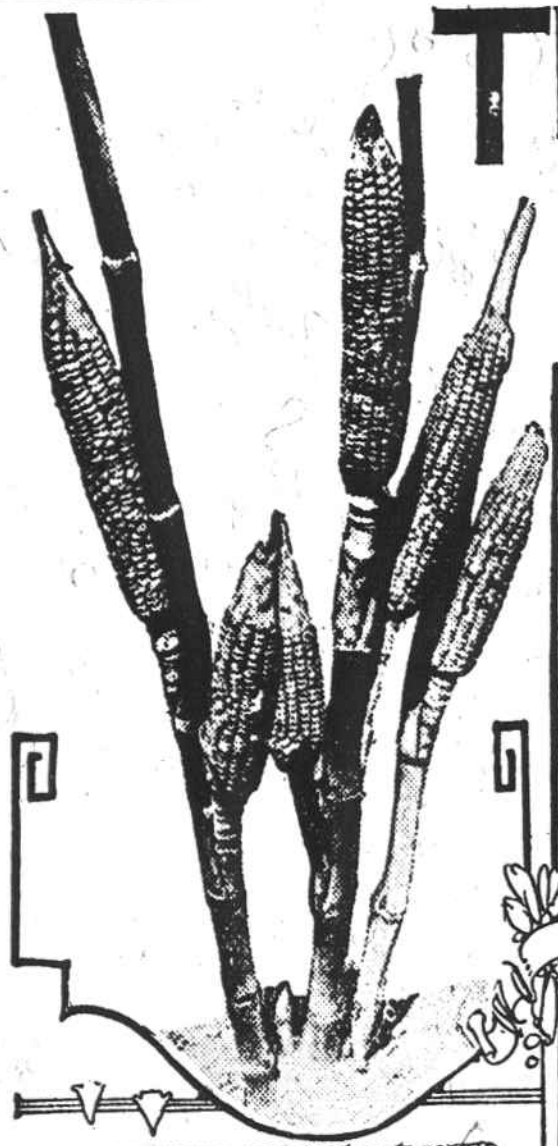


The Indian and His Maize



MANDAN CORN, HUSKS REMOVED

By ROBERT H. MOULTON

MAIZE, or Indian corn, in its present form represents one of the great achievements of primitive planters, the North American Indian. It came originally, it is now generally accepted, from southern Mexico, and was eaten by the Maya tribes. At first it was nothing more than a coarse grass, on which were tiny ears resembling the top of the wheat stalk. Each grain had its own envelope or husk. Occasionally, even now, grains of corn are found which have their original husk, thus showing how the maize of our day reverts to type. The plant was essentially tropical, and even now, after centuries of culture in the temperate zone, it is sensitive to frost.

The tribes of North America saw the possibilities of the grain and hastened its evolution. There has been cross-breeding by white farmers, yet as a matter of fact the corn culture of the present day is practically as it came from the hand of the Indian. He has adapted and modified it to the various sections of the country by a process of careful selection.

It had been accepted for many years that in the Dakotas and much of the Northwest it was impossible for the white farmers to grow corn because all the varieties tried were killed by frost. Recently it occurred to some scientists that despite the drawback of the weather the Mandan Indians of the North were raising corn. An expedition made a study of the agricultural methods of the Mandans, and it developed that for centuries the farmers of the tribes had been developing a hardy corn. The seed had been selected from year to year from stalks which showed no effect of frost. The stalks of this variety as so situated that they are more like shrubs than the plant which is common in other latitudes.

One of the most interesting and remarkable facts in connection with Indian corn is that three tribes—the Hidatsa, the Arikara and the Mandan—who lived along the Missouri river and its tributaries in North Dakota, were practicing a highly developed system of corn culture at the time of the first recorded visit of the white man in 1738. Archeological evidence secured from the Indian remains of the section indicate that corn was being raised in this district three or four hundred years ago.

As a matter of fact, Jacques Cartier, the first European to enter the St. Lawrence, observed large fields of growing maize at Hochelaga (now Montreal) in 1534, exactly 389 years ago, and the tribes between northwest Mexico and the plains of Kansas were found to be growing it when visited by Coronado in 1540. The ease with which maize can be cultivated and conserved, and its bountiful yield, caused its rapid extension among the Indians after it came into use. With the exception of better tillage the method of its cultivation is much the same today among civilized men as among the natives.

