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Boys' and Girls' Corn Club for Montana

By

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Montana State College

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Boys' and Girls' Corn Club for Montana

OBJECTS

The objects of the Corn Club are: to encourage club members to learn the best methods of corn-growing and how to make the best use of their soil and weather conditions; to secure better seed corn and consequently, better yields; to provide club members with some definite work to do which will result in pleasure, profit and education; and to learn team work in order that the young people of Montana may become better citizens who will be interested and able to help others in making and upbuilding the community and State.

RULES AND REGULATIONS

1. Age, 10 to 18 inclusive

2. Requirements

Members agree

(a) To plant and care for at least one-half acre of corn.

(b) To keep a record of work done, cost of seed, value of corn and fodder raised.

(c) To make an exhibit of the ten best ears at local, county or any other fairs if possible.

(d) To furnish a statement signed by the parent or local leader certifying that the work has been done by the child only, or where help has been given to state the amount and money value of same. This statement and the record to accompany exhibit in all cases.

(e) Write a story on "How I Made My Corn Crop."

(f) Mail a summary of record and copy to State Club Leader, Bozeman, Montana.

3. Enrollment

Each member must enroll by June 1st with the county club leader, county superintendent of schools, or State Club Leader.

4. Full Membership Card

One is not a full-fledged club member until the full membership card (which will be sent to each member about June 1st) has been filled out and returned. This card, when filled out and returned,

shows that you are going ahead with your work. This should be done as soon as the card is received.

5. Final Summary and Story

The final summary and the story should be sent to the State Club Leader, Bozeman, Montana, by November 1st.

6. Basis of Awards

(a) Greatest yield per half acre.....	30%
(b) Best showing of profit on investment.....	30%
(c) Best exhibit of ten ears at any fair in Montana.....	20%
(d) Best written story on "How I Raised My Corn Crop".....	20%

Total score..... 100%

SEED

The first factor affecting the yield of corn is the seed. Good seed is essential. Poor seed often results in failure. "Like produces like." To select seed that will grow, the club member should observe the following points:

Choose varieties that have been successfully grown and matured in the community. If possible, choose ears that were picked for seed the previous season before injury by frost. The following varieties are recommended for Montana, where the altitude is below 4,000 feet: Northwestern Dent, Rustler's White Dent, Minnesota 13, and Minnesota 23. Where the altitude is above 4,000 feet, Gehu Flint and Dakota Flint only are worth trying.

Select ears that have a small cob of medium length, well filled, solid, and having large, healthy, bright germs. Discard all crooked ears and those that twist easily or have loose kernels. A very large ear with a big cob does not mature early.

The only way to be sure the seed will grow is to test it. The following methods may be practiced by club members.

METHODS OF TESTING

Bulk Seed Test

If the corn has been shelled, select one hundred kernels, spread them out on wet paper (blotting paper is best) in a pie tin or dinner plate. Cover with an inverted pie tin or plate. Set this aside in a warm place (living room temperature). It will be necessary to watch the moisture condition carefully from day to day to see that

the paper under the corn is kept very moist. As fast as the kernels sprout, remove them from the plate, keeping count of those removed.

At the end of a week the test is complete. Of the one hundred kernels, the number sprouting will indicate the per cent of germination. Good seed corn should show 85 of the 100 seeds vigorously sprouted at the end of the week. In some years it may be impossible to secure seed corn showing as high as 85% germination test. Under such conditions it becomes necessary to use for seed corn the sample showing a germination test nearest to 85%.

Individual Ear Test

Select or make a box about four inches deep and at least large enough to make one hundred squares in it, each square being 3x3 inches, and having a two-inch space around the edge of the box on all sides. The bottom of the box should have small cracks in it to let water out and to allow for swelling of boards when wet. Fill the box with sawdust, sand, or soil to within an inch of the top. Wet the material with warm water and pack firmly. Obtain a firm white cloth large enough to fit the box. Mark off on the cloth while yet dry, one hundred squares, each 3x3 inches, leaving a margin on all sides. Number the squares in order from left to right 1 to 100, using a heavy black or colored pencil. Wet the cloth and spread smoothly in the box. The cloth may be held down by pushing flat-headed nails through it into the sawdust or soil.

