:

**STEP 1: Clean the Beans**

Plate the beans in a shallow layer in a pie plate, baking sheet, or bar pan. Pick out and discard any foreign objects like leaves, small stones or twigs, as well as any broken beans.

**STEP 2: Rinse the Beans**

Place the beans in a colander or strainer and rinse them under cold running water.

**STEP 3: Soak the Beans**

There are three soaking methods you can use, the Hot Soak Method, the Traditional Soak Method, and the Quick Soak Method. The Hot Soak Method is the recommended method because it reduces cooking time and gas-producing compounds the most and it produces consistently tender beans.

**STEP 4: Cook the Beans**

Place beans in a large stock pot and cover with fresh, cold water. Place over medium heat; keep cooking water at a gentle simmer to prevent split skins. Since beans expand as they cook, add warm water periodically during the cooking process to keep the beans covered. Stir beans occasionally throughout the cooking process to prevent sticking. Beans take 30 minutes to 2 hours to cook, depending on the variety. Beans
Beans are naturally low in fat and a good source of protein in their diet. Vegans, who do not eat animal products, may use beans as a major protein source. People who limit the amount of animal protein in their diet, such as meat, poultry, and fish, may add beans to their meals. Beans are found in the MyPlate protein group and are classified as a low-fat protein source.

Proteins are the building blocks for growth, development, and repair in our bodies. They are important for maintaining a healthy immune system and for releasing energy from carbohydrates. Some examples of protein-containing foods are meat, fish, poultry, legumes, eggs, and dairy products. Beans, lentils, and chickpeas are high in protein and are considered a complete protein source.

Beans are packed with nutrients that are important for maintaining a healthy body. Fibers, which are found in many plant-based foods, help to reduce constipation and promote digestion by increasing the movement of “bulk waste” out of our body. Fiber is found in all foods that come from plants, including beans, peas, vegetables, nuts, and whole-grain cereals.

Fiber is found in two forms: soluble fiber and insoluble fiber. Soluble fiber breaks down in water to create a gel-like material that may help to reduce cholesterol levels. Insoluble fiber does not break down in water but instead adds bulk to our stool, which helps to prevent constipation. Both forms of fiber are important for our health.

Beans are rich in many vitamins and minerals that are essential for maintaining good health. Magnesium is needed for many functions in the body and can help to regulate nerve function and blood sugar levels. Potassium helps to maintain a healthy blood pressure and energy production. Vitamins such as folic acid, riboflavin, and Vitamin B6 are important for the proper growth and development of our bodies. Minerals such as phosphorus and copper are also found in beans.

Beans can be prepared in many different recipes, depending on the type of bean, the size of the bean, and the type of dish being prepared. The use of various recipes is vital in promoting the consumption of beans. Communities and organizations can make out the nutritional benefits of adding beans to your next meal!

For best results, follow these tips when cooking dry beans:

• Keep cooking water at a gentle simmer to prevent split skins.
• Since beans expand as they cook, add warm water periodically during the cooking process to keep the beans covered.
• Stir beans occasionally throughout the cooking process to prevent sticking.
• You can “bite test” beans for tenderness. Beans should be tender, but not mushy. If beans are not tender after the specified cooking time, the reason could be altitude, hard water, or the age of the beans. Keep cooking and “bite test” again in 10-15 minutes for tenderness.
• Drain beans immediately after they reach the desired tenderness to halt the cooking process and prevent over-cooking.
• Onions may be added at any time during the cooking process. For a stronger onion flavor, add them during the last half-hour of cooking.
• Herbs and spices like oregano, parsley, thyme, and garlic may be added at any time during cooking.
• Wait to add acidic ingredients like lemon juice, vinegar, tomatoes, chili sauce, catsup, molasses, or wine until after beans have been soaked and are fully cooked. Adding ingredients rich in calcium or acids too early in the cooking process can prevent the beans from becoming tender.

Beans take 30 minutes to 2 hours to cook, depending on the variety. Beans should be tender but not mushy. The three different soaking methods vary in the amount of time required for adequate soaking. The “hot soak” method typically is recommended because it reduces cooking time and gas-producing compounds the most while consistently yielding tender beans.

1. **Hot Soak**

Recommended Method!

i). Place beans in a large pot and add 10 cups of water for every 2 cups of beans.

ii). Heat to boiling and boil for an additional 2 to 3 minutes.

iii). Remove beans from heat, cover and let stand for 4 hours.

iv). Drain beans and discard soak water.

v). Rinse beans with fresh, cool water.

2. **Traditional soak (Best method for Pressure cooking beans)**

i). Pour cold water over beans to cover.

ii). Soak beans for 8 hours or overnight.

iii). Drain beans and discard soak water. (NOTE: Cold water starts but does not complete the rehydration process so the beans will appear wrinkled after soaking. They will fully rehydrate during cooking.)

iv). Rinse beans with fresh, cool water.

3. **Quick Soak (Fastest Method!)**

i). Place beans in a large pot and add 6 cups of water for every 2 cups of beans.

ii). Bring to boil and boil for an additional 2 to 3 minutes.

iii). Remove beans from heat, cover, and let stand for 1 hour.

iv). Drain beans and discard soak water.

Farmers
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