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BOYS' AND GIRLS' INDUSTRIAL CLUBS**CORN
GROWING****Project Circular
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**OREGON AGRICULTURAL COLLEGE
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THE HARVESTING AND SCORING OF CORN

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Corn is a very important soiling crop, available from the middle of August to the first of October. It is used very extensively for silage. It is harvested while the leaves are still green, cut with an ensilage cutter and put in a silo. When right for this work the kernels should be well glazed and dented and in the hard-dough stage. The main crop of corn is ready to cut when the husks turn yellow and the grains reach the advanced hard-dough stage. Corn is cut by hand with corn knives, with a corn harvester, with a corn shocker, or with a sled cutter. For small areas hand cutting is preferred. For ensilage the corn binder has a slight advantage. The corn is hauled to the cutter on low wagons or sleds.

When harvested for grain, it is usually cut 8 or 10 hills square and set up in shocks containing 64 to 100 hills. A shock usually contains the corn from an area of about 28 to 35 feet square. The corn should be set up and tied in shocks containing about 250 to 300 stalks in the warmer and dryer portions of the State, while in the cooler and more moist sections, smaller shocks containing only about 175 to 200 stalks are more desirable. The corn is allowed to cure in these shocks until November, when it is usually dry enough for husking, even in Western Oregon.

Then the shocked corn is husked by hand and the ears are thrown

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residents of Oregon who request them.

in piles, which are later picked up and hauled to storage. The stover is tied up in bundles and set up in shocks for future feeding.

When the corn dries out early and the winter is dry and cold, the shocked corn may be hauled to a husker and shredder where the ears are removed from the stalks and the husks are removed from the ears. The husked corn is delivered to a wagon and the stover passes on to shredding machinery, which shreds it and puts it in much better feeding condition, since the animals eat more of it and the waste makes better bedding and offers less difficulty in the handling of manure.

If there is no use for the corn stalks after the ears have been removed, the cutting is in many cases unnecessary, since the ears can be husked directly from the stalk. In sections where large acreages of corn are harvested, it is often left standing in the field and husked from the stalk. The corn is husked by hand and pitched into a wagon which has a high sideboard on the side opposite the husker, in order to avoid throwing the corn clear over. In Oregon it must be left on the stalk until it dries thoroughly. In October or early November, under conditions such as prevail in Southern and Eastern Oregon, it is usually sufficiently dry so that it may be safely husked and stored in slatted cribs. Usually, under Willamette Valley conditions, it must be left out until well along in November before it has dried sufficiently to keep in a crib. Corn that is protected with a husk dries out even during the rainy season. Most drooping ears and even upright ears protected at the end by the corn silk dry out. Upright ears with open husks or ears that droop to the ground may get wet and mold. Only very early small-cobbed varieties such as Minnesota No. 23 and Oregon Dent should be grown for grain on the average soil of Western Oregon.

At husking time all soft or immature ears should be sorted out and fed promptly. Only well-matured and dried ears should be put in the crib. Hand husking is made easier by the use of a husking peg of some sort.

The crib should be built up off the ground and must be protected around the base with rat guards. The sides must be slatted to allow ventilation. Slatted ventilating flues may be placed in the interior to facilitate drying. The eaves should be wide and low. The width of the crib should not be over 5 to 6 feet.

In Oregon, a good deal of our corn may be advantageously hogged off in the field. This may begin in early September and be continued in various sections until the weather is unfavorable. This period may last from one and one-half to four months in various sections. In sections where rats and other animals do not cause serious loss the corn may be cut, shocked, and fed from the field as desired. It sometimes keeps better in the shock than in the crib in Western Oregon when it is not well matured.

Corn is one of the heaviest-yielding cereals, often producing 50 to 100 bushels of grain to the acre.

The selection of seed corn is very important. The time to get the best seed for next year's crop is while the corn is still standing in the field this fall and just about the time it reaches maturity.

Corn should be selected with reference to the use for which it is desired. If we want corn for grain, we select a type quite different from that used for silage or for soiling purposes. Experiments have indicated that properly field-selected corn makes the very best seed.

Select corn for seed only from hills having a full stand and surrounded by a full stand. Do not select seed from a plant that has an unusual amount of room or that has been especially favored as to plant food, moisture, or other factors. If, with these especially favored conditions, this plant has only been able to produce an ordinary-sized ear, the chances are that the next year when its seeds are placed under conditions in the field where there is a full stand it will not be able to produce the average size of ear. On the other hand, if you have made the selection of ears where there is a full stand, they will simply be placed under normal conditions in the field the next year and the chances are that they will produce the normal-sized ear. Select only from vigorous plants that are normal in every way. In making the selection, avoid all freaks or abnormalities, such as plants having a good many suckers or having ears growing on the tassels or tassels growing on the ear or plants that have white stripes in the leaves or which carry more than one ear to each plant.

The idea in selection is simply to get seed from normal plants that are productive and vigorous and free from abnormalities. A plant which is capable of producing one good ear is the type which we should select, as that is all that can be expected of a corn plant in the normal growing season in this State.

If we desire the corn for grain, the size of the stalk and the character of the foliage are of secondary importance to the ear itself. In that case, we desire a good-sized, fully matured ear of corn that conforms to the characteristics noted in the score card below.

