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MEMORANDUM

IN REGARD TO THE

USE OF INDIAN CORN,

AS AN

ARTICLE OF FOOD.

DUBLIN:

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1846.

Houses of the Oireachtas

MEMORANDUM ON INDIAN CORN.

METHOD OF GRINDING INDIAN CORN.

THE grain Indian corn, to answer your queries about mill stones, is sometimes very hard, and is called flint corn, but all the mill stones used for grinding other grains may be used for Indian corn. This grain being larger than wheat, it is necessary that the stones should be kept wider apart and not driven too rapidly, for when the motion of the stones is too rapid, the meal becomes heated and injured, and the cause of injury to the meal is its being ground too fine—"it kills or deadens the meal." I have seen the French buhrs, the common stones of the country, and certain varieties of trap-pite used for grinding this grain without any perceptible difference in the quality of the meal. In the southern parts of the United States, the common country stones are almost universally used, and very efficient for the purpose. They are made of a variety of syenite. Steel mills are also in common use in plantations, not so much for making meal, but are convenient for "chopping" the grain or making grits or hominy, which is a dish almost universally seen on the tables of the rich as well as poor. By steel mills, I mean a mill of precisely similar construction to those used for grinding coffee or spices, with this difference, that those used for grinding corn are much larger. But I presume you know that those of stone used in the United States are made in England.

Brussels, 5th January, 1846.

VARIOUS MANNERS OF USING INDIAN CORN, AS HUMAN FOOD.

Suppawn, or Porridge, that is to say, boiling milk, broth, or water, thickened with Indian Corn meal, in the same way

that people in the south of England thicken them with wheat flour, and that people in the north thicken with oatmeal. Put into water, this is a breakfast, supper, or dinner for little children; put into milk or broth, it is the same for grown people. It is excellent in all disorders arising from bad digestion. In milk or broth it is a good strong meal, sufficient for a man to work upon.

It takes about three pounds and a half of Indian Corn flour to make porridge for ten persons, less than half a pound of corn flour for a meal for one man, and a warm comfortable meal that fills and strengthens the stomach. Three pounds and a half of wheaten flour would make four pounds and a half of bread, but it would be dry bread, and bread alone; and not affording half the sustenance or comfort of the porridge.

Mush.—Put some water or milk into a pot and bring it to boil, then let the corn meal out of one hand gently into the milk or water, and keep stirring with the other, until you have got it into a pretty stiff state; after which let it stand ten minutes or a quarter of an hour, or less, or even only one minute, and then take it out and put it into a dish or bowl. This sort of half pudding half porridge you eat either hot or cold, with a little salt or without it. It is eaten without any liquid matter, but the general way is to have a basin of milk, and taking a lump of the mush you put it into the milk and eat the two together. Here is an excellent pudding, whether eaten with milk or without it; and where there is no milk, it is an excellent substitute for bread, whether you take it hot or cold. It is neither hard or lumpy when cold, but quite light and digestible for the most feeble stomachs. The Indian Corn flour is more wholesome than wheat flour in all its manners of cooking. It is a great convenience for the workman in the field that mush can be eaten

cold. It is, in fact, moist bread, and habit soon makes it pleasanter than bread. It is a great thing for all classes of persons, but particularly for the labourer. He may have bread every day, and he may have it hot or cold, and there is more nutrition in it than you can get out of the same quantity of wheat flour. It is eaten at the best tables in America almost every day; some like it hot, some cold, some with milk, some to slice it down and eat it with meat; some like it best made with water, others with milk, but all like it in one way or another. Some put these cold slices again into the oven, and eat them hot, or they might be heated on the griddle. It is believed in America that the Indian Corn, even used in this one single manner, does more, as food for man, than all the wheat that is grown in the country, though the flour from that wheat is acknowledged to be the best in the world.

Hominy is made of the broken grain, broken by the steel mills described in the first page. It is soaked over night in warm water, changed in the morning to clean cold water, and boiled gently an hour and a half. Warm it over when cold; eat it with milk, or molasses, or salt, or bacon, or alone. The weekly allowance to a working man is ten pounds of the flint corn, or twelve pounds of the golden corn. Judge what a nutritious food this must be, for twelve pounds of it to be sufficient to maintain a working man seven days.

