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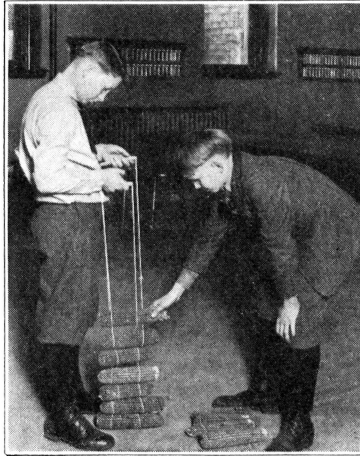
THE CORN CLUB

I and II

Boys' and Girls' Club Circular 6

COLUMBIA, MO.

APRIL, 1923

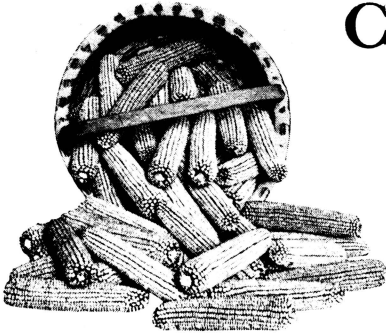


COOPERATIVE EXTENSION WORK IN
AGRICULTURE AND HOME ECONOMICS
UNIVERSITY OF MISSOURI COLLEGE OF AGRICULTURE AND THE UNITED
STATES DEPARTMENT OF AGRICULTURE COOPERATING
A. J. MEYER, Director, Agricultural Extension Service
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The Corn Club—I and II



CORN YIELDS in Missouri have never averaged more than 32 bushels per acre. Yet yields of 100 to 125 bushels have been secured in certain instances in our State. These high yields were not accidental, but the result of having used proper seed, under proper soil conditions and suitable cultural methods. It is to get greater yields through the use of these things that Boys' and

Girls' Corn Clubs are organized. Club members are in a position to secure maximum yields of corn because they usually go about their work with few fixed ideas as to how things should be done and are likely to take great care in following directions.

REQUIREMENTS FOR RAISING THE CROP

Club members must plan to do all the things necessary to secure a high yield of corn, and to do them well. One necessary operation left undone or poorly done may cause a failure. Do not take any chances. They never pay in the long run.

1. Corn club members are of two classes: (a) First-year members are those doing the work for the first time. (b) Second-year members are those doing the work for the second time or two successive times.
2. (a) Each member of the first-year club must have at least one acre in his corn plot. (b) Each member of the second-year club must have at least five acres in his corn plot.
3. Each member must follow all directions given in this circular as far as they apply to conditions on his corn plot.
4. A record must be kept of (a) how the work was done, and (b) the number of hours of both man and horse labor required to produce the crop.
5. An exhibit must be held.
6. A completed Record Book with Story of the Club Work for the Year must be given to the Local Leader when the project is finished.

NOTE.—This circular was prepared by D. W. Frear, Extension Associate Professor of Field Crops in collaboration with Mrs. J. K. Fyfer, Special Assistant in Boys' and Girls' Club Work.

MEETINGS

The corn club may be organized any time from January 1 until May 1. Meetings may be held as often as the Local Leader and the members desire. To be a standard club, which of course, you will want to be, six regular meetings at which officers preside must be held during the club year. These meetings may be held at the school or the homes of the members or any place convenient for all. Below are subjects suggested for six meetings. Remember these are given only as a help in making out your program. If you wish to have more meetings or change any of these you and your Local Leader are free to do so.

SUGGESTED MEETINGS FOR CLUB YEAR

- I. Organization.—Selecting the Plots (kind of soil, and size).
- II. Preparing the Soil.—(a) Manure and fertilizers; (b) Plowing.
Seed Corn.—(a) Variety; (b) Variety adaptation; (c) Securing seed and description of variety; (d) Testing.
- III. Planting.—(a) Time; (b) Rate; (c) Depth.
Cultivation.—(a) Purposes; (b) Methods; (c) Depth; (d) Implements.
Pests.
Picnic and Tour.
- IV. Selecting Seed Corn—Use of Score Card—Judging, Curing and Storage of Seed—Plans for Achievement Day.
- V. Determining the Yield. Discussion of Record Books.
- VI. Achievement Day. Completed Record Books. Exhibit.

RECORD BOOK

In all businesses that are successful, careful records are kept of expenses, labor, profits, etc. The Boys' and Girls' Club has as its business that of producing greater yields of corn at the least cost. You can easily understand that records of everything done must be carefully and accurately kept in order to see whether or not your business has been a success.

