

# In the Field of Agriculture

## HILL SELECTION OF SEED CORN

Hill selection of seed is urged by every institution interested in the improvement of corn, says A. D. Wilkinson, director of agricultural extension, Minnesota experiment station. By selecting corn from the standing stalks in the field one can consider other things besides the ear itself. The height of the ear on the stalk and the strength of the stalk may both be considered, and whether or not the ear grew on a stalk that had the whole hill to itself or had to compete with two or three other stalks can be determined while one waits until the corn has been cut these factors cannot be considered.

Early selection of seed corn from the hill has many important advantages over selection later in the season. In the first place, it enables one to select ears that are known to have matured at the proper time, while if the selection is deferred and weather conditions continue favorable, some of the later maturing ears may be selected, because they are likely to be larger and heavier.

While the large, heavy ears are desirable, one cannot profitably select them at the expense of maturity, because corn that will not mature is bound to be an unprofitable crop. Early selection from the hill avoids the danger of the corn being injured by frost while it is still damp in the husk. It also allows for ample time for the corn to become thoroughly dried out before freezing weather, which is very important in maintaining a strong germination.

## POTATO HILL SELECTION

In extension bulletin No. 50, "The Seed Potato Plot," Minnesota experiment station, hill selection is strongly advocated for the improvement of the yield and quality of potato varieties. To carry out this selection, the exceptionally vigorous and healthy plants, which are known to have started from one tuber or seed piece, should be noted in the field

and designated with a stake or some other simple marker so that they can be readily found at harvest time. When the selected hills are dug, a second selection should be made and only productive hills, with well-shaped tubers should be preserved. Discard all hills possessing abnormally tapering, elongated, and deep-eyed tubers. Keep the product of each hill in a separate receptacle and plant the same as a unit the following season. In this way large quantities of potatoes can be produced within a few years from one mother hill. This method of selection has been practiced on a large scale at university farm. Last fall several hundred hills of Early Ohio and Sir Walter Raleigh potatoes were harvested separately and this spring the product of each hill was planted as a unit. One step further that can be advocated for the commercial grower was taken, that is, a careful description was made of the shape and size of each tuber planted. The results to date have surpassed the most sanguine anticipations. Many hills have produced only runts of plants and others have produced exceptionally healthy and vigorous plants. Still others have given both strong and weak plants, indicating that further selection is necessary. High yield and desirable tubers probably will not be produced by all the rank-growing vines, but it is certain that only unproductiveness can be correlated with the weak and sickly plants. All growers who are anxious to increase the yield and quality of their potato stock should give their immediate attention to the selection of the desirable hills now growing in their fields. — Richard Wellington, Assistant Horticulturist, University Farm, St. Paul.

## TO PROTECT LIVE STOCK FROM FLIES

The problem of protecting live stock, especially milk cows and work animals, from flies is almost continuously before the farmer, according

to the United States department of agriculture. Most of the repelling substances which might be named are of only temporary value, as with practically all of them the flies begin biting again within a very few hours after application. This necessitates considerable expense for the ingredients and the application of the material, and with many substances some ill effects are produced on the host by their continued application. A mixture of fish oil (1 gallon), oil of tar (2 ounces), oil of pennyroyal (2 ounces), and kerosene (½ pint) applied lightly to the parts most attacked by the flies will tend to keep them off.

Work animals may be largely protected by placing blankets over their backs and trousers on their legs. Dairy stock and horses when in barns may be protected by having the barns screened and brushing the flies off with burlap as the animals are driven in. The use of hodge fly traps in a few of the windows will also aid in the destruction of the flies which endeavor to escape from or enter the barn. This fly trap is of simple construction. When large numbers of flies are within the barn, the catching of the flies may be facilitated by darkening the windows which are not fitted with traps. The trap is described fully with illustrations in Farmers' Bulletin No. 540, United States Department of Agriculture, Washington, entitled "The Stable Fly," which will be furnished free to those desiring more complete information regarding the pest.

## SEED BED FOR SWEET CLOVER

In general, the same preparation of the seed bed should be given for sweet clover as for alfalfa, advises the Nebraska College of Agriculture. Early plowing followed by occasional disking and harrowing is desirable on heavy to medium heavy soils. In case the plowing is done shortly before seeding, the soil should be re-packed either with a roller or by disking several times with the disk set rather straight. A firm, moist, seed bed is very important. Under these conditions a stand is quite certain, but there is much danger of losing the seed when sown on a poorly prepared seed bed. In case of spring seeding, it may also be sown on cornstalk land by simply disking in preparation. Upon loose, sandy soil, which is inclined to blow, it may be desirable first to seed the land to a small grain crop and then, instead of plowing, merely disk the stubble before sowing. The stubble will tend to hold the soil. Upon prairie sandy sod, where the stand of grass is light, sweet clover may be sown directly upon the sod without first breaking it. The seed may be covered by a shallow disking.

## SAVE THE STACKS

With straw piles from a 40-acre tract worth, according to conservative estimates, \$100 for the fertilizing constituents alone, the agronomy department of the Nebraska College of Agriculture again calls particular attention at this time to the waste of destroying them. According to data gathered from Nebraska farmers, wheat straw may be put to many uses. It may be scattered effectively on the wheat land as a top-dressing to check blowing in the sandy regions. Others find it profitable to scatter the straw on land that is



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