PROPER SELECTION OF SEED CORN.

There Are Three Important Factors Which Aid in Increasing Corn Yields—First, the Soil; Second, Proper Tillage; Third, the Proper Selection (Which Should be in the Field) and Storing of Seed Corn.

By C. P. BULL and L. H. ROBBINS.

In case one has no "special seed plot," in which his best and earliest maturing ears were planted, it is then necessary that his seed corn be selected from the field. The most practical method to do this is to go through the field with a sack tied across one's shoulder and select the choicest and best-matured ears. Two rows of corn may easily be examined at once. Dur-

Selecting Corn in the Field.

ing the process of selection, consideration of the strength and character of the stalk, the height of the ear from the ground, and the size of the shank, should be noted. A stalk does not necessarily have to be large to be a big producer. A tall splindling plant lodges very easily. The stalk should be of good size and strong at the base, gradually tapering, and not necessarily tall. Strong, vigorous stalks of medium height, usually produce the best and earliest-matured ears. The ear should be attached to the stalk by a medium-sized shank, which is long enough to allow the tip of the ear to hang down.

All ears in a corn field will not mature at the same time. A variation of fifteen days in maturing of ears in a field is not uncommon. One of the reasons why a good selection of corn can not be made from the shock, or from the field late in the fall, is that one is not able to tell the time the ear matured.

Desirable ears may mature ten or fifteen days later than the average freezing time; and, if those are selected, they will insure a late maturing crop. Again, if corn is left unhusked until late, the husks prevent the ear from drying out properly; and, as a consequence, it is likely to be frozen before it is husked, or at least before it has had time to dry out after the husking.

In the choice of corn for seed, one selects the ears that he believes will give him the largest yield of good corn the following year. It is a good plan to choose an ear of corn that is as near the type wanted as possible; then keep this ear from year to year, or until you get a better one. At any rate have a sample ear that you can look at occasionally to help you in following one type. Keep this type-ear handy when selecting corn in the fall; and in the spring, when the final selection is made, it is well to compare all ears carefully with the type-ear.

A common practice is to select ears that are too large. It is much better to grow three medium-sized mature ears to the hill than it is to grow three larger immature ears per hill. As a general rule, the larger the cob and the deeper the kernel, the longer it will take the ear to mature.

Indications of maturity are looseness of kernels on the cob, a high percentage of moisture, chaffiness (or thin, small, poorly developed kernels), adherence of the tip cap to the cob, and generally a large amount of white starch.

It may be well to emphasize the fact again that many are inclined to select ears that are too large. This is a very natural thing to do, because everyone likes large ears of corn better than small ones; but it is yield per acre rather than large ears that determines profit. And if one allows himself to select ears so large that they will not mature, he is the loser thereby.

It has been learned, by many tests, that ears of a certain form yield more than other ears different from the standard form. Ears of corn likely to give best results, carry the butt diameter well towards the tip; they are free from indentations or other irregularities that would tend to decrease the yield of the ear; they have straight, regular rows of uniform kernels, and have kernels extending well over the tip and butt.

It costs just as much to grow an ear of corn that has kernels covering three-fourths of the cob as it does to grow one with kernels covering the whole cob. The kernel contains most of the feeding value. The cob is of very little value as food, hence the rows of kernels should round well down over the butt and extend well over the tip (not necessarily clear over) thus insuring a good proportion of corn to cob. The rows should run straight from the butt to the tip; because in crooked rows, there are more irregular kernels, and kernels of irregular size make it impossible to plant a uniform number in each hill.

To get the most feeding value out of an ear of corn there should be no space between the kernels at the cob. It is the tip of the kernel—the end that contains the germ—that is richest in food nutrient. Pointed, chaffy tips indicate low feeding value and poor germinating power. Every precaution should be exercised to select seed corn that will grow and produce strong, vigorous plants. Space between the kernels at the cob, and lack of furrow, usually indicate a low proportion of corn to the cob, immaturity and poor vitality. The tip of the kernel should be wide, allowing room for a long, broad and deep germ.