I. Organization and Selecting of Plots

ORGANIZATION

The first meeting of the club year will be devoted to the organization of the Corn Club. The Local Leader will take charge of this meeting while the officers, president, vice-president and

secretary are being elected. Committees should be appointed to make a constitution, and a program for the year, to choose a club name and a club motto. After disposing of the business the subject of selecting a corn plot should be discussed.

SELECTION OF PLOTS

Size of Plot.—The plot for the first-year members shall be one acre (43,560 square feet) in size. For the second-year members, the plot shall be five acres in size. It is a good plan to plant an area considerably larger than the plot desired; treat it all alike and at harvest time measure off the best acre or 5 acres as the case may be.

In shape the plot must be square, or a rectangle which is not more than four times as long as it is wide. A square acre is 208 feet 8½ inches on a side. A square five-acre plot is 466 feet, 8½ inches on a side. A rectangular acre four times as long as it is wide is 417 feet, 5 inches long and 104 feet, 5 inches wide. A rectangular five-acre plot four times as long as it is wide is 933 feet, 4½ inches long and 233 feet, 4 inches wide. The plots may be of any dimensions between a rectangle and a square of the sizes given.

Kind of Land.—Corn is not a poor-soil crop. For this reason corn land should be fertile, deep as well as *warm*, well drained and preferably of a *loam* type.

Warm Soils are those that are well drained and of a dark color, and warm up quickly in the spring.

Loam soil is composed of a mixture of particles varying in size from clay to sand and in such proportions that it is easily cultivated and readily drained of excess moisture.

Land that has been in pasture or meadow makes an excellent corn field if the soil is otherwise of a suitable location and quality.

The corn plot should be next to or a part of a larger field of the same variety of corn. A plot by itself is more likely to be injured by livestock, squirrels or insects.

RECORD BOOK

In the Record Book you will find a page for recording the items of interest about the first meeting. After you have told about the number of members, officers elected and committees appointed, give a description of your corn plot. Tell the size, shape, location and kind of soil in the plot. Keep the Record Book neat and clean and have it accurate as well as interesting.

II. Preparing the Soil.—Selecting the Variety of Seed Corn

PREPARING THE SOIL

After a report of the committees appointed at the first meeting has been made and the business part of the program is finished there should be a discussion of the work necessary for producing your corn.

Manure and Fertilizers.—Corn is a plant that feeds very heavily upon the soil and can use large amounts of rather coarse barnyard manure and green manure. Both of these manures furnish needed plant food as well as decayed organic matter (humus) which improves the condition of cultivation (tilth) of the soil as well as the capacity for absorbing and retaining moisture. Apply manure liberally according to the fertility of the soil, using as much as 15 or 16 tons per acre on the thinner soils. Productive corn soil should contain three elements which you will hear about more and more as you progress in agricultural work, they are nitrogen, phosphorous and potassium. Manure is rich in nitrogen but low in phosphorous, so if obtainable add 25 to 40 pounds of acid phosphate to each load of manure before spreading as it will balance the nitrogen of the manure.

If the land is fall-plowed without manuring, apply the manure during the winter or spring and disk it in. On lands of medium to low fertility when manure is not available, apply 150 to 250 pounds of acid phosphate per acre with the fertilizer drill, just before planting the corn.

Plowing.—In preparing the seed bed it is best to disk the land before plowing to destroy the weeds and mix them and other vegetable matter with the soil and to prevent the land from plowing up cloddy.

Fall plowing is usually advisable when the land will not wash badly during the winter. This enables the soil to become well compacted and the manure to decay partially before planting time. For these reasons fall plowing is especially desirable on sod land. Allow the fall-plowed land to go through the winter without disking to prevent washing, to increase its capacity to absorb rain and melting snow, and to allow the freezing and thawing of the winter to break down the rough exposed surface into a fine mellow condition for the seed bed.

Spring plowing should be done as early as possible to allow time for the soil to settle. The later in the spring the plowing is done the more the soil should be worked down into a firm, compact seed bed by disking and harrowing. On late plowing it is best to harrow each day's plowing as soon as it is done in order to prevent great loss of moisture.

If any considerable number of weeds appear in the spring on either the fall or spring plowed ground they should be destroyed by disking before they get too large and waste the soil moisture. Plow 6 to 8 inches deep, going the greater depth on the deeper soils and where the plot is plowed a long time before planting time.

SEED CORN

Although you may have prepared the seed bed perfectly for your corn crop, the yield will not be large unless you have good, perfectly sound, well matured seed adapted to your own location.

Variety.—Club members should select a variety and strain of corn that yields well, and is known from years of trial to be adapted to the climate and soil where it is grown. It is best to use home-grown or locally grown seed if seed of good quality can be obtained. If such seed cannot be secured and it is necessary to use other seed, it is better to go east or west for it rather than to go north or south for any distance as it will be better adapted to the climate than seed from farther north or south.