If we desire the corn for silage purposes, we select a stalk that is of medium to large size, that carries a good many broad leaves, and that produces a large and fairly well-matured ear. There should be enough ears of this type reaching maturity so that the farmer may easily keep himself supplied with seed of the variety.

For soiling purposes it is desirable to have corn that reaches the soiling stage early and that produces a goodly amount of foliage. Suckers are less objectionable for soiling purposes than they are for any other type of corn.

Corn for "hogging-off" purposes should produce a good ear that is supported high enough above the ground so that there is no danger of

its coming in contact with the moist earth and molding in the fall and early winter.

Any field-selected corn should be harvested as promptly as possible; the husks should be removed and the corn placed in some good place for drying. In the drying room, no two ears should touch each other.

Corn may be stored by hanging on strings or wires or on some slatted racks or by hanging up by the husks. One of the best arrangements is to use a square stick, 2"x2"x36", studded with nails. The heads of the nails must be clipped off or finishing nails must be used. The ears of the corn are stuck on the nails which are far enough apart so that the ears cannot touch each other. Any corn that is desired for exhibit purposes should be taken into the house and dried artificially, thus avoiding the danger of molding.

In the selection of corn for seed or for exhibit purposes, the following score card is used. It is understood that the score card is simply a guide in the selection of corn for seed purposes.

SCORE CARD FOR JUDGING EAR CORN EXHIBITS

	Perfect Score
Adaptability —Maturity, size, solidity, etc.....	25
Seed Condition —Large, bright germ, free from discoloration or blisters	15
Shape of Kernel —Deep, slightly wedge-shaped, straight sides	15
Uniformity —True to type, uniform size, shape, etc.....	15
Weight of Ear —Large proportion of grain.....	10
Length and Circumference —Medium	10
Color of Grain and Cob —Free from mixture.....	5
Butts and Tips —Well filled.....	5
	100

Adaptability is the most important single item in the selection of corn. In other words, is it adapted to the conditions? Adaptability is indicated by its maturity, by its size, solidity, color, and the appearance of grain itself. In making tests for maturity, the ear is grasped in both hands and twisted; if it is solid, and gives a sort of creaking sound when twisted, good maturity is indicated; if the kernels may be pushed into the cob easily by the thumb, it is an indication of poor maturity; and if the color of the ear shows a pale and immature appearance and the kernels, especially the germs of the kernels, present a swollen appearance it is indicative of poor adaptability. Kernels that present a pinched appearance at the surface or that are chaffy, usually indicate poor maturity. If the ears twist easily in the hand, immaturity is shown. Ears may be too small or too large. A good ear for Oregon conditions

will be from eight to ten inches in length. Ears having a large cob cannot mature properly.

Seed Condition of the corn is indicated by a good, bright color of kernel and by a large, bright germ that is free from any discoloration. The germs should have a live look and be smooth and free from wrinkling or from breaking off of the tip cap when it is removed from the cob. Moreover, there should be no mold between the kernels or next to the cob.

Shape of Kernel varies with the variety, but should be of good depth and should not be pointed at the tip. The width at the top of the kernel, should be two or three times greater than the thickness.

Uniformity of the corn determines its trueness to type. All the ears of an exhibit should be uniform in size, in shape, in color, in shape of kernel, and in all characteristics. It will be difficult to get ten ears that are exactly uniform, but care should be taken that they are as nearly alike as possible in length, circumference, shape, color, and other similar characteristics.

Weight of the Ear is an important point. Experiments have indicated that all other things being equal, the heaviest ear is the best producer. Weight must not be gained, however, at the expense of maturity. In Oregon, an ear weighing eight to ten ounces when well matured is of satisfactory weight. Ears having a small cob and deep grains are best.

Length and Circumference. Very long, slender ears should be avoided, since they frequently break off in wind storms in the field. The long, slender type of ear dries out well, but the extremes of this type should be avoided. Short ears having a large diameter, and consequently a large cob, do not dry out well under the conditions prevailing here in Oregon and should be avoided. The medium types are to be preferred. The circumference of the ear at one-third of the distance from the butt to the tip should be between three-fourths and four-fifths of the length of the ear. A good length for Oregon corn is from eight to ten inches.

Color of the grain should be uniform throughout, since uniformity of color indicates freedom from mixing. The cob of yellow corn should be red; of white corn, white; of white-capped corn, either red or white, although the red is preferred.

Butts and Tips should be well filled. The rows of corn on the cob should be carried out uniformly over the butt end of the ear and partly fill the end of the ear. The shank, or place of attachment, should be of medium size—not so small that the ear will blow off the stalk in the wind, or so large that it will be difficult to break off when husking takes place. At the tip of the ear the kernels should be carried out in straight rows and the cob should be well filled. A small amount of bare tip of the cob is not undesirable.

In selecting the corn for the exhibit, get an ideal ear in mind and select all the ears available that approach this type. Later, a closer selection may be made, taking care that all the ears are well matured or are adapted to the conditions; that the seed condition is good; that they have a good kernel; and, especially, that they are uniform in all outward characteristics. In order to secure ten ears that are uniform, it may be necessary to assort several bushels of corn.