One would naturally expect the southern and eastern Indians to be good corn raisers, as they lived in regions of abundant rainfall and sufficient summer heat. It is really astonishing, however, that the upper Missouri Indians, living under semi-arid and northern conditions, should develop corn raising to a point that was not surpassed by any other tribe in America. This corn culture was of such importance that the early fur traders established a distillery in 1833



PLANTING OF NAVAJO MAIZE



MANDAN MAIZE FIELD

at Fort Union, which was located at the mouth of the Yellowstone river. Since the Indians were the first dry-land farmers and corn raisers of the Northwest, the corn history of that region naturally begins with them. Their corn was the last of the Indian corn to be adopted by the white man and the early flint group of today is directly derived from it.

According to Scattered Corn Woman, an elderly Mandan matron, and daughter of the last Mandan corn priest, the Mandans had at one time what they considered to be thirteen distinct varieties of corn. The varieties, some of which have now undoubtedly disappeared, were always kept separate and planted in separate fields to prevent mixing. Each family kept and planted one, two or three sorts, which were passed along from one generation to the next, and no other kinds were planted in the family fields.

The fields were not large from our viewpoint, but when we think of the labor required in clearing and tending them with the rude implements used, the size seems considerable. The Indian acre was not of definite size. It consisted of seven rows of corn with a row of beans between each two rows of corn. The length of the rows, however, was not fixed, and the land occupied by the squashes, which were always a part of every garden, and by the sunflower, was not included in computing the acreage planted. As near as much questioning of Scattered Corn Woman revealed, an Indian acre would average between a third and a fourth of one of our acres in area.

The fields were usually located both on the bottom lands and on the higher and drier first bench lands along the Missouri river. In the brushy bottoms the land was first cleared with a stone ax, a spot usually being selected where there were not more than one or two large trees, which were left standing. After cutting, the brush was burned in heaps on the ground, which was then raked over. After this the soil was dug up with a heavy, pointed ash stick some four feet long and one-half to two inches in diameter, called a digging stick, in hills about twelve inches in diameter and about a long step apart for corn. The beans were planted somewhat closer together, but all rows were a long step apart. The field was frequently fenced with brush or wickerwork barrier to keep out the various animals, both wild and domesticated.

When the fields had once been cleared the preparations for planting in ensuing years were not so arduous. The old stalks and vines, together with the dried weeds and brush still left on the field, were raked up with a rake of wood or of deer antlers, piled in heaps and burned. Then the old roots were removed and the hills were again dug up and the earth broken up with the digging stick and bone hoe.

The first seed planted in the spring was the sunflower, which was put in around the outside edge of the field when the Missouri river broke up; that is, at the same time that the first field work started. Corn planting started about the first of May and was continued up to the first of June in the larger fields, every kernel being

carefully placed by hand at the rate of seven or eight kernels to the hill. After the first of June the beans were put in, and lastly the squashes were planted at the time when the wild roses bloomed.

At the completion of the planting the hoeing began, and usually the field was entirely hoed through twice during the season. The hoeing was done with an implement having a handle about the length of a mattock or pick handle with a blade made from the shoulder-blade of a buffalo, or occasionally an elk, or from a broad piece of buffalo horn taken from the base near the skull.

The planting season and the double round of hoeing usually consumed all of the growing time. Most of the field work was done in the early morning hours, the women getting up with the sun and going out to the fields, often accompanied by the young girls, where they worked till the heat of the sun began to be oppressive, or their household duties called. In families where there were several wives, each wife usually had her own separate field or fields. The size of the individual field ranged from one to four acres. When a family had planted from nine to twelve Indian acres, about three of the acres of corn were used green—part in a prolonged feast of roasted green corn, and part boiled and dried for winter use. The remainder of the field was left to ripen. The average yield of the Mandan corn is estimated to have been about twenty bushels per acre.

When the priest pronounced the corn ripe the whole village repaired to the fields. The corn was snapped from the stalk, husk and all, and thrown into piles in the fields, whence it was later carried in baskets to the drying scaffold in front of the family lodge. In the work of the harvest only did the men take any part. At that time they labored in the fields with the women, the prospect of feasts especially prepared for them being the incentive.