Variety Adaptation.—The standard varieties of corn for Missouri are: (1) Boone County White, (2) St. Charles White, (3) Commercial White, (4) Reid's Yellow Dent.

These are not all adapted equally well to every part of the state so each variety is given below showing where it yields best.

Boone County White is especially adapted to the bottom lands in all parts of the state and the more fertile uplands throughout central and southern Missouri. Johnson County White is a variety very similar to Boone County White and adapted to the same conditions.

St. Charles White is a good yielder in the central and southeastern sections and on bottom lands all over the state.

Commercial White is well adapted to the southern third of the state. It does not mature well in northern and central Missouri in the average season.

Reid's Yellow Dent is an especially good yielder on upland soils in the northern third of the state. In the southern part and in

the bottom lands of northern Missouri, it will not yield as well as Boone County White or Commercial White.

Securing Seed.—When the club members have decided on the variety of corn they wish to plant they should secure from near home the best seed possible. Six to eight pounds of good, uniform, viable shelled seed should be secured for each acre to be planted. Viable seeds are those capable of living. If corn is bought in the ear about ten to twelve ears will be needed for each acre planted.

Select your own seed if possible, picking ears that are uniform in size, shape, color, length and indentation and that are as nearly as possible like the description for the special variety that is se-

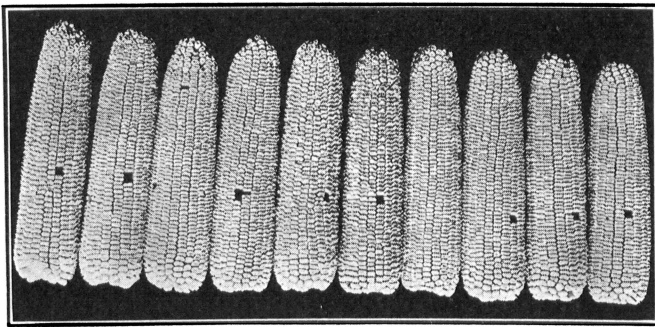


Fig. 1.—Select ears that are uniform in size, shape, color and indentation.

lected as given on page 9. As a help in selecting seed read the paragraphs on Seed Selection page 15, Judging page 17, and the Score Card page 17. Keep the points of the score card in mind while making your selection. In shelling the corn, the kernels from the tip and butt ends should be discarded, principally because they are undersized and irregular in shape and will not plant uniformly and give an even stand of corn.

If it is necessary to send away from home for the seed the club members should consult the Local Leader and County Extension Agent about the best place to secure seed. You can then buy the seed together and each member can pay his share of the expenses.

Approved seed of good quality may be secured directly from growers through the approved seed list published cooperatively by the Missouri Corn Grower's Association and the College of Agriculture, Columbia, Missouri.

DESCRIPTION OF THE LEADING VARIETIES OF CORN IN MISSOURI

	Boone County White	St. Charles White	Commercial White	Reid's Yellow Dent
Ear shape	Cylindrical	Slowly Tapering	Slowly Tapering	Slowly Tapering
Length inches	10½-11	10-10½	10½-11	10-10½
Circumference inches	7½-7¾	7¼-7½	7½-7¾	7¼-7½
Kernel color	White	Pearl White	Pearl White	Lemon Yellow
Indentation	Medium Rough	Medium Rough	Smooth	Rough
Shape	Medium Wedge	Medium Square	Medium Square	Long Wedge
Depth	Medium	Medium Shallow	Shallow	Deep
Rows number	16-20	18-20	16-18	18-24
Space	Medium Close	Medium Open	Open	Close
Cob color	White	Blood Red	White	Deep Red
Average height feet	8-9½	8-9½	8½-9½	8-9
Days to mature	130-135	135-140	140-145	125-130

Johnson County White does not differ materially from Boone County White. It is rougher, kernels more chalky in color, ears more tapering, especially toward the tip, butts more rounded.

Testing the Seed.—After the ears are selected, the club members should test the corn to see if it will germinate or sprout well before it is planted. Testing the corn is an easy task and the simplest effective method for doing it is the rag-doll seed tester. This method of testing shows the germinating power of each ear and its freedom from diseases. For one acre thirty to forty ears should be enough to test. This allows for a number of ears which may have to be discarded because of poor quality.

Lay a strip of butcher's glazed wrapping paper 14 inches wide and 60 inches long on a clean surface and on top of this place a moistened strip of good bleached or unbleached muslin of the same size. Sterilize the cloth by boiling it in water for twenty minutes. Sterilizing makes the cloth free of germs.

