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Saving Seed Corn.

By A. D. Wilson, University Farm, St. Paul, Minn.

The Extension Division has used every means at its command to call attention to the importance of the selection of seed corn. It has designated "Seed Corn Week," September 12th-17th. It may be that in some cases corn will not be mature enough to enable one to select seed at this time, but we feel that corn not mature by September 17th is a variety that is not safe for average years in Minnesota. Hence, we emphasize the importance of going through the field before all the corn is ripe—if it is not all ripe by the middle of September—and pick seed from the stalks that have matured early, being sure to save enough seed so that further selection can be made next spring. If seed is selected only from early-maturing stalks, one can be reasonably sure that his variety is early enough for ordinary years; that is, provided he has not deferred selection until after September 17th. After one has ears selected from early-maturing stalks, he can then go through his corn and select the larger ears, feeling quite confident that he is not making his corn later by this selection.

To all those farmers who, for any reason, fail to select sufficient seed corn during Seed Corn Week, we urgently emphasize the great importance of saving seed corn sufficiently early so that there will be ample time for it to dry out before freezing weather. If you do not get your seed corn selected during Seed Corn Week, select it the following week, if possible.

Egg Preservation.

By R. M. West, University Farm, St. Paul, Minn.

The primary principle to be observed in the preservation of eggs is the protection of the interior from contact with the air. The most effective way of doing this is to immerse them in a water solution of sodium silicate, usually known as "water-glass." Sodium silicate can be obtained from any druggist at from 45 to 60 cents per gallon. One gallon should be sufficient for about 50 dozen eggs.

Mix one part of the sodium silicate with from ten to twelve parts of water. Some water-glass is so thick that, with this dilution, the eggs will float. In such a case, add enough more water to make them settle to the bottom of the liquid.

Use only clean water, from which the air has been removed by boiling. Be sure that it is cold before mixing it with the water-glass.

Pack the eggs in a jar or clean wooden keg, and add the preserving solution in sufficient quantity to cover the eggs. No part of the shell should be exposed to the air.

The packed eggs should be kept cool. A cellar is the best place for storing them. Pack only strictly fresh eggs. Stale eggs will not keep for any length of time under any conditions, and they may affect the fresh eggs which are packed with them.

Do not wash eggs before packing them. Washing removes from the shell the mucilaginous coating which nature provides for their temporary preservation.

Eggs preserved in this way retain their original fresh flavor perfectly, they are not discolored, the yolk retains its normal consistency for several months.

Other methods of preservation, though less satisfactory in their results, will keep eggs for from three to four months in such condition that they may be used for cooking purposes. A preserving mixture which has given fair results is made up of 3½ pounds of fresh lime mixed with 4½ pounds of salt, and the whole dissolved in 8 gallons of water.

Eggs may also be preserved fairly well for a few months by packing dry in a mixture of equal parts salt and sawdust.

Care of Manure in Winter.

By A. D. Wilson, University Farm, St. Paul, Minn.

One of the important problems on the farm is to conserve as much of the fertility as possible, and still produce good crops. It is well recognized that one of the best ways of doing this is to feed to live stock a large proportion of the crops grown, and to return the by-product, manure, to the land. This brings up the important question of how best to handle this manure so that it will be best conserved.

It is quite generally considered, now, that the most economical way, both as to the economy of labor and elements of fertility, is to haul the manure direct from the barn to the field. Of course there are some days in the winter when it is difficult to get manure onto the field. However, every day that it is possible, manure should be hauled directly to the field and spread.

Losses From Manure.