Nothing will aid more in making a high yield of shelled corn than a deep well-formed kernel. But do not select a too deep kernel; because the deeper the kernel, the greater is the length of time required to mature it; and, above all other things, maturity is the first consideration. To secure uniform planting, the kernels of selected seed corn must be all of nearly the same size, not only on one ear, but throughout the whole selection.

A few ears of yellow corn, in a field planted to white corn, means there is a mixture and that seed from that field will not be pure. Pure-bred corn, like pure-bred cattle, always sells better; not necessarily on account of superiority in the individual, but because it is well known that a pure-bred plant or animal will be likely to transmit its character to its offspring, while scrubs or mixed variety may not. Intelligent crossing of either plants or animals often brings good results, but it is seldom that an unskillful cross brings increased production. Field mixtures of corn (crosses) are usually associated with decreased yields and anything but uniformity. A breeder of corn should have his ideal type of corn in mind, and breed towards that ideal; and the longer one selects to one type, the more certain he is that his crop will be like the seed he planted. The shape of the kernel, and color of the grain, should adhere closely to the type of corn described. If mixtures of shares or colors appear, one may be sure that his corn needs more rigid selection. Variation in color of cob indicate a mixture of varieties. White corn should have a white cob; yellow, a red cob; and white-capped yellow, a red cob.

Ears with large cobs are to be avoided, on account of being hard to dry. A great variation exists in the amount of corn to cob different ears will shell. The variation usually comes between seventy and ninety per cent corn and ten to thirty per cent cob. From this it is seen that if one feeds one lot of hogs a bushel of corn that is but seventy per cent shelled corn, and another lot a bushel which is ninety per cent shelled corn, one lot will get forty-nine pounds of shelled corn and the other lot sixty-three pounds. Indications of per cent of corn to cob are size of cob, depth of kernel, furrow space, and space between the kernels at the cob.

GIRLS MAKE POOR SHOW.

Low Scores in a Recent Home Economics Contest.

The Massachusetts Agricultural College has been holding a home economics contest in its "extension service," but it is hard to tell whether the results should be considered alarming or practically lacking in significance. The girls completed in cooking, sewing, and household duties and the scores were kept in this way: Quality of work as shown by exhibits counted 30; quality as shown by rank sheets, 25; amount of work as shown by time sheets, 30; story of experience, 15 points.

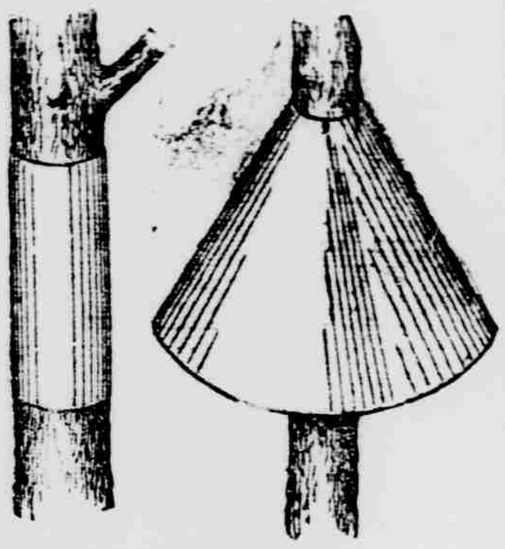
Only one girl revealed the talent of an approximately "perfect" housekeeper. She had a score of 97.7. Three won second prizes, fifteen third prizes, and about the same number received honorable mention. The average attained was very low. The conclusion reached might be that the girls of today as a rule do not take kindly or efficiently to domestic duties and "home economics," but perhaps the method of determining results is too academic. Certain kinds of ability cannot be accurately measured by card-index systems or score cards. After all, cooking, sewing, and housework are not in the realm of science; properly they are arts.

The ultimate test of a good cook is not to be found in any "rank sheet" or "story of experience," but in her comparative skill in the preparation of bread, pie, doughnuts and other wholesome food. The chances are that one of these girls whose mark was below 50 would prove a realy better cook and housekeeper than the girl with the high scholastic score.