Take out eight kernels from each ear. Start near the tip and take one out of another row and farther from the tip, turn toward



Fig. 2.—Removing the kernels and placing on rag-doll tester.



Fig. 3.—Rolling the rag-doll.

the right again and remove another kernel from a third row and farther from the tip than the second kernel. Continue until eight have been removed. Lay the eight kernels from each ear in a row across the cloth, beginning about 2 inches from the top of the cloth and putting the first row about 4 inches from one end of the cloth. Place the kernels in the order in which they are removed from the ears, with the germ side next to the cloth and the tips all pointing in the same direction. Leave about a 2-inch space between the rows of kernels and about a 4-inch margin at the bottom of the cloth. Number the rows at the margin of the cloth to correspond to the number of the ears. The number may be attached to the butt end of the ear, by means of a pin stuck into the cob.

Roll the paper and cloth into a smooth, firm roll (doll) and fasten at each end with a rubber band or string. Stand the doll on end with the tips of the kernels pointing downward in a pail containing about 2 inches of water. Keep the water at about this depth by adding more from day to day.

Place a moist gunny sack or cloth over the pail and cover with another pail or board to prevent drying out. Keep the doll moist and at a temperature of 80° to 85° Fahrenheit which is slightly higher than the ordinary room temperature. It should be protected from the cold at night.

At the end of seven days the germination is ready to read. Unroll carefully, count and record the number of kernels from each ear that sprouted.

Examine each row of kernels for dark, moldy, rotted and weak sprouts. Such kernels come from diseased ears which should be discarded as well as those which do not show 100 per cent germination. If possible use only those ears for seed whose kernels show 100 per cent germination and that have no moldy, rotted or weak sprouts.

RECORD BOOK

After the discussion of the preparation of the seed bed, each member should tell how his corn plot was fertilized and when it was plowed. With what did you fertilize your corn plot? What reasons did you have for using this fertilizer? What was the cost? Give reasons for plowing the plot when you did. Where did you get your seed corn? What variety did you select? Why did you select this variety? What quantity did you get for planting? Did you use the rag-doll tester? Tell what success you had with it.

III. Planting, Cultivation, and Pests

PLANTING

Time.—Do not plant the corn until the ground has become fairly warm and danger of frost is past. The time will vary from the middle of April, for the southern part of the state, to the last of May, for the northern part of the state.

Rate.—On the more fertile soils, plant at the rate of three kernels to the hill, 3 feet, 4 inches to 3 feet, 8 inches apart. On the thinner soils, plant two grains per hill. To insure a perfect stand, plant more seed than needed and thin to the proper stand. Thinning should be done as soon as the stalks are too hard to be injured by cut worms and before the stalks are more than eight or ten inches high, leaving three stalks to the hill on the more fertile soils and two stalks to the hill on the poorer soils. A broom handle flattened at one end, or a similar stick, to which is fastened a sharp piece of flattened iron like a 2-inch chisel, is of greatest assistance in thinning, since it is necessary to remove the stalks below the surface of the ground in order to prevent further growth.

Depth.—Plant the seed about 2 inches deep either by hand or with the ordinary corn planter.

Furrow openers on an ordinary planter give good results by putting the seed deeper into the ground where it will withstand drought better. They should not be used on heavy, poorly drained, or the very shallowest soils. The furrow produced by this method of planting is gradually filled in by cultivation.

CULTIVATION

Purposes.—The main purpose of cultivating is to destroy weeds. Other less important purposes are:

1. To conserve soil moisture.
2. To enable rainfall to penetrate the soil.
3. To set free or make available additional plant food.
4. To bring about better aeration of the soil or to supply air to the soil.

Ordinarily, enough cultivations to keep down weeds will produce the other results, and are all that are necessary to produce the greatest yields.

Methods.—Harrow the field if weeds appear, or the ground crusts before the corn comes up and before the corn gets too high

to be injured by this operation. Set the teeth of the harrow pointing backward and drive the harrow at an angle to the corn rows and not parallel with them.

Start the cultivator early and destroy the weeds while they are small and not deeply rooted. Cultivate often enough to prevent the weeds from developing deep and large roots, which will sap the moisture that is needed by the corn.

Depth.—Do not cultivate too deeply; go only deep enough to stir the surface and kill the weeds. Deep cultivation destroys the surface roots of the corn and usually results in a decreased yield.

If the regular cultivations have been done promptly and well, late cultivations after the corn is normally "laid by" will seldom be required and they rarely pay.

If late cultivation is practiced, it should be shallow and done with a one-horse cultivator, a one-horse harrow, or a mower wheel dragged through the rows which will loosen up the surface soil an inch or so deep.