Samp, though not in such common use as porridge or mush, is very much used. The husk or skin of the corn is scalded off, or dipped in hot lye, or beaten off as we do the skin of oats. This is put into a pot with pork or fat, and boiled just in the same manner as the people in the country make pease porridge, but the samp is more wholesome and more nutritious.

Wheaten Bread, with one-third Indian Corn meal, is decidedly improved by it, and is preferred at all the tables

of the first American families. It acquires by this addition, a sweetness in flavor, and a freshness that we in vain look for in bread made entirely of wheat.

Indian Corn and Wheat Flour Bread.—Take one quart of corn meal and a little salt and one quart of boiling water. Wet the meal, let it stand till it is blood warm, then add two quarts of wheat flour and a half of a pint of yeast, and let it rise. This quantity will make two loaves. Bake it one hour and a half.

Brown Bread.—Take one quart and a pint of Indian meal, one quart and a pint of rye flour, and a little salt. Mix well together; then take half a pint of yeast, a quart and half a pint of blood-warm water, and let it rise; bake it in an iron stand in the oven all night.

Rye and Indian Corn Bread another way.—Scald three pints Indian meal, in boiling water, one quart rye meal, a little molasses, salt, scalded altogether, not to be made stiff; yeast put in when cold.

To make an Indian Meal Pudding.—About four table spoonfuls of Indian meal, a pint of milk, one egg, and two full table spoonfuls of treacle, mixed well together, put into a basin, tied down, and boiled an hour.

In the midst of a wilderness, with a flint and a steel, and a bag of corn meal, an American sets hunger at defiance. He makes a large wood fire on the ground, and while that is burning up, he takes a little wooden or tin bowl, or sometimes in the crown of his hat, in which he mixes up a sufficient quantity of his meal with water, and forms it into a cake about an inch thick. With a pole he then draws the fire open, and lays the cake down where the centre of the fire was. To avoid burning, he rakes some ashes over the cake first, he then rakes on a suitable quantity of the live embers, and his cake is cooked in a short space of time.

In Canada, the French inhabitants place the unground corn in hot lye, thereby getting rid of the outside skin, after which they boil it in milk, until it is well thickened and the grain soft, and with a little sugar to sweeten it, it makes an excellent and very nutritious breakfast.

The usual mode of making bread or cake of Indian meal, is to scald the meal in boiling water, and make it of a proper consistency of dough, and bake it on tins before the fire half an inch thick; and at the South and West, it is made three quarters or an inch thick. It is Indian meal, water, and salt, of a consistency to roll out on a tin or board, or flatten out with the hands.

It is also made into gruel, or thicker into hasty pudding, by stirring the meal into hot water gradually until it is of a consistency of starch, or a very soft pudding, which hardens as it becomes cold.

It is eaten with butter, fat, salt, or sugar, or molasses, or any relish of salt meat or fish, or alone.

It is also made the basis of thickening any broth or soup, or made with eggs and suet into puddings of the usual consistency, and with molasses.

No mistake can be made in using the meal, as it *can be mixed with, or adapted to anything.*

Maize or Indian corn has never been extensively used in Great Britain, and this has arisen from the almost total ignorance of the English people as to the mode of preparing it for human food. It is, perhaps, the most productive crop that can be grown, and its nutritious qualities, when properly prepared, are equal to its productiveness. We are satisfied that it may be grown in that country, or, at any rate, in the south and eastern parts of it, with great advantage; indeed, the experiment has been tried, and with decided success. The late Mr. Cobbett grew an average crop of the dwarf

kind on Barn Elms farm, Surrey, for three or four years, as the editor can testify from his own personal inspection, and he himself has succeeded in rearing the large sort to perfection, the cobs or ears, when quite ripe, averaging eight or nine inches; this, however, was effected upon a small scale, and in a garden.

Indian Cake, or Bannock.—This, as prepared in our own country, is cheap and very nice food. Take one quart of Indian meal, dressed or sifted, two table-spoonfuls of treacle or molasses, two tea-spoonfuls of salt, a bit of “shortening” (butter or lard) half as big as a hen’s egg, stirred together; make it pretty moist with scalding water, put it into a well-greased pan, smooth over the surface with a spoon, and bake it brown on both sides before a quick fire. A little stewed pumpkin, scalded with the meal, improves the cake. Bannock split and dipped in butter, makes very nice toast.