From one hundred selected ears, take six (6) kernels from each ear, two near the butt, two near the center and two near the tip. No two kernels should come from the same row. Remove the kernels with a dull knife blade by prying up from the sides, being careful not to injure the germ. Put the kernels from the first ear, with the germ side up, in square number 1 and number the ear from which these kernels were taken by attaching a tag numbered to correspond with the number in the square in which these kernels were placed. This tag may be fastened to the ear by pushing a pin or small nail through the tag and into the pithy end of the cob. Lay the ears in order (each numbered) on a shelf or convenient rack. When the squares are full, place a heavy paper or closely-woven wet cloth over the kernels.

A pad of wet paper or other material should be spread over the top. This should be kept moist.

Put the germinator in a warm place where the temperature is constant, as in the living room or kitchen. After a week remove the cover by rolling the cover carefully back from one side. Be sure that all the kernels are left in their proper squares. To read the test, begin at square number 1. Save only the ears that have at least five kernels showing vigorous sprouts. For instance, in square thirteen, if only three or four kernels have strong roots, turn to the ears, remove ear number thirteen and discard it as unsafe to plant.

After the ears have been tested, shell the corn from the ears that have passed the test to use for seed. At this time the irregular kernels from the tips and butts of the ears should be kept separate and not used for seed.

SELECTING THE PLOT

The next important step is to select the best available site for the corn plot. The soil should be fertile and easily worked. A well drained area is necessary, especially if the crop is to be irrigated.

Where possible, locate the plot near enough to the house to be handy for odd hours of work. It should be well fenced. A number of club members last year lost good crops through destruction by straying animals.

A plot that is longer than it is wide is more easily worked. A plot five rods wide and sixteen rods long gives an area of one-half acre. This is a more suitable shape where a team is used.

PREPARING THE LAND

Begin working the seed bed as early in the spring as the weather permits. If the soil is neglected until late it will be almost impossible to put the ground in the best condition; moisture will escape and the soil may become dry and lumpy.

If the land has been summer fallowed or fall plowed, disk thoroughly each way. Then harrow until a dust mulch is obtained.

If spring plowed land is used, it should be disked or harrowed very thoroughly at once to retain the moisture. A seed bed for corn should be fine and fairly firm beneath, with a loose fine surface. Such a seed bed will be warm, will admit air and water freely and retard evaporation, thus increasing the chances for a good crop.

PLANTING

The two methods of planting—check row and drilling—return about the same yield per acre. In Montana, especially in the weed-

infested sections, check rowing is recommended for the large areas. This method, which allows cultivation in both directions, assists in the fight against the **soil robbers**—the weeds.

The usual field corn planter is devised for check rowing. If this cannot be obtained, a hand planter is very satisfactory. In the latter case it will be necessary to mark the plot both lengthwise and crosswise before starting to plant.

If neither kind of planter is available, the corn may be planted by hand with a hoe.

In checkrowing, the hills are usually placed forty-two inches apart each way with four to five kernels to a hill.

If the field is fairly free from weeds, the drill method may be used. In this case the rows are thirty-six to forty-two inches apart with but a single kernel in a hill. The hills are twelve to eighteen inches apart. The thickness to plant will depend upon the region and local conditions. The planter should be thoroughly tested and adjusted before starting, to be sure it drops accurately.

Since one bushel of corn (ear or shelled) is sufficient to plant seven acres of corn, it will require about two and one-half quarts of seed corn for a one-half acre plot.

Depth of Planting

The corn should be planted two to three inches deep. It may be planted as deep as four inches in case of a sandy soil.

Time of Planting

Plant as early as possible after danger of frost killing the young corn is passed. Consult older residents as to the proper time for planting in your locality. Generally, from May 5th to 20th is a safe date to plant in Montana.