There are two ways by which the fertilizing value is lost; the first is by heating, and the second is by leaching. If manure is left in piles about the barn, it soon begins to heat, even in winter, especially if it contains any large proportion of horse manure. When it heats, the manure is decomposed and the element of most value, nitrogen, is lost in the form of gas. In the spring and early summer, if manure is lying about the yards where rain can fall on it, much of the fertility is leached out and carried away. If manure is spread on the field directly from the barn, heating is prevented until the manure is covered up in the soil. Then any elements that are liberated by decomposition are taken up by the soil and saved. When manure is spread out on the field, it dries out; and, as the larger part of the manure is in insoluble form, even if it does rain on the fields, very little fertility is washed out, because it is not soluble. It does not become soluble until covered up in the ground, where it is kept moist and where decomposition can take place. Then the leaching leaves the fertility in the soil, where it is used.

Considering these facts, and the fact that manure is handled fewer times when hauled direct from the barn to the field, makes it quite evident that, from the standpoint of economy, this is the practical way of handling manure.

Seed and "Contest" Corn.

The ears of corn which the Extension Division has described as the best to be selected for seed corn should by rights be regarded as also the best for exhibition in the boys' "Corn Contests." As has been repeatedly shown, the largest ears, while more attractive to the eye and affording a greater amount of shelled corn, are very likely to be insufficiently matured to afford the best quality of feed; or, if matured, the time required for their perfect maturity has been too long to justify their use for seed in a region where Jack Frost is so likely to pay an unwelcome visit in the "ripening days" of September.

The judges of Corn Contests, as well as the exhibitors, should bear Minnesota conditions in mind. Those ears are "the best ears" the planting of the kernels from which will produce the greatest proportion of ear-bearing stalks, and therefore the largest number of bushels to the acre. It is hardly the part of wisdom, then, to encourage the boys to direct their efforts too exclusively to the raising of big ears, which make a fine show at the Exhibition, but which are to be avoided in the selection of seed. The best show ears should be the best seed ears.

Keep Stock Comfortable.

By A. D. Wilson, University Farm, St. Paul, Minn.

One of our good dairy farmers, living in Carlton County, who is also a Farmers' Institute lecturer, Mr. F. B. McLeran, in talking on "Care of Dairy Cattle," always emphasizes the importance of making the stock comfortable. He says that if they are made uncomfortable by being fed at irregular times, so that they spend a great deal of their time expecting to be fed, the discomfort shows in lower production. If they are made uncomfortable by having a poor bed, by

being roughly handled, by having a dog set on them, or by being left out in the cold or allowed to go thirsty, these conditions result in decreased production. He emphasizes the fact that one of the great advantages of weighing the milk every day, from each cow, is that it gives one a quick check on any condition that brings about discomfort to his animals. If any cow shows a dropping off of her milk flow, as a rule a little observation will show that she has been made uncomfortable in some of the ways mentioned above; and, knowing these facts, the farmer is able to check these unfavorable conditions quickly.

One of the points that Mr. McLeran especially emphasizes is the importance of not allowing the cows to stay out in the winter when they are uncomfortable. He states that a good way to determine this is to take off your coat and go out in the yard with the cows, stand around and act just as the cows do. When you begin to feel uncomfortable and feel like going into the house, put the cows in the barn.

Fall Plowing of Corn Lands.

Most people recognize the value of fall plowing for grain crops; but very few, however, follow the practice with their corn crops. Many feel that they must leave the corn land until spring in order to be able to get on to the land the manure that is made during the winter. It has been found, at the Minnesota Experiment Station, that from 12 to 15 loads per acre of barnyard manure, taken directly from the barn, can be applied to fall-plowed land and disced in in the spring, so that it will not interfere in any way with planting or cultivating the crop. This makes it practical to plow corn land in the fall and still get the manure made during the winter on to the corn crop.

There is a great advantage in this practice, especially in dry years. Plowing the coarse manure under, so that the straw lies between the furrow slice and the subsoil, makes it very difficult for moisture to move up from the subsoil to the furrow slice. On this account, land that has been manured and plowed in the spring, the manure plowed under, is very likely to dry out. By manuring on top of the land, and disking manure into the surface, the manure helps to form a surface mulch and to check evaporation of moisture, and when it does rain, the elements of fertility in manure are washed down into the furrow slice, where the plant roots can get them, instead of being washed down into the subsoil out of reach. The experts at the Minnesota University Farm heartily recommend fall plowing of the land for corn.