Implements.—Either a shovel or disk cultivator may be used, but for all conditions the shovel cultivator is most satisfactory. If only one cultivator is available it should be of the shovel type.

The disk cultivator can be used to best advantage on sod ground in wet seasons or when weeds have gotten the start of the corn. For the first cultivation, run the disks as close to the plants as possible throwing the soil away from the plants (barring off). For the second cultivation, set the disks to throw the soil back towards the plants and to cover the weeds in the row. For succeeding cultivations, either type of cultivator is satisfactory.

A shovel cultivator with six or eight shovels will give better results usually than one with only four shovels. The larger number of shovels will stir all the soil and kill the weeds without going too deeply or ridging the land excessively. On stumpy or very rocky land the four shovel type is more commonly used and probably preferable.

CORN PESTS

If you have trouble with insects, disease or other pests which you cannot handle yourself consult your Local Leader, County Agent, or write to the Agricultural Extension Service, Columbia, Missouri, stating fully the nature of the trouble.

RECORD BOOK

Do not forget the Record Book as it will tell the Agricultural Extension Service what you have done in your club work. You can now tell:

1. The date of planting.
2. The number of kernels to the hill.
3. The distance between the hills.
4. The depth you planted the kernels.
5. The number of stalks left in each hill after thinning.
6. The date of cultivation.
7. The tools used in cultivating.

It is important to record the number of hours of labor needed in every step of the work. You will find a place for this in the Record Book.

PICNIC AND TOUR

There will be some weeks between the last cultivation and harvesting and this would be an excellent time to have a picnic or party. A tour to visit each corn plot would be very instructive as well as interesting for the club members.

IV. Selection and Care of Seed Corn—Use of Score Card in Judging—Plans for Achievement Day.

SELECTING SEED CORN

When it is time to harvest the corn don't fail to have a field selection demonstration somewhere in your neighborhood for securing the best ears of corn from the plot. The Local Leader, County Extension Agent or a corn specialist will give the demonstration. The best ears should come from the best stalks or those producing the most good corn under ordinary conditions. The best stalks should be of medium height and thickness, and contain a good supply of broad leaves, and have ears at a convenient height for husking. The selected ears should have a shank of medium length and should hang down toward the ground with a natural curving of the shanks as shown in figure 4.

Pick ears that are uniform in size, shape, color, length and indentation and that conform as closely as possible to the variety standard. The kernels should be uniform and arranged in straight rows which extend well over the tip and butt ends of the ears. After the seed ears have been picked in the field they should be reselected and the poorer ones discarded.



Fig. 4.—Ear in good position.

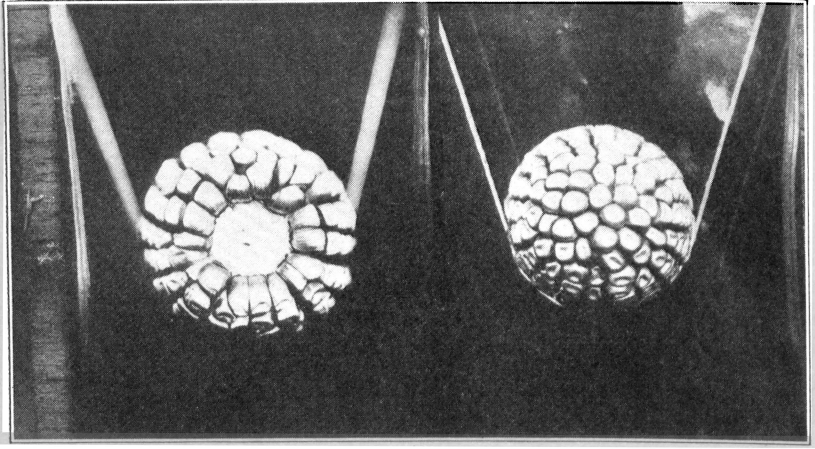


Fig. 5.—A good butt and tip end of ear.

USE OF SCORE CARD

Study the score card and keep its points in mind in making your selections. The score card shows the relative value of the different characters of the ears. For example uniformity of type and length of ear have scores of 10 points each while shape of ear counts only 5 points. In selecting seed corn choose ears that follow closely the variety standard, and consider the different characters of the ears according to their relative value on the score card.



Fig. 6.—Demonstration of field selection of seed corn.

CORN SCORE CARD—TEN-EAR SAMPLE.

