Every farmer knows that corn must be planted in large quantities closely together — that a single kernel of corn planted in one corner of a lot, apart from other growing corn, will be non-productive.

Yet how many of those who depend upon corn for their living know the reason for this?

The reason is simple enough. It is obvious when the method by which corn reproduces itself is understood.

All plants depend upon pollination, in some form, for reproduction — perpetuation.

Most of the flowers depend upon bees to carry their pollen from one to another. And similarly other flowers and many fruits depend upon other insects, or upon humming birds or other birds, to carry the pollen which means perpetuation — propagation — multiplication.

Corn has an entirely different method of propagation. It relies not at all upon birds, bees or other insects. It is what is called a wind-loving plant.

If you will call to mind a stalk of corn as you have seen it standing in a field, you will remember that at its very top there is a bunch of tassels. These tassels bear the reproductive pollen.

Lower down upon the stalk are the ears — containing the seed — and from each ear protrudes a quantity of silk.

The silk is the female organ, or pollen duct.

Every separate strand of silk leads to a separate kernel on the ear.

Thus it will be seen that, in a waving field of corn as the wind swishes it gracefully to and fro, the pollen dust is showered from the tassels at the top and, descending, is deposited upon the silken pollen ducts.

Where you have seen an ear of corn with defective or immature kernels, you may be sure that the cause was that the particular strands of silk dusted to those kernels were not dusted with pollen.

So, Nature's provision for the reproduction of corn demands that it be planted closely together, in large quantities, in order that the pollen dust may, during the reproductive season, fill the air in showers.

As a definite example of the absolute necessity of pollinating corn, the direct color photograph reproduction on this page is shown

The full ear of corn depicted at the left is a normal ear from a patch of corn planted in such a way that pollination naturally took place.

The figure at its right is an ear of corn from the same stalk, picked at exactly the same time, which had been covered during the pollinating season with a common paper bag, so that the pollen could not reach the silks.

A close examination of this undeveloped corn will show the white, immature, unformed, mushy kernels beneath the strands of silk — of no value, of course, either for food purposes or as seed.

Corn is one of the easiest plants with which to work by cross breeding because results are shown the same season.

The reason for this is that it is one of the few plants in which the seed itself (the kernel of corn) is the crop which the plant gives us. In most plants the crop which brings us profit is the fruit or food which grows around the seed.

Many interesting experiments may thus be tried with corn.

If a selected ear is covered with a paper bag shortly before the receptive period, the pollen tassel from any other corn with which it is desired to make a cross, can, when mature, be carried to it, and dusted upon it by hand, after which the pollinated ear may be re-covered with the bag. This latter precaution is not wholly necessary. Once the silk has received its first pollen, it usually becomes unreceptive to all other pollen.

In a very few weeks the result of the pollination will be seen. The kernels of that hand-pollinated ear will represent a cross between the two selected parents, whereas the kernels of another ear on the same stalk, pollinated by its neighbors, will be entirely different. In fact, pollen may be selected from three or four or more different kinds of corn and dusted upon the silk of a single ear — with the result that the individual kernels will show — in color, flavor, size and shape — the different characteristics of the two parents.

Corn is America's most important crop.

To add a single kernel to the ear means a five million bushel crop increase in this country alone.

Already much has been done along the lines of cross breeding, selection and cultivation toward the improvement of corn.

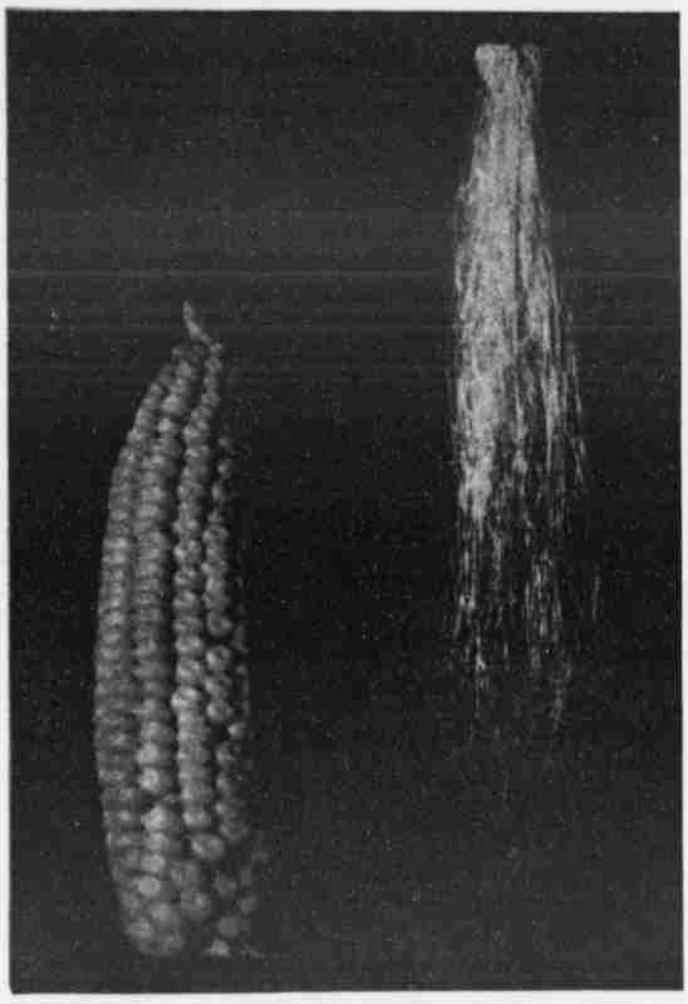
Yet in spite of all of the effort expended, corn in the best corn states usually grows to a height of eight or nine feet, and averages slightly less than two ears to the stalk.

During the past summer, Luther Burbank, after nearly forty years of experiment with corn, has produced stalks sixteen feet in height, bearing thirty-two ears to the stalk.

In doing this, he made use of the facts which he learned while taking corn back ten thousand years in its evolution. He developed latent tendencies of which present-day corn gives no indication, but which, in the corn that grew before Columbus came, were obviously manifested.

Luther Burbank's corn experiment is not a completed experiment, but the results already achieved show the way to increasing America's corn crop not only in quantity but in quality, without adding expense, either in seed, in land, or in equipment, and effecting an actual economy in harvesting the crop.

As these experiments progress, bulletins for free distribution, illustrated with direct color photograph prints, will be issued by The Luther Burbank Society.



Corn — Pollinated and Unpollinated