

SELECTING AND GROWING YOUR SEED CORN. THAT THE YIELD CAN BE GREATLY INCREASED BY THE PROPER SELECTION OF SEED HAS BEEN FULLY DEMONSTRATED.

By C. D. Smith, Illinois.

Locate the plot so that the soil will be as nearly alike as possible in every part, and give the whole plot the same preparation and the same cultivation throughout the season, letting every row have an equal chance.

Plant each row from a single ear, save part of the ear, number it so that you can know which row was planted from it. Observe whether one row shows more weakness of stalk than others, as evinced by the stalks falling or blowing down.

Keep a record of these observations; of the number of stalks in each row, the number of stalks that fall down in each row, the weight of the corn husked from each row, and any records that might tend to show the individuality of the seed ear from which the row was planted.

Husk the corn from each row separately; pick out the best ears and mark them so you can tell which row they came from. Then from the two rows that show the strongest powers of transmission by growing the largest yields, select your seed ears for the next year's trial. Discard the corn of the weak-growing and low-yielding rows altogether.

I have one acre in my plot that I have tried this plan with for two years. There are 43 rows, 84 hills long. The first year I selected for seed 43 ears, the best I could find.

The second year I selected for seed 43 ears from rows that yielded the best the first year.

If two or more seed ears were taken from one row, two of them were planted side by side.

When farmers pick their seed corn from the crib or wagon box each ear is chosen because of its good looks and nothing else.

That is the poorest way to select seed corn, simply because the farmer knows absolutely nothing about the ears, except that they may be good looking.

He knows nothing about their power to produce a good yield, and no more about their ability to transmit their good looks to their offspring.

Both are necessary features in good seed corn. Because an ear is a good looking is no guarantee that it can grow good-looking ears.

The farmer who selects his seed from the field while the corn is still on the stalk is following a much better plan, but not the best plan.

We must know whether the ears we plant have been grown from a high-yielding strain of corn or from a low

one. We must know whether their powers of transmission are strong or weak.

In my breeding plot row 21 and row 22, growing side by side, had equal chances, and yet one produced 61 bushels and the other 123 bushels to the acre. No man would suspect that difference between the seed ears to look at them.

Row 37 produced at the rate of 54 bushels per acre, while rows 38 and 39 on either side of it produced at the rate of 95 bushels per acre. You would not have any use for a seed ear like number 37 simply because you can see that it is weak in the power of transmission; it cannot grow corn like the other two.

In the first plot, ear 1 weighed 20.5 ounces; ear 2, 15 ounces, and ear 34, 29 ounces. Ears 1 and 34 were very large, fine ears, both show ears.

Row 2 would not meet any of the requirements of the score card except in length; it was not a show ear, yet it was the best yielder of the three, producing at the rate of 132 bushels per acre, while the other two yielded respectively 86 and 118.5 bushels per acre.

Ear 34, while a good looking ear and one that any person would choose for seed if he were picking the ears from the crib, proved to be a very weak grower throughout the whole season.

At husking time the stalks in this row were from 18 to 24 inches shorter than the stalks in the adjoining rows.

Ear 1 while a fraction heavier than 34 was a strong grower and a good yielder, so we cannot say that all big ears are poor seed ears.

Then we must not conclude from the big yield of ear 2 that we should pick only 15-ounce ears for seed, for ear 15 of the second plot, weighing a little less than 15 ounces, yielded only 89 bushels per acre. Ear 25 weighed only a fraction over 13 ounces, but made a yield of 116.7 bushels to the acre.

This row came the nearest to an ideal-growing row of any that I ever saw. Almost every stalk in it grew as straight as a plumb line; the leaves were broad and a very dark green, it was a remarkably strong grower.

So we are forced to the conclusion that the size of the seed ear, or the looks of the ear, or the shape of the ear, has but very little to do with the yield of the corn. But this fact must not deter us from picking good-looking ears, for some of them are splendid yielders.

We must get down to the bottom of the trouble, and that is the breeding of seed corn.

The seed for one plot was taken from a field that yielded possibly 60 bushels per acre. The acre plot yielded 82 bushels of weighed corn.

The second year, the plot was planted with ears from the best rows of the year before which averaged 95 bushels per acre, and the acre plot that year yielded 102 bushels.