Green Indian Corn.—This is a most delicious vegetable. When used as a vegetable, the *cobs*, or ears, are plucked about the time that the corn has arrived at a milky state, or just before it assumes a solid substance. A part of the leaves or filaments by which the cob, or ear, is surrounded, is taken away, and the cobs boiled from twenty to forty minutes, “according to its age.” When it is done, it is served with cold or melted butter, and eaten (after being stripped of its remaining leaves) by taking the two ends of the cob in the hands, and biting off the corn. The editor can bear testimony to its delicious quality, from having grown it in his own garden and partaken of it.

Indian Corn, or Maize Pudding, baked.—Scald a quart of milk (skimmed milk will do), and stir in seven table-spoonfuls of sifted Indian meal, a tea-spoonful of salt, a tea-cup full of molasses or treacle, or coarse moist sugar,

and a table-spoonful of powdered ginger or sifted cinnamon; bake three or four hours. If whey is wanted, pour in a little cold milk after it is all mixed.

Boiled Maize Pudding.—Stir Indian meal and warm milk together “pretty stiff;” a little salt and two or three “great spoonfuls” of molasses added; also a spoonful of ginger, or any other spice that may be preferred. Boil it in a tight-covered pan, or in a very thick cloth; if the water gets in, it will ruin it. Leave plenty of room, for Indian meal swells very much. The milk with which it is mixed should be merely warmed; if it be scalding hot, the pudding will break to pieces. Some chop suet very fine, and warm in the milk; others warm thin slices of apple to be stirred into the pudding. Water will answer instead of milk.

Rye and Indian Bread.—There are many different proportions in the mixing of this bread. Some put one-third Indian with two of rye; others like one-third rye and two of Indian, others prefer it half and half.

If you use the largest proportion of rye meal, make your dough stiff, so that it will mould into loaves; when it is two-thirds Indian, it should be softer and baked in deep earthen or tin pans after the following rules:—

Take *four quarts* of sifted Indian meal: put it into a glazed earthen pan, sprinkle over it a table-spoonful of fine salt; pour over it about two quarts of boiling water, stir and work it till every part of the meal is thoroughly wet; Indian meal absorbs a greater quantity of water. When it is about milk-warm, work in *two quarts of rye meal, half a pint* of lively yeast, mixed with a pint of warm water; add more warm water if needed. Work the mixture well with your hands: it should be stiff, but not firm as flour dough. Have ready a large, deep, well buttered pan; put in the dough, and

smooth the top by putting your hand in warm water, and then patting down the loaf. Set this to rise in a warm place in the winter; in the summer it should not be put by the fire. When it begins to crack on the top, which will usually be in about an hour or an hour and a half, put it into a well heated oven, and bake it three or four hours. It is better to let it stand in the oven all night, unless the weather is warm. Indian meal requires to be well cooked. The loaf will weigh between seven and eight pounds.

There is another mode which many persons think preferable. Scald a quart of rye and another of Indian meal with a small quantity of boiling water. Boil a tea-spoonful of salt in a pint and a half of milk, mix the rye and Indian meal together, and pour the milk over them—add half a pint of fresh yeast; but not before the meal is cooling. The mixture must be well kneaded and placed in a deep pan by the fire to rise. When it has risen sufficiently, take it out of the pan, make it into any shape you like, and put it into an oven well heated. If the fire is too brisk the crust will brown and the inside remain heavy.

It should bake from two to three hours.

To Make Excellent Bread without Yeast.—Scald about two handfuls of Indian meal, into which put a little salt, and as much cold water as will make it rather warmer than new milk; then stir in wheat flour, till it is as thick as a family pudding, and set it down by the fire to rise. In about half an hour it generally grows thin; you may sprinkle a little fresh flour on the top, and mind to turn the pot round, that it may not bake to the side of it. In three or four hours, if you mind the above directions, it will rise and ferment as if you had set it with hop yeast; when it does, make it up in soft dough, flour a pan, put in your bread, set it before the fire, covered up, turn it round to make it equally warm, and

in about half an hour it will be light enough to bake. It suits best to bake it in a Dutch oven, as it should be put into the oven as soon as it is light.