After the corn was all gathered at the scaffold all the good ears were braided into strings or traces by the husks. These braids and cache-pits full were the regular measurements of the amount of corn. The poor ears and nubbins were thrown loose on the scaffold floor to dry, then thrashed out on an old robe or tent skin with sticks. As the corn was sorted for braiding the very best—ripe, large, straight-rowed, well-filled ears were tucked away into a sack by themselves. These were later all braided together and furnished the seed stock for the next season. All the braided corn was hung on the two-story stage or scaffold to dry and cure in the sun and air, the whole frame and sides being covered with braids.

When the corn was thoroughly dried it was taken down and stored in cache-pits in the ground. These pits were of bottle-like shape, five to eight feet deep and four to six feet in diameter underground, having a capacity of from twenty to forty bushels. They were carefully lined with dried grass before putting in the corn and when full were covered with grass, a board fitted snugly in the neck or narrow entrance hole, and dirt filled in and smoothed over to hide the opening. Every Mandan village was pitted with these caches, some of which were always inside the houses. They were opened during the winter when the need arose.

In view of the success of the Mandan Indians in raising corn, there seems no reason why the higher plains area of North Dakota and neighboring states cannot be brought into the corn belt, a matter which has been much discussed within the past few years and regarding which there has been considerable difference of opinion.

Removes Rusted Bolts.
Operating on the principle of a screw jack is a new tool with which bolts or pins that have rusted fast can be removed from machinery.

master, and as he was a cook, he was boiled to death at Smithfield in the presence of a great crowd.

Teaching the Child New Habits.
Many young children accustomed to drinking milk from a bottle, do not care for it when the bottle habit is stopped. A taste for it may be cultivated, and the habit of drinking from a cup formed in this way. If the child has a cup or mug which he likes very much, this should be filled several times during the day and offered

to him. He may drink at least part of whatever he finds in his cup and soon acquires the habit of cup-drinking. Avoid other food so hunger may help him to form the habit.

Co-operation Important.
The valuable man in business is the man who can and will co-operate with other men.—Elbert Hubbard.

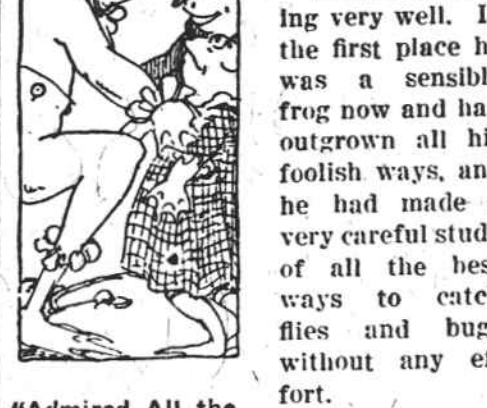
Respect to Age.
If you can't laugh at jokes of the age, laugh at the age of the jokes.

Daddy's Evening Fairy Tale

MARY GRAHAM BONNER

GEORGIE'S TALKS

Georgie Green Frog had been talking to many old and wise frogs and he had been asking them how he could become a more successful frog.



"Admired All the Children."

He had been doing very well. In the first place he was a sensible frog now and had outgrown all his foolish ways, and he had made a very careful study of all the best ways to catch flies and bugs without any effort.

To be sure he was willing to make an effort, but he didn't want to do more than he had to do, and it was pleasant to be able to sit on a stump and day-dream and nap and yet be able to awaken all of a sudden to get a little meal.

He was very clever at catching these delicious little meals that flew by him or stopped for a moment on his nose, not realizing what a careless thing that was for them to do. But still he wanted to be as successful a frog as ever a frog had been.

So he asked the old frogs around what had been the things they had done which had made them so successful. He stopped and talked with many a powerful and splendid frog, frogs who had been very clever and very wise and very successful. And he found that the pathways to success were not always smooth and straight and direct, sometimes they were hard, but they made the successes so worth while.

He found many of the frogs who were so successful were not in the least snobbish. They were not conceited. They were pleasant and had most engaging manners. And they were all glad to talk to Georgie Green Frog because they wanted to see the family of frogs become more and more famous and they thought perhaps it would help others to hear of their experiences.

