

**BULLETIN NO. 5.**  
**1903.**

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**Tuskegee Normal and Industrial Institute**  
**Experiment Station**  
**Tuskegee, Ala**

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**COW PEAS**

TUSKEGEE INSTITUTE  
HOLLIS BURKE FRUIT  
FISH

7 354

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*G. W. Carver*

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# THE TUSKEGEE EXPERIMENT STATION.

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# The Tuskegee Agricultural Experiment Station.

| BULLETIN NO. 5. |

| NOVEMBER, 1903. |

## *Cow Peas.*

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

Every year the demand for an increased quantity and better quality of nutritious forage for animals, and a wider range of food stuffs for man, has suggested a basis for some very careful and interesting study. Experiment Stations, as well as individuals, have devoted much time and means to this line of investigation. Plants of many different genera, species and varieties have been brought from India, China, Japan, Russia and other places. Many of these have proven worthless, while a few were of local importance only, still others are being tested with a considerable degree of promise.

Before we can appreciate the cowpea, or any of the legumes (pod-bearing plants), it is quite necessary that we fix clearly in our minds the following four laws of the great German chemist, Justus Von Liebig, with reference to soil fertility:

First. A soil can be termed fertile only when it contains all of the materials requisite, or necessary for the nutrition of plants in the required quantity and in the proper form.

Second. With every crop a portion of these ingredients is removed. A part of this portion is again added from the inexhaustible store of the atmosphere; another part is lost forever if not restored by man.

Third. The fertility of the soil remains unchanged if all the ingredients of a crop are given back to the land. Such a restitution is effected by fertilizers.

Fourth. The fertilizers produced in the course of animal husbandry are not sufficient to maintain permanently the fertility of a farm; it lacks the constituents which are annually exported in the shape of grain, hay, milk, and live stock.

In connection with the above facts, every progressive farmer recognizes that certain crops exhaust or make his soil poorer, and certain others build it up or make it richer. He is also aware that a better crop follows a pod-bearing one, such as peas, beans, clovers, vetches, peanuts, etc.; therefore, they are absolutely indispensable in a wise crop rotation, and in the rational feeding of both man and beast.

The fertilizing value of these plants is due mainly to the relationship existing between certain germs in the soil and the free nitrogen of the air, they being the only recognized class having the power to extract and utilize this nitrogen from the air and convert it into a class of substances in the plant known as "Albuminoids," which, when consumed by the animal, are converted into milk, wool, hair, hoofs, horns, and muscular tissue (lean meat.)

As yet, none bids fair to equal—much less excel—in the number of really good points, those of our old trusty cowpea, in its many varieties. A number of investigations throughout the country have shown quite conclusively that every acre of well-grown alfalfa can be made to deposit forty-three dollars worth of nitrogen in the soil; one acre of cowpeas, twenty-five dollars; one acre of red clover, fifteen dollars. The above is in addition to their feeding value, deducting—say one-fifth—for the amount fixed in the animal's body.

While the cowpea does not rank as high as a nitrogen gatherer as alfalfa, we must admit that the plant is yet to be found that furnishes as much nutritious and palatable food as the cowpea for both man and beast.

#### FOOD.

As a food for man, the cowpea should be to the South, what the White, Soup, Navy or Boston bean is to the North, East and West; and it may be prepared in a sufficient number of ways to suit the most fastidious palate.

From the following table we see that it compares most favorably, in points of nutrition with the much prized Boston bean.

	WATER	PROTEIN (Muscle Builders)	CARBOHYDRATES (Fat Formers)	CALORIES (Heat Units)
Boston Bean	12.6	22.5	59.6	1.605
Cow Pea ...	13.0	21.4	60.8	1.590

#### COOKING.

We take pleasure in submitting below twenty-five receipts which have been carefully tested as to their value, and I am sure will be found helpful in the preparation of this delicious vegetable.