CULTIVATION

Good seed, properly planted in a well prepared plot, does not insure a prize crop. Unless it is well cultivated, the best results cannot be expected. The yield is largely in proportion to the frequency and thoroughness of the cultivation. By having his plot in good physical condition, absolutely free from weeds when the corn is planted, the club member has his summer's battle half won.

Reasons for Cultivation

1. To destroy weeds. If weeds are permitted to grow, they

rob the soil of plant food and moisture. In addition, they may injure the corn by shading.

2. To keep the surface soil in good condition. This prevents cracks from forming and produces a surface mulch, which checks the evaporation of moisture from the soil.

When cultivation is done by horse power, the first cultivation should be as soon as the corn is large enough to be worked without danger of covernig. This cultivation should be as close to the row as possible, to kill the weeds starting there. If the seed bed was properly prepared before planting, deep cultivation will be unnecessary. At all times the utmost care should be taken to avoid injury to the corn roots. The number of succeeding cultivations will depend upon the quantity of weeds appearing and the condition of the soil.

The plot should be kept free from weeds at all times. It may be necessary to use the hoe to free the plot from all weeds.

After heavy rains, stirring the soil will break the crust and leave the soil in good condition. From three to five cultivations should be sufficient. The crop is usually ready to "lay by" or stop cultivating when the tassels begin to appear. The last cultivation should leave the ground fairly level.

Where the plot is cultivated entirely by hand, hoeing should be started at the first appearance of weeds. Until the corn is ready to "lay by," the plot should be hoed frequently enough to keep the surface soil loose and mellow. If the field is tended as often and carefully as it should be, it will not be a difficult task.

THE FIELD SELECTION OF SEED CORN

"To make the best better," the club member should select his seed corn for the next year from his own acre. High grade corn, picked from the stalks on a high producing acre, is always in good demand and brings a good price.

Soon after the corn has tasseled, the young ears appear. This is the time to begin watching the field for such ears as will make good seed. But it is first necessary to know the kind of a plant the ears grow on and also the kind of ears to select. The following points will be helpful:

(1) The stalk should be rather sturdily built and of medium size and leafiness. It should stand erect but should not be whip-like.

(2) Select the plant that, for no apparent reason, is much better than its neighbors.

(3) **Always select for seed the ears that ripen earliest.**

(4) The ear should be well filled, medium size and free from disease.

The seed ears must be picked before a killing frost. The germ is killed if frosted when there is moisture in kernels. No date can be fixed for picking the seed in Montana. When inside husks become white and the ears have a dry feeling to the hand, it is ripe enough for seed. In the dent varieties the dents should begin to **show white**; in the case of flint varieties, the kernels should be well glazed.

DRYING AND STORING

Just as soon as the corn is picked, it should be dried and stored in a clean, well ventilated and dry place. If dried thoroughly, it will stand any amount of freezing weather without injury to its vitality. However, It must be kept dry and have space between each ear for free circulation of the air. Never store seed corn where it is liable to absorb moisture.

An easy method to store seed corn is to drive finishing nails three inches apart into each side and edge of a 2x4-inch timber about six feet long. Slant the nail upward. Push the butt end of the ear on to the nail—the pith of the cob being soft. Then hang the “corn tree” in suitable place by means of wire from upper end.

Another good method is to use a binder twine about sixteen feet long with the ends tied together forming an eight-foot loop. Place an ear a little to the middle of the loop and hold it suspended as in a hammock. Then “see-saw” or weave the shorter loop through the longer loop and pull tight across the ear. Place another ear in the hammock above the first one and repeat the “see-saw” motion. Continue until string is full and then hang up.

EXHIBITING

Whenever it is at all possible the Corn Club member should exhibit his ten best ears at a fair. It is, therefore, well that the members know what kind of ears to select. The following suggestions, if followed, may help bring home the prize:

First, pick out a number of the ripest and most mature ears. This is indicated by a solid ear, free from loose kernels. The rows should be straight, well filled to butts and tips. The kernels must be

bright and clear, without blisters or indications of having shriveled. The germ should not be discolored, but be bright and fresh looking. The shape of the kernels should be such that they fit tightly together on the cob.