The Fair and the School.

As an educational agency, the Minnesota State Fair had this year a higher value than ever before in its history. There was an unprecedented number of exhibits which served as object-lessons illustrative of the latest developments in the various lines of agricultural industry. The space given to exhibits representing the work and endeavors of the Minnesota School of Agriculture, the Experiment Station, and the Extension Division, indicates a rapidly growing appreciation of these, not only by the Fair management, but by the people at large. These exhibits occupied about one-fourth of the old "Main Building," large areas in the Horticultural and Dairy buildings, and considerable space elsewhere. The banishment of fancy goods and of the purely mercantile exhibits from the Main Building, and its devotion to such as were of a purely agricultural nature, marks a decided advance toward the ideal in such a Fair; which is, or should be, the exaltation of the things of the farm, rather than those of the city.

The Fair Grounds adjoin those of the School of Agriculture, and the two constitute a "team" which is pulling Minnesota rapidly forward on the lines of the healthiest development—lines which must ever center in the betterment of farm life and industries. The one "points the way" in agricultural endeavor; the other annually sets forth the results which follow the intelligent use of scientific methods, and introduces new appliances for making them most effective. Each institution is one of which every citizen of Minnesota may well be proud.

Winter Care of Brood Sows.

Success in pork production is largely affected by the attention given to the health and comfort of the brood sow. She should always, especially in winter, be housed in a warm, comfortable place. Preferably this will be a cot well supplied with straw, and having a door which swings both ways, always closing when the sow passes in or out. This cot may well be located at some distance from the feeding place, so that she will get the necessary exercise in running to and fro.

Her food should consist largely of bulky foods, such as milk, roots and clover hay, which will keep her in good condition without fattening. As farrowing time approaches the bulk should be cut down, less water should be given, and more protein and oily feeds should be fed, so as to keep the sow in a laxative condition. She should be disturbed as little as possible. If she is allowed to get nervous or excited, the effect may be seen upon the litter, in an excitable temperament which lessens the rapidity of their growth. Extension Bulletin No. 7 of the Minnesota Farmers' Library, from which this paragraph is condensed, will be found to contain many other suggestions of value to the pork-raiser.

Fire vs. Frost.

Many times it happens that a backward crop, either of fruit or vegetables, is injured by a late spring or early autumn frost—moderate, it is true, but still severe enough to do the mischief. Down in Florida, the costly experience of the orange-growers, some years ago, in the loss of their groves by an untimely visitation by the Frost King, led to the equipment, not only of the new groves, but of plots devoted to other fruits, with inexpensive canopies of cheesecloth or muslin, and with means of warming the atmosphere, through bonfires or with numerous coal-oil lamps. That similar methods of protection are available further north is shown by an account given in the Rural New Yorker of the saving of a promising field of tomatoes near Montreal, Canada, by the maintenance of bonfires during the night. These sent a canopy of warm smoke over the field—the location of the fires being changed when the wind shifted—with the result that not only was a good crop of tomatoes saved to the owner, but he was able to supply his neighbors—who "hadn't thought" to start bonfires—with new plants to replace those which they lost by the frost.

Stimulating Prizes.

The steady growth of interest, among business men, in the Boys' and Girls' Industrial Contests—through which the Extension Division seeks, not only to direct the ambition of the young people toward life on the farm, but to raise the standards of crop-production and home-making as well—is shown by the action recently taken by such men in Steele County. In response to the endeavors of the Extension Division, each one of twelve merchants has agreed to pay all the expenses of the attendance of one of the prize winners in the Steele County contest at the "Boys' and Girls' Short Course" at St. Anthony Park, St. Paul, in April next. The expenses include, not only railroad fare to and from St. Paul, but board and incidentals. Thus twelve aspiring contestants will be given a fine cultural opportunity, to gain which no doubt hundreds will put forth their very best endeavors in the various competitions which are to determine the award of the prizes. The example of the Steele County business men is one well worthy of imitation in other localities.