	Scale of points	No. of Sample				
		1	2	3	4	5
Trueness to type and breed characteristics—						
1. Uniformity of type	10					
2. Shape of ears	5					
3. Length of ears	10					
4. Circumference of ears	5					
5. Purity of kernel	5					
6. Purity of cob	5					
	40					
Maturity and market condition—						
7. Maturity	10					
8. Market condition	5					
	15					
Yielding qualities and vitality—						
9. Character of germs	15					
10. Shape of kernels	10					
11. Uniformity of kernels	5					
12. Butts	5					
13. Tips	5					
14. Size of cob	5					
	45					
Total	100					

VARIETY STANDARD

	Length	Circumference
Yellow		
Reid's Yellow Dent	10 to 10½	7¼ to 7½
White		
Boone County White	10½ to 11	7½ to 7¾
St. Charles White	10 to 10½	7¼ to 7½
Johnson County White	10½ to 11	7½ to 7¾
Commercial White	10½ to 11	7½ to 7¾

JUDGING

Corn judging demonstrations should be given in order to learn how to pick out superior ears or groups of ears that will produce the largest and best crop and at the same time conform or

agree most closely and uniformly to a definite variety standard. Judging depends on three main factors:

1. Trueness to type (variety standard)40 points
2. Maturity and market conditions15 points
3. Yielding quality and vitality45 points

Each of these factors is made up of a number of values based on definite ear characters, uniformity and condition as shown in the score card page 17.

Trueness to Type (Variety characters).—Ears should conform as nearly as possible to all variety and other desired characters.

Maturity and Market Condition.—Ears should be well matured, thoroughly cured, and firm. Good market conditions are necessary which mean freedom from injury, disease or decayed parts or any other condition which would lower the market value.

Yielding Quality and Vitality.—The kernel shape and size, fullness and condition of tips and butts and size of the cob must be such as to produce a high shelling percentage of the ear. The germs should be relatively large, extending well over the surface of the kernel, be bright in color and free from discoloration and injury. When cut or broken open they should reveal a fresh oily appearance indicating high vitality which is absolutely necessary in seed corn.



Fig. 7.—A club leader giving a lesson on judging corn.

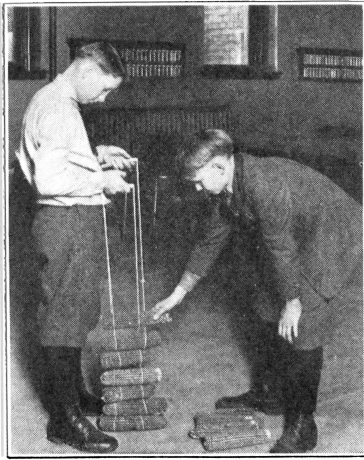


Fig. 8.—The twine method of hanging seed corn.

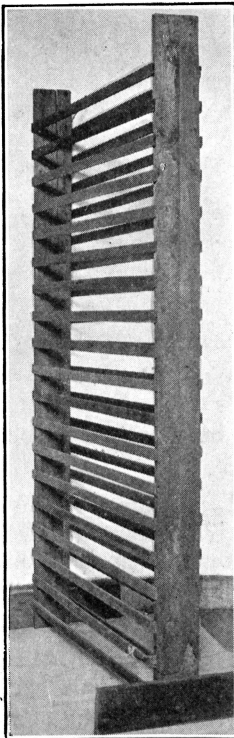


Fig. 9.—A seed corn rack, from 1-by-6's and lath.

corn in the loop, after each ear is laid on, the strands are crossed over and another ear is laid in place. This weaves the twine back and forth around the ears. About one pound of twine is required per bushel. The strings of ears may be suspended from the ceiling, rafters or especially made racks.

The wooden rack shown in figure 9 is made by nailing laths about 4 inches apart on two upright boards 5 or 6 inches wide. The rack in figure 10 is made by driving

CURING AND STORAGE

Seed corn should be placed to dry the same day it is gathered where there is a good circulation of air. Some common ways of curing the ears are shown in figures 8 to 11.

Two people are needed to string ears as shown in figure 8. Take a piece of binding twine about 20 or 25 feet in length or as long as is found convenient to handle. Double it as shown. One person stands and holds the ends of the twine in each hand, and the other person lays an ear of

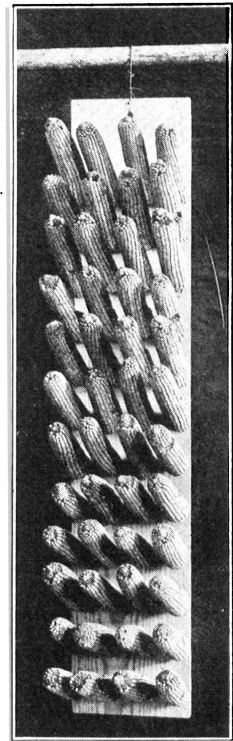


Fig. 10.—A very good way of drying seed corn.

good sized nails, 8 or 10 penny, in rows through a board which is hung up with the ears stuck on the nails. Racks may be made of pieces of electrically welded wire fencing with the strands cut off upon which the ears are stuck as shown at the center in figure 11.

