



Luther Burbank's Cobless Corn

AS AN illustration of the extreme results which can be produced by plant breeding, a photographic reproduction of Luther Burbank's cobless corn is shown above.

This kind of corn has no practical value, for corn on the ear, as it now grows, is the most economical and satisfactory method of producing the grain.

The cobless corn pictured here, however, represents the form in which corn grew ten thousand years ago.

As with all other plants and animals, corn has been made better and better by slow degrees—year by year—by the natural processes of evolution. The corn which we have today is bigger, better, more economically grown, more useful to the world, than any corn which has preceded it.

In breeding corn backward and backward through the ages, Mr. Burbank's purpose was to reveal the steps through which corn has come to its present state of perfection, with the hope that in these steps there might be seen some possible method of improvement—some hint or

clew which would show him how to breed it **forward** several generations.

As an example of what plant breeding can accomplish, it is interesting to note that it took less than eight years for Mr. Burbank to produce this so-called cobless corn—less than eight years to carry the plant ten thousand years backward in its history.

By conducting this experiment, although the immediate result has no practical value, Mr. Burbank was able to lay bare the life evolution of corn, and to learn what may be expected of the improved corn of the future.

The corn which the American Indians originally found was not cobless corn such as is shown here, but was in the form of a wild grass now known as Teosinte.

This wild grass has a stalk and leaf very much resembling present-day corn, but the ears represent a half-way stage between our present ears and the cobless tassels shown here.

The cob of Teosinte was about as big around as a small lead pencil, perhaps

2½ to 4 inches long—and containing only two rows of kernels.

By a crude process of selection, the Indians improved Teosinte so that when the first white settlers came they found Maize, or Indian Corn.

The process which the Indians used was simplicity itself; it was true plant breeding, although they, perhaps, were unconscious of it.

It consisted in saving the largest and best kernels for seed just as intelligent corn growers do today; and as the Indians did this, year after year, the kernels kept growing bigger and bigger, and the ears got longer and longer, until finally an ear with four rows of kernels instead of two resulted—to be followed by those with six, eight, ten and more rows.

Thus purely by elemental selection—saving the best for reproduction—the Indians developed Teosinte from a 2½-inch, two-row ear to an 8-inch, fourteen-row ear.

Corn, of all of our important crops, lends itself most readily to improvement.