They told him not to pay any attention to excuses and not to be too sensitive. Creatures often would not be any too kindly in what they would say when a creature was starting out. And he must not mind discouragements. They said that the more creatures pulled together the better it was for everyone. And they told him that hard work and thought and patience were of great help.

So after Georgie Green Frog had heard all the wise old frogs talk he went forth on that brilliantly sunny day, a day so bright and cheerful and warm that Georgie felt the whole world was smiling with him about his plans and his dreams of becoming a splendid big leader frog, a frog everyone would respect and admire.

He went about and saw how the frogs were situated and helped them with their pond homes and admired the views they had and listened with pleasure to their stories of adventures and success.

He admired all the children and he thought the markets about were of the best. He passed all about the pond and everyone seemed glad to have him as their leader, too, for though he was about to be their leader, they knew he would not be a conceited, mean leader. They knew he would be a real leader. For once Georgie Green Frog had been conceited and silly and then he had gone away.

The Pond Fairy had taken him to visit the Sbons, whose name when spelt the other way around is Snobs. They lived at Gums Landing, which really means Smug Landing. And Georgie had become disgusted with it in no time at all and ever since then he had been such a nice friendly, sensible frog, joining in all the frog activities.

He enjoyed singing in the Frog Glee club, which in the olden days he had been too proud to do. Oh yes, Georgie Green Frog was a splendid frog, and that night, following the day when Georgie had been around to see all of them, they decided to have a Frog Parade in his honor.

They sang and they croaked and the Frog band played, and one frog acted as Drum Major and carried a splendid stick which he tossed up in the air in a magnificent fashion.

POULTRY

Real Meaning of Term "Sports" Not Understood

The real meaning of the term "sports," as applied to fowls, is not quite understood by a good many poultry keepers. Now, in breeding many varieties there will often come a chicken that is contrary to the parent birds, and the reason for this sometimes seems very strange.

For example, those who have bred Silver Laced Wyandottes know that frequently a white one, and occasionally a black one, will be produced, and it was the breeding together of these so-called sports that gave us the two distinct colors, the White Wyandotte and the Black Wyandotte, as we know them today. Where very lightly laced birds are used there is a greater tendency to white, and just the opposite when a very heavily laced bird is used, the sport here coring black. Partridge Wyandottes will also throw a few white ones, and those who breed them in big quantities will produce perhaps four or five white ones during the year.

Another common example of "sports" is found in the fact that oftentimes a rose comb breed will throw a single comb fowl. There is always an occasional tendency in this direction, and it does not prove that the parent stock is bad, nor that it does not measure up to the required purebred standard. Many of our present-day breeds are the results of working from sports. The black Plymouth came first from the barred, and for years no one ever heard of a male chicken coming black, these being all females. Today we have a distinct breed known as the Black Rock.

It is probable that all of our more than a hundred modern varieties of poultry descended from the one kind of original jungle fowl. In fact, most of our now numerous varieties have been created during the past 40 or 50 years. The old breeds, like the Black Langshans, do not often produce sports, for the reason that they have been bred pure for many hundreds of years, perhaps for thousands of years. But modern breeds, such as the Orpingtons, Rhode Island Reds, etc., are given to producing sports.

Movable Roosting Coops Good for Young Fowls

When the chicks are old enough to leave the brood coops and when they are weaned from broody hens or brooders, they grow so rapidly that they need more room. To meet this requirement, poultrymen use what are known as roosting coops. These are structures about six feet long, three feet wide, three feet high in front and two feet high at the rear. They have waterproof roofs, but the front side and one end, or the front side and two ends, are covered with wire so that the air can circulate through freely in warm weather, but hostile animals cannot get in.

To keep out driving rains or for use in cooler weather, particularly when the chicks are first put in and the nights are chilly, curtains of cloth or burlap are attached to the tops of the open sides so that they can be rolled down and fastened to protect the chicks when necessary. The curtain covering each side is made separate from the others so that much or little space may be left open according to requirements and according to which way the wind blows or the storm drives.

These little buildings should be movable and it is a good plan to place them on skids with rounded ends so that they can be drawn from place to place, thus affording a fresh, new location every day or two. Many poultry keepers block up these little houses so that there is a space between the floor and the ground which affords a cool, shady place for the chicks during hot days.