When thoroughly dry if well protected from mice and the weather, the seed ears may remain where they were cured or they may be stored in mouse proof boxes and put in a dry place. Insects may be kept out by storing some moth balls with the ears.

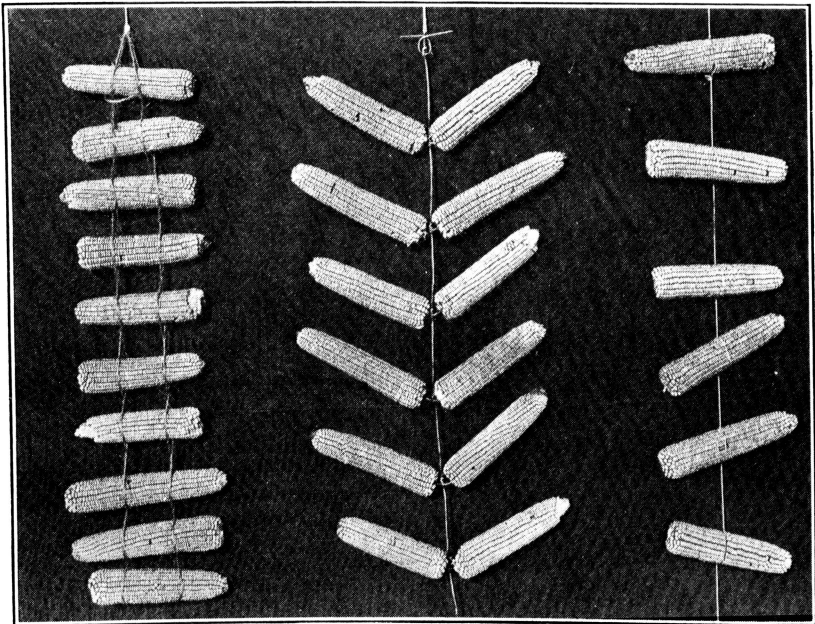


Fig. 11.—Three excellent methods of drying seed corn.

Remember that excellent seed corn may be ruined by poor storage, so take good care of it.

PLANS FOR ACHIEVEMENT DAY

Plans for an exhibit or achievement day should be made. This should be held when the harvesting is finished and all work for the club year is completed. A good program with Story of the Work done by the Club Members for the Club Year, some corn judging demonstrations, club songs, and a display of the ten best ears each member has produced will be interesting to everyone in the community. If you are expecting help from the County Agent or the

Agricultural Extension Service it is advisable to consult with them before setting the date of Achievement Day.

RECORD BOOK

Did you have a picnic during the summer? Be sure to tell all about it if you did. Did you select your seed from the field? Do the farmers in your neighborhood select their seed from the field? Why is it a good practice to select in this way? What kind of ears do you look for? How do you want them to hang on the stalk? Why? How did you store your seed corn? Have you given any demonstrations in judging corn? What points are hardest for you to determine in judging? What plans have you made for the Achievement Day?

V. Determining the Yield—Discussion of Record Books

DETERMINING THE YIELD

One of the important parts of club work is determining the yield of your plot. At harvest time the corn plot should be accurately measured and the yield correctly determined. The best way to determine the yield is to husk and weigh all of the corn on the measured plot.

The seed corn should be weighed with the rest of the corn in order to get the full yield of the plot.

1. To determine the yield of dry corn weigh out 100 pounds of ear corn. Place the ears on a frame, string up in a loft or arrange in some manner so that they will dry thoroughly without injury.

2. When dry, weigh again and record the weight. Shell these dry ears and weigh the shelled corn. Record this weight as the per cent of dry shelled corn.

Multiply the total weight of corn from the plot by this per cent. The result is the yield in pounds of dry shelled corn from the plot. Dividing this weight by 56 gives the yield in bushels per acre as there are 56 pounds of shelled corn in a bushel.

If the entire plot cannot be harvested and weighed, the following plan will give the yield correctly and with less labor.

Select in the field at representative and separate places a total

of six rows. Measure off 175 feet on each row and husk the corn from the measured portion. Weigh the corn and determine the yield of dry shelled corn as stated above under 1 and 2. The result is the yield in bushels of dry shelled corn from the selected rows.

Decide from the following table what fractional part of an acre the six rows represent.

Multiply the weight of the dry shelled corn from the six rows by this fractional figure. The result will be the number of bushels of dry shelled corn per acre.

Table.

