

the corn is just dry enough and heat is properly applied, the moisture in the starch cells expands until the horny case can no longer stand the pressure and gives away with a snap. The horny case giving way relieves the outward pressure on the starch cells and they also break open at the same time, making a white transformed mass.

Popcorn to be of any value to the confectioner must be in a condition to transform into a white flaky mass. In popping it loses one-tenth in weight and gains about sixteen times in bulk. There is a knack in the art of popping corn. If the popper allows the corn to lay still over a hot fire, the cells on one side of the kernel are heated more than on the other side, so when the horny case snaps, all the starch cells do not break open and a poor pop is the result. The heat must be evenly applied to all cells of the kernel and to the right amount so all the starch cells will break open when the horny case snaps. Keep the kernels on the move continually until the corn is all popped.

Popcorn is successfully grown in most of the states in the northern half of the United States, and in a few of the Southern States. The great bulk of the crop is grown in Iowa, Michigan, Illinois, Wisconsin, and Nebraska. You may get some idea of the popcorn industry when you learn that more than three hundred carloads are shipped annually from one station in Iowa.

Any well drained upland soil that is rich in vegetable matter is suitable for growing popcorn. Muck and beaver-dam land usually liberate an excessive amount of nitrogen during the warm weather the latter part of the season which causes an excessive growth of stalk and late maturity.

Whatever the soil may be, there must be a sufficient supply of the plant food elements. The element most likely to be short on the upland is nitrogen, unless there has been a liberal supply of barnyard manure. A clover sod that has received a coating of manure makes an ideal feeding ground for corn. During the early part of the season there will be a deficiency of available nitrogen, so to give the corn a good start, sow one hundred pounds of nitrate of soda to the acre when the corn is about six inches tall. If you have not a very good supply of manure, mix together four hundred pounds of acid phosphate and one hundred pounds of sulphate of potash for each acre. Sow this mixture broadcast and work into the soil before you plant the corn.

Cultivate your corn before you plant it. What I mean by this statement is this—work the soil into a fine condition before you plant the seed. Plant in checks not nearer than thirty inches each way, leaving three plants to mature in each hill. The corn can be worked both ways in keeping down the weeds and making the earth mulch to hold moisture. Practice shallow and constant cultivation. Two or three inches