##### (1)

#### BOILED PEAS WITH BACON.

Wash the desired quantity of peas to be cooked in cold water, put in iron pot or stew-pan, cover with cold water, drop in a piece of fat bacon, boil slowly until tender; season with pepper and salt, if the bacon is not sufficiently salty to supply the required amount of salt; then simmer slowly until ready to serve. A small piece of butter will add greatly to their flavor;

(2)

## BAKED PEAS.

Prepare the same as for boiling; when half done pour into the baking pan, season with butter, pepper, and to every pint of peas, add one scant teaspoonful of salt, and a pinch of sugar; sear the piece of bacon and half bury it in the middle of the dish, cook slowly until thoroughly done and a delicate brown; serve either hot or cold.

(3)

## CREAMED PEAS. (Delicious.)

Soak one pint of peas in cold water over night or until the hulls rub off easily, free them from the skins by rubbing them between the hands; continue washing in cold water until all of the skins are removed; put in vessel to cook (porcelain or granite stew-pan preferable), with just enough water to cover them, boil slowly until thoroughly done, pass through a colander, season with a scant teaspoonful of salt, a pinch of pepper, one-half a teacup of pure cream, a heaping teaspoonful of brown sugar, or two of syrup; a small piece of butter may be added if not rich enough; whip the same as for creamed potatoes, serve hot.

(4)

## GRIDDLE CAKES. No 1.

Mix together one cup of boiling milk, one-half cup of cream, one cup of pea meal—which has been previously soaked in cold water for one half hour and boiled until thoroughly done—one tablespoonful of butter, the same of sugar, one half teaspoonful of salt, one beaten egg, two teaspoonfuls of baking powder, and one cup of flour, or enough to make a stiff batter. Cook in griddle pans and serve while hot.

NOTE: It improves the lightness to whip vigorously before stirring in the baking powder. Sour milk and soda can be used the same as for other griddle cakes.

(5)

## ALABAMA BAKED. (Delicious).

Hull the peas the same as recommended for creaming, put in small piece of fat pork, boil the peas until about half done, pour

NOTE [A] Tastes differ so widely as to pepper and salt that it has been thought wise not to specify the amounts to be used in these receipts, except in a few instances.

NOTE [B] I wish to thank the following members of the Senior Class in Agricultural Chemistry for practically testing and verifying the value of nearly all of these receipts:

Misses Sarah Woodall, Bessie Warrick, Clara Johnston and Lucy Hill; Messrs. R. B. Woodford, Chas Stevens, William H. Crutcher, George K. Gordon and Jesse J. Jones.

into baking dish, season to taste with butter, pepper and salt, put tablespoonful of sugar to every quart of peas; put in oven, cook slowly until well done and brown; serve hot or cold.

(6)

#### HOPPING JOHN.

Take one quart of peas and a scant pint of rice, boil the two separately until both are nearly done, turn the two together, and season with lump of butter the size of a walnut, a pinch of pepper and two teaspoonfuls of salt. (If bacon is desired, put one-half pound into peas when first put on to cook. (The salt in this case should be omitted). A beef bone can be used instead of bacon, if desired, and, to my mind, adds much to the flavor. (Double the salt in this case or proportion it to the size of the bone.)

(7)

#### BOILED GREEN PEAS.

Select those that are about two-thirds grown; do not shell until ready to cook; wash in cold water and drain them, cover with boiling water and add one heaping teaspoonful of brown sugar to every quart of peas. Salt to taste.

When tender pour into a colander and drain; put them into a vegetable dish, and quite in the center of the peas put a lump of butter the size of a walnut, and four tablespoonfuls of thick cream; garnish with mint and parsley, serve hot.

CAUTION: Do not gather or shell this delicious vegetable long before it is dressed, or much of the delicate flavor will be lost.

(8)

#### PLAIN PEA PUDDING.

Soak one-half pint of split peas over night; put in an earthen dish, cover with hot water, add one heaping teaspoonful of butter, one-half teaspoonful of salt, cook thoroughly done and brown; garnish with parsley and serve.

