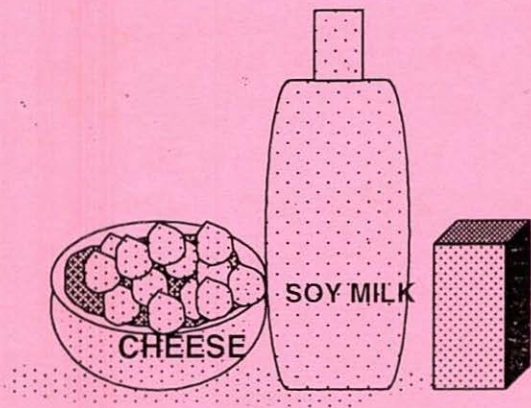




PREPARATION AND USES OF SOYABEAN



Guide

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PREPARATION AND USES OF SOYBEAN FLOUR

SOYBEAN

Soybean flour has high value vegetable protein that complements all cereals.

About 5 percent soybean flour may be added to bread recipes without adversely affecting their baking characteristics. Soybean flour combines protein with the largely carbohydrate content of bread and makes it more nutritious and comparable to the quality of protein in milk or meat. It does not impair grain or loaf volume; neither the texture nor crumb colour. The flour has a moisture retaining property which enhances eating quality through improved tenderness.

As a general rule in bread making, about 20-30 percent of any recipe will be made up of soybean flour. In yeast breads, soybean flour is combined with wheat flour, which is high in gluten. Gluten is essential in bread making. Since it lacks gluten if soybean flour alone is used, the bread would be a hard brick-like loaf. The addition of wheat flour provides the necessary gluten and enhances the bread quality.

Soybean flour has some characteristics that make it most valuable in all home baking. When soybean flour is used in baking, the dough will retard fat absorption so that baked foods are less greasy, enrich the crust colour and often times improve the flavour. The texture of cakes and breaks made with soybeans flour tend to be fine and soft.

The proportion of soybean flour may be

increased up to 50 percent in some soybean cookies and cakes. The soybean flour will help to make them light and moist.

Remember the more soybean flour the more nutritious the end product. To improve the protein quality of tuwo, eba and many other traditional Nigerian foods, add one part soybean flour to three parts of local flour. The taste is unaltered but the protein content is greatly increased.

THE PREPARATION OF SOYBEAN FLOUR

1. Remove the stones, sticks, leaves and discoloured or damaged soybeans, wash in water to remove dust and dirt.
2. Bring to boil. Cover the soybeans with twice the volume of water and boil for 10-25 minutes.
3. Wash the beans and drain
4. Cover the beans with twice the volume of clean water. Soak for 3-5 hours
5. Remove the skin and rinse
6. Spread the beans in a thin layer on clean paper, cloth or trays with good air circulation and expose to direct sunlight.
7. When completely dried, either:
 - a) Store the dry beans in an empty covered plastic container until needed.

The sun dried whole soybean will keep longer than the soybean flour.

- b) Grind the beans into a fine flour on a grinding stone or at a local mill. Store the soybean flour in a clean airtight container to prevent deterioration of the flour by insects and moisture.

Note: If poor weather conditions do not permit the soybeans to be dried within 36 hours, use an electric fan or roast (fry) the soybeans to speed up the process. Slow drying may procure high bacteria counts and putrefaction. Mould producing toxic substances may also be present in poorly dried and stored soybean flour. Properly dried and stored soybean flour can keep almost indefinitely.

USES OF SOYBEAN FLOUR

- a) For baking – products; confectionaries
- b) As fortification with indigenous food.

OVEN BAKED PRODUCTS

Cakes bread and biscuits are rapidly increasing in popularity in Nigeria. Soybeans can make a great contribution in improving the nutritious of these foods.

Ingredients :

- 1-cup soybean flour
- 3 cups wheat flour
- 2 teaspoons baking powder
- 1 cup milk
- 1 cup sugar
- 1 cup margarine
- ½ teaspoon salt
- 2 eggs
- 1-teaspoon vanilla, orange, or lemon

juice.

Method

1. Sieve together the wheat flour, soybean flour salt and baking powder into a bowl.
2. In a different bowl, cream the margarine and sugar
3. Add eggs one at a time and beat well after each addition.
4. Add the sifted dry ingredients alternately with the milk; beginning and ending with the dry ingredients.
5. Pour the batter into greased and floured muffin tins or clean empty food tins.
6. Bake in 35 oF over for 15-20 minutes.