E. Randall Leonard, of Bath, Me., is the owner of an old razor taken from the pack of a French soldier by an English soldier named Prescott on the field of the battle of Waterloo. It was presented to Thomas Leonard by Mr. Prescott in 1840, and was used by him until his death. The razor is much like a modern one, only heavier.

PROTECT THE BIRDS.

In order to increase the number of birds in any area, they must be protected, not only against every form of persecution by human kind, but we must defend them from various natural foes. Guards should be placed



Tree Guards.

about the trees or poles which contain the birds' nests. These guards should be placed six feet or more above the ground, and they should be made of sheet metal. This will prevent cats and all such marauders from climbing to the nests.

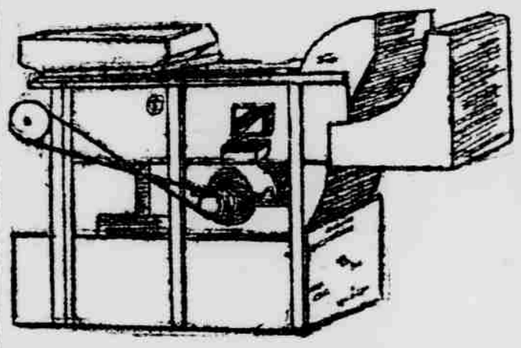
FOREST FIRES.

An especially good showing was made by the forest officers last year in extinguishing fires outside the national forests before they reached the forest boundaries. Such fires constitute more than one-sixth of all fought by the forest rangers and guards. About nine tenths were extinguished before they touched the forests. Of the fires within the forest boundaries, more than 18 per cent were on lands in private ownership. Nearly one-fourth of the extra expenditures due to fighting fires—that is, expenditures outside the time of the regular forest force—was incurred in fighting these fires.

Lightning caused more fires than any other agency, followed by railroads, campers, and incendiaries, in the order given.

RECLEANING ALFALFA SEED.

Alfalfa seed as it comes from the machine is not usually in marketable condition. It contains small stones, clods, pieces of stems and pods, and often a considerable quantity of weed seeds as well as more or less shriveled alfalfa seed. These impurities must be removed before the seed can be sold to advantage. A good fanning mill or other cleaning device will re-



A Type of Fanning Mill Adapted to the Recleaning of Alfalfa Seed.

move the lighter seeds as well as most of the portions of pods and stems, while a special set of seives will remove the weed seeds and small stones and clods which differ in size from the alfalfa seed.

SUCCESSFUL RAT TRAP

A trap which has been known to catch the rodents by the dozens is called the barrel trap. Procure a water-tight barrel, put a rock in the bottom that will reach up about a foot high, and pour in sufficient water to nearly cover the rock, leaving just the upper point sticking out, and it should be about large enough to hold a single rat.

In place of the upper head, stretch a piece of very thick wrapping-paper over the top of the barrel and fasten it securely, by means of the top hoop or a cord.

Dampen the paper slightly with a moist sponge, and it will become tight when dry. Feed the rats on this paper head, with cheese-parings and other things that they like, for several nights in succession, so as to get the rats accustomed to coming without fear or suspicion.

After you have gained their confidence, cut a cross slit in the middle of the paper and spread the food as before.

The first rat that comes will drop through into the water and get on the rock; the next one drops through and there is a fight for a foothold, and they argue the point with such squeals that all the rats in the neighborhood hasten in to find out what the trouble is.

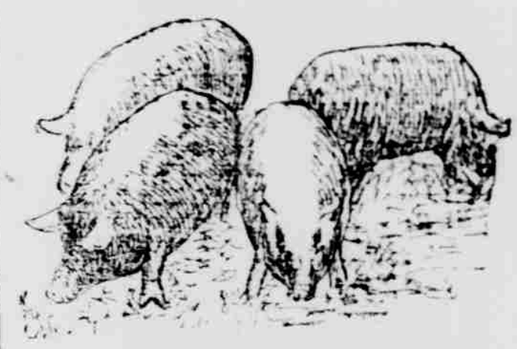
St. Andrews is the oldest Scotch university, it having been founded in 1411, and, according to an ancient document, "many excellent and noble clerks war brocht out of sindry countries to be preceptours in it."