Hasty Pudding.—Boil water, a quart, three pints, or two quarts, according to the size of your family; sift your meal, stir five or six spoonfuls of it thoroughly into a bowl of water; when the water in the kettle boils, pour into it the contents of the bowl; stir up well and let it boil up thick; put in salt to suit your own taste, then stand over the kettle, and sprinkle in meal, handful after handful, stirring it very thoroughly all the time, and letting it boil between whiles. When it is so thick that you stir it with difficulty, it is about right. It takes about half an hour's cooking. Eat it with milk or molasses. Either Indian meal or rye meal may be used. If the system is in a restricted state, nothing can be better than *rye* hasty pudding and *West India* molasses. This diet would save many a one the horrors of dyspepsia.

The Canadian Voyageurs employed by the North West and Hudson Bay Companies, who are exposed to the severest labour without cessation, rising at 5 o'clock A.M. and working till sunset; if on the water, continually paddling; and at the portage carrying the packs on their shoulders, weighing 200 lbs.; these men are fed entirely on Indian corn. Each man receives, per diem, one quart of Indian corn husked, (that is the outer skin taken off,) and one ounce of fat or grease; this is boiled in water and the grease or fat with it, and when cooked produces one quart and a half, and no man can eat more in a day. They live on this food for six weeks together without any change, and grow fat on it. The Canadian Peasantry are well fed in their own homes, yet they enter with alacrity into this service and manner of living. Taking adults and children, the cost of living for

fifty persons is estimated at 4*s.* 6*d.* sterling, per diem; calculating the Indian corn at 3*s.* sterling per bushel of forty quarts, and forty ounces of grease or fat, at 1*s.* 6*d.*, say for forty men, or fifty adults and children.

Dr. Bartlett, the able Editor of the *New York Albion*, who has published an admirable pamphlet on this subject, makes the calculation somewhat less, but of course on the prices in the United States.

“I carefully weighed out one pound of the meal, and gave it to a person who understood the mode of cooking it. In the course of boiling it absorbed about five pints of water, which was added at intervals until the process was complete. The bulk was again weighed, and gave as a result four pounds and a half. Such are the powers of expansion possessed by this grain. On dividing the mass into portions, it was found to fill four soup plates of the ordinary size, and with the addition of a little milk and sugar, gave a plentiful breakfast to four servants and children.”

According to this experiment one pound of maize flour, which cost one penny, would give a breakfast to four persons at one farthing each, and if we add to this another farthing for milk, sugar, or butter, the breakfast would cost one half-penny each, and would be an ample meal for females and children.

It is found from daily experience in all the rural districts of America, that persons, instead of becoming tired of this food, become more attached to it.

Be careful to observe that Indian corn in all its preparations requires thorough cooking. If not sufficiently boiled or baked, it loses its flavor and becomes indigestible.

The following recipes are extracted from Dr. Bartlett's admirable pamphlet :—

Griddle Cakes.—Use milk altogether and no water. Two eggs yellow and white to be allowed for a pint of corn meal, the milk to be a little warmed, and the whole to be well beaten up with a spoon. There must be milk enough used to make the whole so liquid that it will pour out of the saucepan on the griddle, one spoonful of wheat flour and lard (pure butter is better) the size of a walnut.

The griddle is a flat round iron concern, standing on three legs, and of any size; it must be made not very hot, as it would then burn the cakes, and it must be well cleaned and greased while warm, that it may be perfectly smooth, so that the cakes may be easily turned, that they may be done brown (not burnt) on both sides; to promote their turning easily, is the object of adding the wheaten flour. The dough, or rather the batter, must be well beat up, and prepared directly before being cooked, though it might set an hour, but it would not bear to be mixed over night. The cakes are usually poured on, until they spread on the griddle to the size of the bottom of a breakfast plate.

Egg Pone.—Three eggs to a quart of meal, no wheat flour, to be made also with milk, as water would make it heavy, a spoonful of butter, all well beaten together, and made up of a consistence thicker than the cakes, too thick to pour out, but just thick enough to require to be taken up with a spoon—may be baked like cakes, immediately after being mixed, must be baked in a tin pan, which must be placed in a Dutch oven, not too hot at first, but the fire under it to be increased. The object is to have it begin to bake at the bottom, when it will rise in the process of baking, become brown on the top, and when put on the table and cut, resemble what we call pound cake. Salt, of course, add as usual to your taste in both cases.