Now I have seed ears with a still higher average yield with which to plant the plot the coming season. There were twelve rows in the second year that averaged above 110 bushels, and 23 rows that were above 100 bushels. In the year previous there were but two rows that averaged above 100 bushels.

Is this not sufficient proof that the yield can be increased by the proper selection of seed?

If we could eliminate the ears that grow the rubbins and plant in their place good ears, we would thereby increase the yield. That is true in a much greater measure than we have suspected. You have only to grow a seed plot and plant each row from a single ear to find out how true that is.

THE PEOPLES' FLOWER.

Everybody knows the gladiolus—in a way. It has been called "The Peoples' Flower" because more people can get more satisfaction out of it, without special skill or facilities, than from any other flower. As a cut flower, nothing but the expensive orchid lasts so long and no other flower has such variety and beauty of coloring.



Lasting and Beautiful.

Nevertheless, the modern gladiolus is almost unknown to a large majority of our people, because of the great improvement which has been made in a comparatively short time.—G. S. Woodruff.

PLANNING YOUR VEGETABLE GARDEN. PROCURE WELL-KNOWN AND THOROUGHLY TESTED VARIETIES; THOSE BEST SUITED TO YOUR LOCALITY.

By Bessie L. Putnam.

The selection of seeds should not be delayed until congested mails render the delivery too slow to enable one to plant early. For whether for home use or marketing, the earlier a vegetable can be secured, the greater its value to us.

If for home use, the season is thus prolonged; if for the market, the cash value represented is greatly increased.

Before ordering, look over your own supply carefully, and note what seeds are lacking; what are so old that vitality may be impaired—and replace all doubtful ones with new seed. Select a reliable firm. Cheap seeds are too often a bitter disappointment.

If you have saved beans or peas and find them infested with weevil, treat with carbon bisulphide or destroy. Never plant them to scatter the insects broadcast.

Onion seed is one of the most difficult seeds to secure in a fresh state. When you find a firm that furnishes a first class article stick to it.

If growing onions for market, the yellow and white Globe are popular sorts, being decidedly attractive in appearance. The Large Red Wethersfield is the most profitable red onion,

and is particularly adapted to heavy soils.

For early use, the "sets" are preferred; and for very early the winter or "top onions" are always welcome.

Not every one recognizes the fact that there are two distinct types of lettuce, the cabbage or heading varieties, and the curled or loose-leaved sorts. Big Boston is a favorite variety of the former for forcing, the leaves blanching readily. For the entire season Improved Hanson is one of the best, being slow to run to seed, hence adapted to summer use.

Early Curled Simpson is one of the favorites among loose-leaved varieties. Well adapted to out-door cultivation. Lettuce may go into the ground the earliest of all spring vegetables; in fact, volunteers from fall scattering seed are usually the first garden delicacy.

Beets may be sown in the open ground early, but are more fastidious, liking a rich, mellow soil. The character of the soil materially affects their quality; and when we come upon a tough lot, lacking sweetness, we may often trace the lack of good quality to soil rather than variety of seed used.

Crosby's Egyptian is a standard early variety that remains tender for a long time. Sow the seed without stint, and thin the plants out to six inches apart when the tops are large enough for greens, the plants removed being thus utilized.

While the main crop of turnips may go into the corn field after the last cultivation, a few in the garden for early use will be appreciated. The Early White Snowball being one of the best. It is quick to mature, and so tender that it will cook in twenty minutes.

Among parsnips, the Long Hollow Crown is still a standard variety, the roots being improved by leaving in the ground over winter.

Among beans, individual taste will dictate largely. Lightning is the earliest of early, and an excellent green podded snap bean. The Rosemeat Wax is a giant podded sort, with rich golden pods and bears in profusion throughout the entire season. The Horticultural is a pole bean that is an especial favorite having a rich flavor peculiarly its own. It is also superior for autumn use as a shell bean. While not so

prolific as some varieties, its excellent flavor and the ease with which it is grown, a little corn raised in the rows serving as poles, renders it one of the best varieties for family use.

The Gradus is the best early pea, the pods and their contents being almost as large as those of the later varieties. Bliss's Everbearing is a profitable second early, and for the main crop the Champion or England still heads the list.