Six rows each 175 feet in length (1050 feet of row) represent the following fractional part of an acre. The fraction in each case is one over the number given: thus $1/20,743$.

Distance between rows	Fractional figure*
2 feet 0 in.	20.743—
2 feet 1 in.	19.913+
2 feet 2 in.	19.147+
2 feet 3 in.	18.438+
2 feet 4 in.	17.779+
2 feet 5 in.	17.167—
2 feet 6 in.	16.594+
2 feet 7 in.	16.059—
2 feet 8 in.	15.557+
2 feet 9 in.	15.086—
2 feet 10 in.	14.642+
2 feet 11 in.	14.224—
3 feet 0 in.	13.829—
3 feet 1 in.	13.455—
3 feet 2 in.	13.101—
3 feet 3 in.	12.762—
3 feet 4 in.	12.446—
3 feet 5 in.	12.156
3 feet 6 in.	11.852—
3 feet 7 in.	11.577
3 feet 8 in.	11.314+
3 feet 9 in.	11.063
3 feet 10 in.	10.822+
3 feet 11 in.	10.592+
4 feet 0 in.	10.371+

*This number will be the number below the line in the fraction which shows the part of an acre six rows, 175 feet long, make of the width given opposite.

To illustrate the method of determining the yield per acre we will suppose the following case:

The weight of ear corn husked from the six rows is 380 pounds. The distance between the corn rows is three feet, four inches. The 100 pounds of ear corn when dried out and shelled weighs 78 pounds, which is the amount of the shelling per cent. Seventy-eight per cent of 380 pounds is 296.4 pounds.

296.4 pounds divided by 56 equals 5.29 bushels. 5.29 bushels multiplied by 12.446 (fractional part of an acre which the six rows 3 feet, 4 inches apart represent) equals 65.84 bushels of dry shelled corn produced per acre on the field under consideration.

DISCUSSION OF RECORD BOOKS

The members of the Corn Club should have all record books up-to-date, but if there are any questions or points not understood consult the Local Leader and see that every item is recorded just as neatly, correctly and promptly as possible.

RECORD BOOK

After the yield has been determined it will be of great interest and value to know what method you took to determine the yield and how much shelled corn you produced per acre. You might put in your Record Book a copy of the way you figured out the yield of your plot.

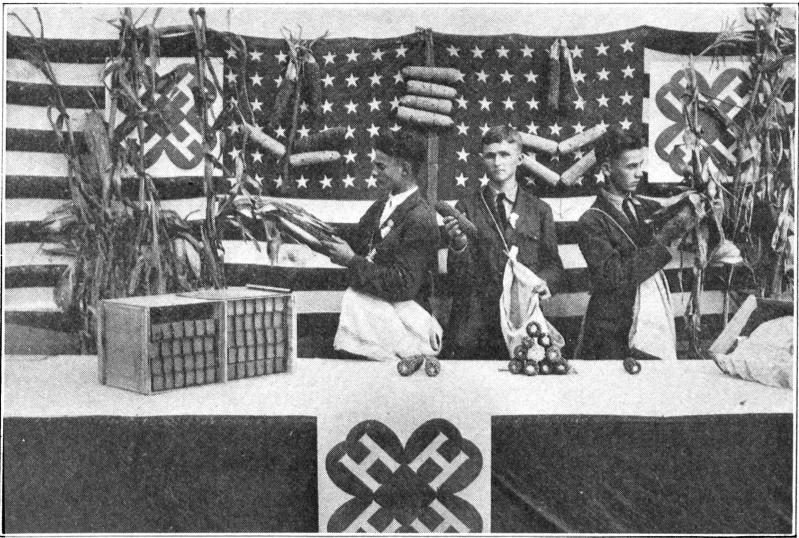


Fig. 12—Demonstration in gathering seed corn (Achievement Day Program).

VI. Achievement Day

As you have planned so long for the exhibit and Achievement Day everything should be in readiness for it. Don't leave any details for the last minute but have the program a lively one and full of interest to all present. If there were any premiums offered tell about the awards.

RECORD BOOK

Give the program of Achievement Day. Tell of any premiums you won. What part did you especially like? At the end of the

project after all meetings and records have been completed, and the Story of the Year written, give the book to the Local Leader and your work is finished.

SUGGESTIONS FOR ROLL CALL

Each member should give:

1. One point in judging corn.
2. One step in preparing a rag-doll tester.
3. One point in the variety description of the corn selected to plant.
4. One step necessary in determining the yield for a crop.

SUGGESTIONS FOR PUBLIC DEMONSTRATIONS

Testing Seed.	Selection of Seed Corn.
Judging Corn.	Storing and Curing Seed Corn.

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