The thoroughly practical nature of the methods of instruction pursued in the Minnesota School of Agriculture is nowhere better illustrated than in the department of Veterinary Science. A large collection of anatomical specimens and of models is used in illustrating the various phases of animal life and its diseases. A moment's inspection of one of these will often convey more information than long pages of print. Veterinary clinics afford practical experience in the actual treatment of diseases and mechanical injuries in horses, cattle,

sheep, swine and dogs. The student who avails himself of all the opportunities of the veterinary course here offered, under Prof. M. H. Reynolds and his two assistants, Messrs. Lipp and Spencer, will be well equipped to meet all the ordinary emergencies of animal life on the farm.

When Boys are Interested.

Just as the organization of a Sunday-school is almost sure to result in the formation of a church in a heretofore churchless neighborhood, so is the organization of a boys' "Corn Club," or "Corn Contest" almost sure to result in the growth of co-operative organizations among the farmers and in larger attendance at the Farmers' Institutes. As says a circular from the Louisiana Department of Agricultural Extension:

"When the boy has been interested in the work, the father is sure to follow in his footsteps. Many times have I seen the boy prove father to the man in this work. While farmers' institutes have failed to interest the farmer, his boys' half-acre of corn has not; and often he has felt a keener interest in the contest than the boy has. He has applauded the movement that could lead his boy voluntarily to gather the manure about the barn and haul it to the corn patch; he has appreciated the interest on the boy's part that has extended to other crops of the farm; he has willingly taken his boy perhaps twenty or more miles to the corn contest, and he has felt a just pride in the efforts of his boy. If his son has been the winner of a premium, his pride and satisfaction have overflowed; his neighbors have felt the influence, and the movement has grown in that district. Thus the good influence has spread from son to father; the best and most direct interests of the farmer have been concerned, and he has responded. Such a farmer can never revert to the type that 'knows it all,' and that lives and labors apart from the world.

Care of Farm Implements.

One of the most serious leaks on the farm is in the poor care taken of farm implements when not in use. As soon as the season is over, binders and other machinery, no longer needed this year, should be carefully cleared; the grease and dirt should be removed from the bearings, and these should be carefully oiled and all bright parts greased, to prevent rusting. Preparations should be made for replacing any broken or defective parts.

If time does not permit of all this, make a memorandum to be governed by on some stormy day, and then see that everything is put in readiness for the next harvesting or haying season. Get the repairs and place them on the machines at once. Take care of the plows. Get them under cover. Clean and grease the bright parts, so that, when wanted next spring, they will scour and save the time so many farmers lose in putting their implements into working order.

The Boy in the Corn Contest.

An Arkansas circular for 1909 thus speaks of the effect of the Corn Contest upon the boy participating:

"The boy who has engaged in a contest of this kind, whether successfully or not, has gained practical training of far-reaching value and lasting significance. He has been brought in touch with the great natural laws on one hand and with modern science on the other. He has by his own efforts demonstrated the relation between the two. He has been led to work and think, to apply knowledge to the most practical affairs of life. By his own efforts he has made a crop and dignified himself by accomplishment. He has established in his own mind for all time the relation of theory and practice. He goes back to school with greater respect for his books. He has been developing manhood and sterling citizenship and learning the real nobility of toil."

At the Minnesota Experiment Station it is believed that greater care must be had in preparing silage for sheep than for cattle. Sheep require a sweet and dry silage. Thickly planted corn cut before it is well matured, does not make ideal silage for sheep. Corn planted about like field corn, harvested and put into the silo when it begins to dent, has proven very healthful to sheep, and they have done well upon it. If clover hay is fed in conjunction with this silage, cheap and satisfactory gains may be made in sheep fattening.