For early late, all season the Earliana tomato is hard to beat. For two successive seasons we have planted it when small beside large well grown greenhouse plants or other varieties; yet in both instances, it was from the Earliana, though started so much later, that the earliest fruits were picked. And the plants bore heavily through the entire season, the fruit being large, smooth and firm.

Iceberg is all that the name implies in the line of radishes, being very crisp and tender—one of the best for early use. Shepherd is a standard variety for summer, attaining a large size without becoming pithy.

For early cabbage the Jersey Wakefield is one of the best; Late Flat Dutch and Danish Ballhead are both excellent for winter use, being firm and solid.

Those liking a small chunky pickle will find the Early Russian, the earliest of all cucumbers, a fine variety for pickling. The White Spine and Improved Long Green are profitable for market, either as "slicers" or for pickling.

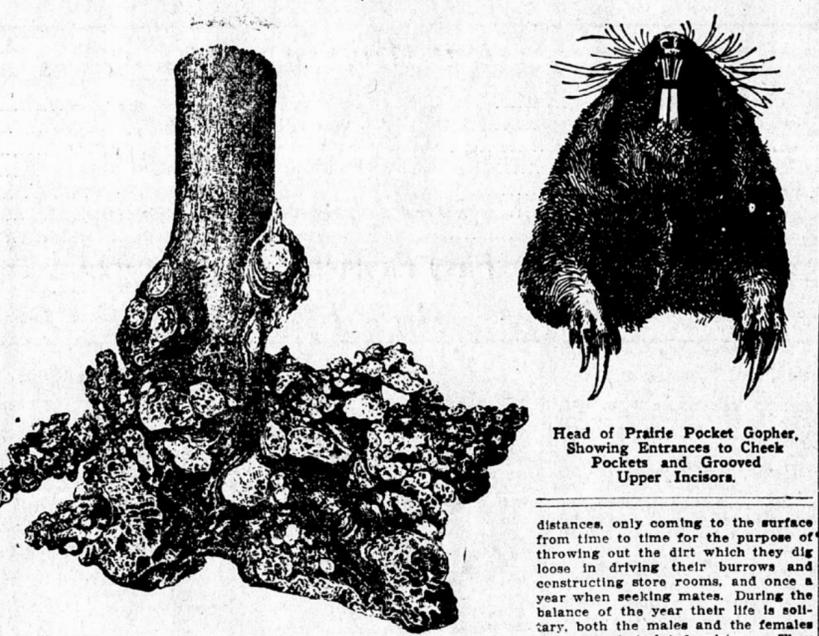
The Hubbard squash is an almost universal favorite, especially for winter use; though some find the Faxon, easily adapted to corn field culture, its equal in quality and much more prolific.

The Winter Luxury is a pumpkin with quality unsurpassed for table use. It is sweet, yet not too sweet, tender and quickly cooked, having a flavor so rich that cream and eggs are almost superfluous in pie-making with it.

Premo corn is early, of excellent flavor, and produced on good sized ears. For general use there is no better than Evergreen. Black Mexican is the sweetest variety known, and before ripe the grains are white and pleasing in appearance.

DAMAGE TO CROPS BY POCKET GOPHERS.

By Lawrence Bruner.



The damage caused by pocket gophers is difficult to estimate in dollars, since it is both actual and apparent. However, all agree that the injury is sufficient to make it quite necessary to wage relentless war against the pest. The various estimates of harm done range on the average, between \$10.00 and \$15.00 per each 160-acre farm, and in some instances as high as \$1.00 per acre, and in still other cases several dollars per acre where the injury is in orchards, gardens, and potato and alfalfa fields. It is therefore quite within bounds to place the annual damage caused by pocket gophers at several million dollars. This being true it is certainly worth our while to give the matter more than casual attention. The injury caused is due both to the actual devouring of some crops and to the choking out of others, together with injury to machinery. A very little good might result from the gophers mixing and loosening the soil, but this is more than offset by the harm they do by draining irrigating ditches, etc.