HIGH PROTEIN SOYBEAN FLOUR BISCUITS

Ingredients:

- 2 cups soybean flour
- 2 cups wheat flour
- 1 cup sugar
- 1 teaspoon salt
- 1 cup margarine
- 2 eggs, beaten
- 2 teaspoon lemon rind or vanilla
- 1 teaspoon baking powder.

Method

1. Sieve together the baking powder, flour and salt
2. In a separate bowl, cream the margarine and sugar
3. Beat in the eggs one at a time
Gradually add the dry ingredients and mix well
4. Form the dough into round balls on greased cookie sheets about 3" apart
5. Flatten with the back of a fork dipped in cold water
6. Bake in 375 o F oven for 8-10 minutes or until light brown in colour
7. Cool slightly before removing from the pan.

SOYBEAN ROLLS

Ingredients

- 2 tablespoonful yeast
- 3 cups wheat flour
- 1 cup warm water
- ½ cup sugar
- ¼ cup shortening
- Pinch of salt
- 1 cup soybean flour
- 1 egg.

Method

1. Dissolve yeast in warm water, let it sit for 15 minutes
2. Sieve the soybean and wheat flour together
3. Combine the yeast mixture, milk, sugar, egg, salt shortening and 2 cups of flour, beat until smooth.
4. Mix in enough remaining flour to make dough easy to handle.
5. Turn dough onto a slightly floured board; smooth until it is elastic (approximately 10 minutes)
6. Place the dough in a greased bowl; until it is smooth; cover and let it rise in a warm place until it double s in size (approximately 1-1 ½ hours).
7. Greased and floured tray, place the dough and bake in oven until brown.

SOYBEAN ENRICHED PORRIDGES

To make the soybean-enriched porridge follow the method used in making the enriched soybean flour and soybean milk paps, but use the staple cereal as flour instead of as akamu.

NOTE: Soybean allele (steamed bean cake) can be served along with paps and porridges to children over six months of age.

When making allele for small children remove the seed coat and grind the soybeans to a fine paste. It is advisable not to make the pepper content of allele too high, since it may be irritating to young children.

SOYBEAN AMALA

Ingredients:

3 cups (400gm) yam or Cassava flour

1 cup soybean flour (80gm)

5-10 cups (1360-1700mm) water

Method

1. Put water to boil
2. Make a paste with soybean flour pour the into boiling water and stir vigorously to avoid formation of lumps.
3. Boil for 10-20 minutes

4. Add yam/cassava flour to the mixture, a little at a time and stir vigorously to avoid formation of lumps.
5. Stir until smooth and compact in texture
6. Serve hot with vegetable or Ewedu soap.

ENRICHED SOY EBA

Ingredients:

- 3 cup of gari
- 5-10 cups of water
- 1 cup of soy flour

Method

1. Put water to boil
2. Make a paste with soybean flour, pour into boiling water and stir vigorously to avoid lumps
3. Cook for 10 minutes. Switch off the heat
4. Sprinkle gari onto the boiled soy flour mixture
5. Mix well until smooth
6. Serve with soybean vegetable/Okra soup

ENRICHED SOY GARI

Ingredients:

Gari can be enriched with soybean during the processing period. In this way,

gari soaked and drank as a meal will give not only energy but supply us with the some protein.

Method:

Prepare the cassava for frying the normal way, i.e.

1. Peel the cassava
2. Wash the peeled cassava in water
3. Grate the peeled cassava
4. Put into a bag and squeeze out water by setting under pressure
5. Dry the cassava and sieve, ready for frying. Prepare the soybean paste.

Get the soybean paste:

1. Squeeze out the milk by setting under pressure
2. Then fry the gari with the dry soybean paste until it is well dried.

PROPORTION

1. 1 part of soybean to 3 parts of gari

SOYBEAN PUDDING (Tuwo made of Sorghum or Maize)

Ingredients:

- 3 cups soybean residue or flour (180gm or 130 gm)
6 cups of water (120mm).

Method

1. Bring water to boil
2. Make a paste with soybean residue or flour and stare into boiling water. Boil for 10-20 minutes.
3. Stir in the corn/sorghum flour and mix until a soft consistency is formed
4. Serve with dry or fresh okra or vegetable soup.