#### GRIDDLE CAKES No. 2.

Boil the desired quantity of half ripe peas until tender, mash to a pulp and pass through a strainer; to every cupful of strained peas add one of boiling milk, one-half teaspoonful of salt, one heaping tablespoonful of sugar, and, when sufficiently cool, one egg well beaten; then stir in one cupful of flour, which has had two teaspoonfuls of baking powder mixed into it by passing several times through a sieve. If the batter is too thick, add a little milk; if too thin, a little flour. Bake on a hot griddle and serve hot with syrup.

(9)

#### A DISH FOR DYSPEPTICS.

Peas are deliciously prepared without grease of any kind, as follows: Hull the same as recommended for creaming; choose the

large white crowders; boil slowly in soft water in a covered vessel for several hours, or until the peas begin to fall to pieces, and the water (which should barely fill the peas when done, and not stand above them) is viscid and jelly-like. Add a little salt and nothing else, unless at the proper time you have chosen to put in a few sweet or Irish potatoes to eat with them. Many stomachs can retain and digest them in this way, when they could not do so in any other.

(10)

## PEA SOUP WITH CELERY.

One-quarter pound each of onions, carrots or parsnips, two ounces of celery, three-quarters pound split peas, a little mint, shredded fine, one tea-spoonful of coarse brown sugar, salt and pepper to taste, four quarts of water or liquor in which a joint of meat has been boiled. Fry the vegetables for ten minutes in a little butter or drippings, previously cutting them up in small pieces; pour the water on them, and when boiling, add the peas. Let them simmer until thoroughly done. Add the sugar, seasoning and mint, boil for a quarter of an hour and serve.

(11)

## PEAS IN THE POD.

Top and tail with a sharp knife, cut in short pieces and cook tender, add a little salt while cooking, drain, butter freely and season with pepper and salt to taste; at this point a half-teacup of sweet cream to every quart of peas will greatly improve the flavor. Let simmer twenty minutes and serve.

(12)

## PEAS IN THE POD WITH PORK.

Prepare the same as for the above; parboil in water made slightly salty, for fifteen or twenty minutes, drain off the water, add a piece of fat salt pork, two or three inches square, cook slowly until soft, take out the pork and season with pepper and serve.

(13)

## BOSTON BAKED PEAS.

Take a quart of large white peas, put in a stew pan and cover with lukewarm water, place on the back of the range early in the morning; at noon, if the heat has been sufficient, they will be slightly soft to the pressure; now have ready an earthen bean pot, which comes for the purpose; put a pound of uncooked salt pork in the bottom of the jar, add pepper only, as it will receive salt enough from the pork; add one large tablespoonful of New Orleans molasses to give a fine color, fill with water and set in a moderate oven and bake slowly for six hours, occasionally adding hot water, if necessary, to keep moist.



(14)

## CROQUETTES.

Season cold mashed peas with pepper, salt, nutmeg; beat to a cream with tablespoonful of melted butter to every cupful of peas; add two or three well-beaten eggs and some minced parsley. roll into small balls and dip in beaten egg, roll in bread crumbs or cracker dust, fry a rich brown in hot lard, drain and serve while hot.

(15)

## GREEN PEA SOUP.

Put two quarts of green peas with four quarts of water, boil two hours, renewing waste by adding boiling water when needed; strain from liquor, return that to pot, rub the peas through sieve, chop an onion fine and small sprig of mint, and one of parsley, let boil ten or fifteen minutes, stir a teaspoonful of flour into two of butter, add a pinch of pepper and two teaspoonfuls of salt, stir carefully into the boiling soup. Serve with well buttered sippets of toasted bread.

(16)

## PLAIN PEA SOUP.

Take one quart of hulled peas, boil until perfectly soft, allowing four quarts of water to one of peas, mash peas, add flour and butter rubbed together, also salt and pepper to taste; cut cold bread into small pieces, toast and drop into soup, with a bit of minced parsley.

