

BULLETIN No. 37

1918

**How to Make Sweet Potato
Flour, Starch, Sugar
Bread and Mock
Cocoanut**

BY

G. W. CARVER, M. S. Agr.,

Director

**EXPERIMENT STATION
TUSKEGEE NORMAL AND INDUSTRIAL
INSTITUTE**

HOW TO MAKE SWEET POTATO FLOUR, STARCH, SUGAR, BREAD AND MOCK COCOANUT

BY GEO. W. CARVER

Director Experiment Station, Tuskegee Normal and Industrial Institute, Tuskegee Institute, Alabama.

SWEET POTATO FLOUR

There are several grades of this product and quite as many ways to manufacture them. Each one of these flours or meals (as most millers insist upon calling them) has a particular character of its own and is therefore adapted to certain uses the other products are not.

These Sweet Potato flours are generally speaking of three kinds.

1st. Those made from the uncooked potato.

2nd. Those made from the cooked potato.

3rd. Those made from a careful system of roasting, or from the starch making process. The first two will interest the housewife most, so, therefore, I will dwell almost or quite exclusively on these.

FLOUR NO. 1. FROM THE RAW POTATO

Here, all that is necessary is to wash, peel, and slice the potatoes real thin, dry in sun, oven or dryer until the pieces are quite brittle, grind very fine in a clean coffee mill, spice mill, or any type of mill that will make wheat flour or corn meal; bolt through fine cloth in the same way, as for other flours.

The fine flour-like particles will pass through, and the coarse granular meal left on the bolting cloths.

Uses

This kind of flour is fine for making mock rye bread, ginger snaps, wafers, waffles, batter cakes, custards, pies, etc. Bread can be made with it, but it makes a dough deficient in elasticity, bread dark in color and a loaf which dries out quickly.

The coarser meals can be cooked in a great variety of ways and make very palatable dishes; they are to be soaked in warm liquid (whatever is desired to cook them in), when soft proceed as for grated potatoes.

FLOUR NO. 2. FROM COOKED POTATOES

For the making of this flour the potatoes are boiled, or steamed (preferably the latter) until done, sliced or granulated by mashing or running through a food chopper and dried until they become very brittle, they are made into flour and meal exactly the same as given for Flour No. 1.

Uses

This kind of flour is especially fine for bread, cakes, pies, puddings, sauce, gravies, custards, etc.

Indeed, most people consider a loaf made in the proportion of one-third sweet potato flour to two-thirds wheat flour, superior in flavor and appearance to all wheat flour.

Many experiments have proven that either the mashed sweet potato or the sweet potato flour may be used in bread up to as high as 50%, but at this point it becomes decidedly potato-like in texture and flavor but not unpalatable or unwholesome.

FLOUR NO. 3. FROM PULP

This flour is made from the pulp after the starch has been removed, it is dried without cooking, ground and bolted exactly the same as recommended for the other flours.

When made into puddings, pies, blanc-mange, etc., the same as shredded cocoanut, it resembles it very much in taste and texture and is very palatable, and is a most welcome addition to the dietary.

It can also be used in the making of bread and is especially valuable where people object to a loaf with the least bit of a sweet taste, also where they wish one with as little starch and sugar as possible.

SWEET POTATO STARCH

This is very easily made, all that is necessary is to grate the potato, the finer the better, put into a cheese cloth or thin muslin bag and dip up and down, in a vessel of water, squeezing occasionally, continue washing as long as the washings are very milky.

Allow it to settle five or six hours or until the water becomes clear, pour off; rewash the starch, which will be in the bottom of the vessel, stir up well, allow to settle again, pour off the water and let dry, keep the same as any ordinary starch.

Uses

Use exactly the same as corn starch in cooking; I am confident you will find it superior to corn starch; it makes a very fine quality of library paste, and has very powerful adhesive qualities.

In certain arts and trades it is almost indispensable.

SWEET POTATO SUGAR

By saving the water in which the pulp was washed first, in the starch making process, and boiling down, the same as for any syrup, a very palatable, non crystalline sugar will be the result; this sugar or syrup can be used in many ways.

Here in the South and other sections of the country where fresh potatoes can be had almost or quite the year round, the flour is not a necessity for bread making; but for commercial purposes there are almost unlimited possibilities, and is destined to become more popular as fast as the public finds out what a delicious, appetizing and wholesome product these flours are.

Our method of using follows with the hope that thousands of housewives will try out this most satisfactory way to conserve wheat flour.

HOUSEHOLD RECIPES

SWEET POTATO BREAD

Take:

1 cup finely mashed sweet potatoes;

2 tablespoons warm water;

$\frac{1}{2}$ yeast cake;

1 teaspoon salt.

Two and $\frac{3}{4}$ cups flour, or sufficient to make a soft dough.

Add the salt to the potatoes, and the yeast; pour in the water; add flour enough to make a smooth sponge (about a cupful); cover, and set in a warm place to rise.

When light add the remainder of the flour or whatever is needed to make a smooth, elastic dough. Cover, and let rise until light; mould; shape into loaves or rolls; let rise and bake.

Many variations of the above bread can be made by adding sugar, butter, lard, nuts, spices, etc.

SWEET POTATO BISCUITS

Take:

$\frac{1}{2}$ cupful mashed sweet potatoes.

1 cupful flour.

4 teaspoons baking powder.

$\frac{1}{2}$ teaspoon salt.

2 tablespoons butter or lard.

Milk sufficient to make a soft dough. Sift the flour, salt, and baking powder together several times; add these to the potatoes, mixing in with a knife.

Now work the fat into the mixture lightly; add the milk; work quickly and lightly until a soft dough is formed; turn out on a floured board; pat and roll out lightly until about one-half inch thick; cut into biscuits; place on buttered or greased pans, and bake twelve or fifteen minutes in a quick oven.

SWEET POTATO BISCUITS NO. 2 (EXTRA FINE)

Take:

- 1 cup boiled and finely mashed sweet potatoes.
- 2 eggs, well beaten.
- 2 cups flour.
- 2 teaspoons baking powder.
- 1 teaspoon salt.
- 2 scant tablespoons melted butter or lard.
- 1 tablespoon sugar (if desired).
- 2 cups milk.

Mix together all the dry ingredients, and stir into the milk, beaten eggs and potato.

If too soft add more flour, sufficient to make a soft dough. Roll out lightly; cut with a biscuit cutter; bake in quick oven.

SWEET POTATO BREAD (BAKER'S METHOD)

This recipe was given me by Mr. J. M. Colter, who has charge of the Institute's Bakery:

Take:

- 70 pounds of wheat flour.
- 30 pounds of finely mashed sweet potatoes.
- 40 pounds of water.
- 1½ pounds of salt.
- 1 pound of sugar.
- 1 pound of lard.
- 1 pound of compressed yeast.

Every other operation is exactly the same as for bread or rolls made from all wheat flour.

Mr. W. T. Shehee, Steward of Boarding Department, says it not only gives universal satisfaction, but is preferred by many to bread or rolls made from all wheat flour.