Poultry Notes

- Don't crowd; better sell some of the birds and make room.
- When lice come into the hen house, profit usually goes out.
- Lively chicks come from the eggs laid by hens of good breeding and vitality.
- A hen that will lay during the fall shows her persistence and value as a good producer.
- Ducklings need plenty of fresh water in dishes deep enough for them to wash their eyes and nostrils.
- Oatmeal and buttermilk, either fresh or in the dried form, are two of the best developers for growing chicks.

The warm-weather chick is not so robust a type, as a rule, as the early one, the parent stock often being run down and less vigorous.

Vigorous breeding stock is the first essential for healthy chicks, but sometimes when a good start is made neglect and improper care work havoc.

Duck eggs and ducklings are more readily available, and about 20 cents apiece is a fair price for fresh eggs. Ducklings can be shipped fairly successfully.

STRONG PROOF IS OFFERED BY TATE

"Hardly a man comes to the Tate, I don't tell about Tate," said Tate, 503 E. Main St., Charlottesville, Va., Battery Repairer for Irwin Hill Co.

"All my life I suffered from constipation and for three years past stomach was in such terrible shape could eat barely enough to keep life and soul together. My nerves were shattered, neuralgia almost blazed me at times, and I was losing weight so fast it was a question how longer I could last.

"I was tempted to quit taking Tate's after my second bottle, but fortunately, I stuck to the treatment. It increased my weight and made me a well man. I took my last spring but haven't felt a single constipation or any other ailment since. Just put me down in the same way as being strong for Tate's."

Tate's is for sale by all druggists. Accept no substitutes. Over a million bottles sold.

Tate's Vegetable Pills are your own remedy for constipation. Everywhere.—Advertisement.

Uncertain.
"Do you believe the human race originated with Adam?"
"Well, Adam or any."

CHILDREN CRY FOR "CASTORIA"

Especially Prepared for Infants and Children of All Ages

Mother! Fletcher's Castoria has been in use for over 30 years to relieve babies and children of Constipation, Flatulency, Wind Colic and Diarrhea, allaying Feverishness arising therefrom, and, by regulating the Stomach and Bowels, aids the assimilation of Food; giving natural sleep without opiates. The genuine bears signature

A farmer boy is naturally curious to find out if he has talent for something besides farming.

Thousands Have Kidney Trouble and Never Suspect It

Applicants for Insurance Often Rejected.

Judging from reports from druggists who are constantly in direct touch with the public, there is one preparation that has been very successful in overcoming these conditions. The mild and healing influence of Dr. Kilmer's Swamp-Root, soon realized. It stands the highest for its remarkable record of success.

An examining physician for one of the prominent Life Insurance Companies, on an interview on the subject, made the following statement that one reason why so many applicants for insurance are rejected is because kidney trouble is so common to the American people, and the large majority of those whose applications are declined do not even suspect that they have the disease. Dr. Kilmer's Swamp-Root is on sale at all drug stores in bottles of two sizes, medium and large.

However, if you wish first to test the great preparation send ten cents to Dr. Kilmer & Co., Binghamton, N. Y., for a sample bottle. When writing be sure to mention this paper.—Advertisement.

It is buying without thinking that fills the market with so many second-hand bargains.

To Have a Clear, Sweet Skin
Touch pimples, redness, roughness or itching, if any, with Cuticura Ointment, then bathe with Cuticura Soap and hot water. Rinse, dry gently and dust on a little Cuticura Talcum to leave a fascinating fragrance on skin. Everywhere 25c each.—Advertisement.

Dessert is an edible which comes and goes with company.

Safe instant relief from CORNS

Our ointment—and the pain of that one word! That's what Dr. Scholl's Zino-pads do—safely. They remove the cause—pressure, and heal the irritation. They also prevent infection from cutting, peeling or using corrosive acids. They are clean, hygienic, waterproof. Stays for weeks on toes, bunions. Get a box today at your druggist's or shoe dealer's.

Dr. Scholl's Zino-pads

Made in the laboratories of Dr. Scholl Mfg. Co., makers of Dr. Scholl's Foot Comforter Appliances, Arch Supports, etc.

Put one on—the pain is gone!