(17)

## PEA SOUP NO. 2.

Put in a sauce-pan two ounces of bacon chopped fine, six onions, peeled and chopped, salt and pepper to taste, add four quarts of hot water; boil twenty minutes; meantime rub through sieve a quart of peas that have been previously boiled, add them to the first ingredients, boil one hour longer and serve hot.

(18)

## PEA BOUILLON.

Take six pounds of round of beef, three small carrots, three turnips, nine small onions, one large onion stuck with four cloves, bunch of sweet herbs, two pints of peas (one shelled, the other in pod) one small head of cabbage, three large tomatoes, four quarts of water, pepper, salt, flour, noodles, rice or sago; put beef into the water whole and heat slowly to a boil; skim, dip out a pint of the liquor left with the beef and put by for the cooking of the vegetables; add to the liquor left with the beef one sliced carrot, one turnip, also sliced, the large onion and the herbs; stew

slowly four hours, take out the beef and keep hot over boiling water; strain the soup, pulping the vegetables, cool, skim and return to the fire, and when it heats, add noodles, boiled rice or soaked German sago; simmer five minutes, pour into hot soup tureen and serve.

(19)

## PEA MEAL SOUP.

\*An almost endless variety of delicious soups can be easily and quickly made by thickening any soup stock with pea meal, (browned or unbrowned) permitting the same to cook slowly until the meal is done.

(20)

## FRITTERS.

One cup of pea meal, previously soaked and simmered until done, one pint of milk, one-half teaspoonful of salt, three eggs, one teaspoonful of sugar, two tablespoonfuls of butter; to the cold peas add the yolks of eggs, sugar, butter and salt, also the whites of the eggs, which have been previously whipped to a froth; drop in spoonfuls in plenty of lard, made hot for the purpose, fry a rich brown, serve with cream or lemon sauce. If inclined to fall to pieces, add a little flour to the batter.

(21)

## SUCCOTASH.

Take one pint of large white peas after they have been hulled and cooked tender, cut off the grains from eight ears of corn, add one large tablespoonful of floured butter, two of thick cream, pepper and salt to taste. add one cup of milk; boil corn and peas until both are thoroughly done, add the milk; when this boils, add the butter, pepper and salt, simmer ten minutes and serve.

(22)

## PEA SALAD.

Take a scant quart of large white peas, after they have been hulled and thoroughly cooked, put into a salad dish and season as follows: To two tablespoonfuls of best salad oil, add one-half teaspoonful of sugar, same of pepper, made mustard and salt, and about the same of Royal celery salt; rub to smooth paste, and whip in, teaspoonful at a time, five teaspoonfuls of best vinegar; when thoroughly mixed, pour upon salad and serve.

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\*Note Pea meal can be made by grinding the peas in a ~~new~~ or well cleaned coffee mill. For brown pea meal the peas are simply roasted before grinding

(23)

## SALAD NO. 2.

Prepare peas the same as for the above; to one quart add two-thirds of a cup of sour cream, two well beaten eggs, season to taste with sugar, a pinch of salt and mustard; a couple of stalks of celery should be chopped and added to it, or a tablespoonful of celery seed. This is very fine and most excellent for picnics.

(24)

## ROAST PORK WITH PEAS.

Choose a leg of fine young pork, cut a slice in the knuckle with a sharp knife and fill the space with sage, pepper, salt and an onion chopped: when half done score the skin in slices, but do not cut deeper than the outer rind; let cook until nearly done, pour off the excess of fat, add one quart of white peas that have been previously hulled, and cook slowly until all is quite done and brown. Serve with apple sauce.

(25)

## PEA COFFEE.

Brown some peas in the oven the same as for green coffee. To a given quantity (the strength desired determining this) add one-third pure coffee, boil and clarify the same as for the other coffee. Some like it just as well to leave out the pure coffee altogether.