THE WAY TO PREVENT HOG CHOLERA.

(By J. Kastle and R. Graham.)

Hog cholera is the greatest menace to successful hog raising. It is by far the most contagious and fatal of any of the disease of swine. The disease is due to an ultra-microsopic virus which is present in the blood, the excreta and in the carcasses of all infected animals. The infection may be carried from infected to healthy herds by a number of agencies, such as running water, birds, dogs, new stock from infected sources, and also on the shoes of persons who have walked over infected areas. We can only hope to control, and ultimately eradicate hog cholera by honest, conscientious and painstaking efforts on the part of all farmers and hog raisers looking to the effective isolation of all animals having the disease, scrupulous cleanliness in the handling and care of hogs, disinfection of infected premises, the burning of all carcasses of hogs that have died of this disease, proper care in the selection of fresh stock and the careful and intelligent use of hog cholera serum.

Hogs should be fed a balanced ration consisting of such materials as corn and various corn products, bran,



Hogs Isolated While Being Watched for Cholera Symptoms.

wheat middlings, oil meal, tankage and distillers' dried grains and, whenever possible, they should be supplied with forage crops, such as green alfalfa or alfalfa hay. Hogs should be supplied with an abundance of pure, clean water, plenty of shade in hot weather, dry bedding, and airy, light, well ventilated hog houses.

Great care should be exercised in the purchase of new stock in order to secure healthy, vigorous animals, free from disease. In this connection, it is well to bear in mind that hog cholera has an incubation period lasting from 5 to 20 days, during which time the animal may appear normal to all intents and purposes. Separate quarters should be provided for the isolation of all newly purchased animals, where they may be kept from the rest of the herd for a period of three weeks, and kept under observation for any symptom of the disease that may appear.

Following an outbreak of hog cholera in a herd, a thorough cleaning up and disinfection of hog lots and quarters must be resorted to. Fire and fresh air-slaked lime are the most efficient agents for the destruction of hog cholera virus. Scatter fresh air-slaked lime abundantly about the hog lots or disinfect with a 3 per cent solution of cresol compound and whitewash the hog houses and fences.

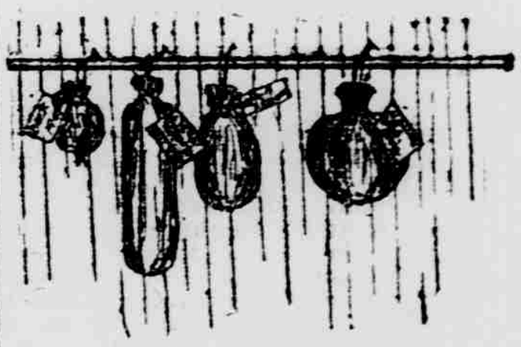
Sick hogs should not be sold; neither should they be driven along public highways or transported in cars from place to place, or placed in public stock yards or pens. In other words, the only way to properly control this disease is to isolate it, and though it may work a temporary hardship on the individual owner to do this, it is certainly, ultimately, to his interest and to the interest of the great body of hog raisers, to do all in his power to establish and maintain a rigid and effective quarantine with respect to this disease.

The only means of protecting the hog against cholera is by inoculation with hog cholera serum, or with hog cholera serum and virus.

The serum alone confers an immunity lasting from six to eight weeks while the double treatment (inoculation of the hog on one side with serum, and on the other side with virus), shows a lasting or permanent immunity to hog cholera.

NEXT YEAR'S CROP.

In order to have the best of flowers and vegetables next year, the seed must be very carefully saved from this year's crop. Have bags containing seeds marked carefully and in detail. If the seed is of Mrs. Brown's pansies, write that on the bag; and any other information regarding the plant, the



Seed Properly Labeled.

seed of which you desire to keep. Then hang the bags up out of reach of mice or other vermin.