Indian Meal Breakfast Cakes.—Pour boiling water into a quart of corn meal; stir it until it is wet; then add two well beaten eggs, and milk enough to make it a thick batter; measure a small tea-spoonful of dry saleratus, and dissolve it into some warm water, and put it into the batter with a small quantity of salt; butter square tin pans, fill them two-thirds full, and bake in a quick oven; when done cut it in squares, and serve hot.

Indian Muffins.—Pour boiling water into a quart of corn meal, stir it well, let it be a thick batter; when it is cooled a little add to it a table-spoonful of yeast, two eggs well beaten, and a tea-spoonful of salt; set in a warm place to rise for two hours; then butter square tin pans, two-thirds fill them, and bake in a quick oven; when done serve hot or cut in squares, or bake as wheat muffins.

Johnny Cake.—Is prepared from the corn meal scalded and the dough rolled or pressed out to half an inch in thickness, is cooked one side at a time in front of the fire, after being put on a board, sheet of tin, or plate, or any other material of suitable shape.

Ash Cake.—Is prepared from the Indian meal dough made as above, and is cooked as follows:—make a bed by scraping away the ashes on all sides, roll the dough after being made into form, between two cabbage leaves, place it in the bed, and cover up with the previously removed ashes and embers. A little practice will determine the length of time requisite for cooking. The process resembles that of roasting potatoes.

Corn Cup Cake.—Take two cups of corn meal and one of wheat flour, or in that proportion, make them into a thin batter with milk and eggs, and cook them on a griddle.

Hoe Cake.—Is prepared by wetting up corn meal with boiling water, is made into a cake and cooked in front of the fire on a board or plate. This resembles the Johnny Cake.

Baked Indian Pudding.—One quart of milk boiled, stir in seven spoonfuls of meal while it is boiling hot, mix it quite thin, when it is moderately warm add molasses, a little ginger and salt, four eggs, a lump of butter the size of an egg.

Boiled Indian Pudding.—One tea-cup of molasses, one piece of suet the size of two eggs, chopped fine, three spoonfuls of meal, scald the meal with boiling water or milk, mix it quite thin, when it is nearly cold add four eggs well beaten. It requires three hours boiling in a strong cloth.

Indian Gruel.—To one quart of boiling water, stir in two table-spoonfuls of Indian meal, mixed with a little cold water, boil 15 or 20 minutes, add a little salt.

The Mexican mode of using the Indian Corn differs from all the foregoing.

The *whole* corn is soaked in water until it becomes soft. A small quantity is then placed on a flat stone, on which it is crushed into an uniform smooth paste by a roller, also of stone, somewhat of the shape and size of a common paste roller. Successive portions are added, and the paste, as it accumulates, removed into a dish, until a sufficient quantity is thus prepared; after which it is made into cakes of the thickness of pancakes, called "Tortillas." These are baked quick on a hot hearth, or on an iron plate, and usually eaten as hot as possible; but are also kept till cold, and then re-baked in the same manner, when they become as crisp as thin biscuits. No other kind of bread is used in the country districts, or by the majority of the inhabitants of even the large towns; and many of the wealthier classes prefer it to

the best wheaten bread. The muleteers, who are always on the road, are considered to prepare these cakes better than other people, and they make them of the thickness of a London crumpet, but they then require a longer time, and a stronger heat to bake them properly. These are called *Tortillas gordas*.

There will be found some repetition in the preceding pages, as the selections are made from various sources, some original and some printed, and they are frequently different manners of arranging the same thing.

I have always understood that the Indian corn grown in the northern States of America is best adapted to the uses of cattle, and that grown in the south the most delicate and the best for human food. I believe it requires a dry temperature, and at least one month of a hot sun. It grows in all the south of Europe, and is the principal food of the inhabitants of Portugal, a great part of Spain, and of Italy. The Indian corn bread is there eaten without any mixture of wheat, and not usually of any other grain. It is sweet and agreeable to the taste, and those who are accustomed to its use become exceedingly fond of it. It is also used in the south of France.

To those who are unaccustomed to the use of Indian corn bread, I think the thin cake baked or toasted over or near the fire is more palatable than the bread in the form of a loaf; the material is the same, but in the form of a thin flat cake it is lighter; but a little habit soon leads you to prefer the bread in the usual form.

In conclusion, it will be found on trial that every thing which can be made with wheaten flour may be made with Indian corn meal, and that the latter is more wholesome and more nutritious.