Do not try to get the largest ears. Better by far have ten medium sized ones as near alike as possible. The long, slim ears or the very large short ones are poor for exhibits. When put together they destroy the uniformity. The best rule to follow is: pick out the best or as near an ideal ear in size, shape and kernels that you can then select nine others as near like it as possible.

MEASURING THE YIELD

To estimate the yield the Club member can husk and weigh the corn from one-fifth the number of rows in plot. The rows selected should not be side by side, but from different parts of the patch so as to secure an average. Multiply by five and you have a fairly accurate estimate of the total yield.

STANDARD CLUB

All Standard Clubs will receive a beautiful charter from Washington, D. C., signed by the Secretary of Agriculture, Director of Extension, and State Club Leader. If there are five boys and girls in your Corn Club and you have a local club leader, you should write the State Club Leader for further information on the Standard Club.

FREE SCHOLARSHIPS

To further Boys' and Girls' Club Work in Montana, the State Board of Education is offering the following scholarships at any of the four institutions comprising the University of Montana: To the county winner in each club, a one-year scholarship; to the State winner in each contest, a four-year scholarship; and to the winners of the second and third places in the State contest, a three and two-year scholarship, respectively.

A neat scholarship certificate is issued to each winner. These scholarships are good whenever the winner chooses to use them.

STATE AND COUNTY FAIRS

Prizes are offered at the State and County Fairs to Club members who exhibit their corn. The record book and story is to form part of the exhibit. Every Corn Club member should, if possible, enter these contests. Get in touch with your club leader, county

agent or county superintendent of schools, and find out if there is to be a county fair. You should be glad to show people what you can do.

ACHIEVEMENT PINS

During 1918, the State Club Leader, through the help of friends who were interested in the boys and girls of Montana, issued a beautiful Achievement Pin to each Club member who completed the work and sent in the final report. The State Club Leader plans to make similar awards to deserving members this year. Are you going to win a prize?

FINAL REPORT BLANK

No Club member will be entitled to compete for prizes, win a scholarship or receive an Achievement Pin who has not sent to the State Club Leader, Bozeman, Montana, a full report of his or her Club work. This report will call for the following data:

1. Name..... Address..... County.....
2. Size of corn plot..... Variety of corn raised.....
3. Did you ever raise corn before?..... What date did you plant?.....
4. What did your seed cost? \$..... How many times did you cultivate?.....
5. What does your record book show that it cost to raise the corn?
.....
6. At market price, what is your corn worth? \$.....
TOTAL YIELD.....bushels.
7. How much do you value the fodder for feed?.....
8. Add the items 6 and 7 and you will have your TOTAL VALUE
\$.....
9. Subtract the answer of item 5 from the answer of item 8 and
you will have the NET PROFIT \$.....
10. Write a story on "Growing My Corn Crop."

Name of Project : Corn Club

Leader :

Location :

Object : 1. To encourage better methods in corn growing.
2. To increase the acre yield by
(a) Field selection of seed.
(b) Seed testing.
(c) Proper seed storage.
3. To stimulate the interest of farm boys in scientific agriculture.

Procedure : 1. Junior Demonstrator.

A. Plant one-half acre of corn.

B. Use the best adapted seed obtainable.

C. Plant on well prepared and suitable land.

D. Practice cultural methods given in corn club bulletin..

E. Keep a record of work done, cost of seed, value of corn and fodder.

F. Write a story on "How I Grew My Corn Crop".

2. Senior Demonstrator.

A. Plant at least one acre of corn with seed that was tested for germinating qualities.

B. Follow cultural methods given in corn club bulletin.

C. Practice field selection of seed.

D. Store seed corn according to any suggestions given in corn club bulletin.

E. Exhibit ten ears of corn at local, county or State Fair.

F. Keep a record of work done, cost of seed, value of corn and fodder, and write a story on "How I Grew My Corn Crop".