The different species of pocket gophers live almost entirely beneath the surface of the ground, where they frequently run their galleries to great distances, only coming to the surface from time to time for the purpose of throwing out the dirt which they dig loose in driving their burrows and constructing store rooms, and once a year when seeking mates. During the balance of the year their life is solitary, both the males and the females leading such isolated existence. They are not rapid multipliers, since only one brood is reared each year. The average number of young is two or three, and these are generally born in May or June.

The probable cause for the increase in numbers of these mammals during recent years must be laid to the killing off of their natural enemies, rather than to any other special agency. The natural enemies are owls, hawks, weasels and bull-snakes. The planting and cultivation of certain especially enticing food plants, as alfalfa, potatoes, etc., may also have had some influence in attracting the animals to particular locations.

"SQUATTERS' RIGHTS" RECOGNIZED BY GOVERNMENT.

An Order Just Issued by Secretary Wilson Provides For a More Liberal Treatment of Settlers Upon Lands Within National Forests.

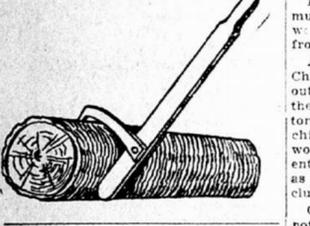
Under the homestead law it is impossible for any one to secure legal title to unsurveyed public land, but occupancy pending survey is recognized as giving a prior claim to the land after survey, under what is known as "squatters' rights." A squatter who, in good faith, takes possession of a piece of National Forest land before the National Forests were created is not dispossessed of his claim by the Forest Service, and if he lives upon it and cultivates it until the land has been surveyed, he is able to get his homestead just as though he had settled on any part of the unsurveyed public domain. But since the passage of the Act of June 11, 1906, which permits the Secretary of Agriculture to list for settlement land which he finds chiefly valuable for agriculture, it has been possible for squatters to apply for the listing of their lands under this Act, and thus to obtain title prior to the Government survey. The object of the new order of the Secretary is to provide for the listing of the full amount of land which the occupant would receive if he exercised his action of squatters the Government survey, irrespective of whether or not the entire area is cultivable, provided the claim is bonafide and the land is not more valuable for its timber than for agriculture.

Secretary Wilson's order is as follows:

"A person who has settled upon and continuously occupied unsurveyed lands within a National Forest before its creation and is at the present time occupying such lands in good faith and in all respects complying with the homestead law, has the right to include within the lines of his homestead 160 acres after the land has been surveyed. Therefore, if the land is occupied for agricultural purposes and is not more valuable for its timber than for such purposes, and there are no circumstances which would in the opinion of the District Forester tend to discredit the bonafide of the claimant, he should be allowed to make application for the patenting of such lands under the Act of June 11, 1906, and the examination for listing should be made with a view of listing 160 acres of land where possible. The tracts as listed should conform so far as practicable to the form of the public land surveys. The listing of lands as above should not in any way govern the determination of the total area or amount of non-cultivable land listed for applicants under the Act of June 11, 1906, who were not residing upon the land before the creation of the Forest.

"In cases where less than 160 acres of land has been listed to a person who settled upon the land prior to the creation of the Forest, an additional area sufficient to complete the homestead entry may be allowed upon proper application."

LABOR-SAVING LOG ROLLER.



The United States farmer is, collectively, the most wealthy capitalist the world has ever known. By the last census the farmers had invested in agriculture in United States \$20,000,000,000 which last year produced \$7,000,000,000. Such a yearly income means \$50,000,000 a month, or \$13,000,000 a day.

POULTRY NOTES.

In the damp, spring weather turkeys must be well protected from the weather. A good house is an open-roof shed with a roost in the rear. At the recent electrical show in Chicago, an electro hen daily hatched out broods of chickens in view of the thousands of interested spectators. In a couple of hours each chick had found its way into the world the little fellows were dry and entirely presentable, and just as lively as if they were responding to the cluck of a feathered mother.

Chickens of different ages should not be kept together. Much better results are obtained when they are kept separate.

The March pullets are the ones they will begin to lay in November if they have been given proper care.

They should be well fed up to the time they begin to lay and then a small amount of food will keep them in laying condition.

BUILDING FARM FENCES.

If more careful planning and mapping out of the fields were done, there would be a great deal of money saved in fencing.

The end posts are the life of the fence, and should be put in good and deep, well tamped and braced.

Care in the selection of the posts, especially the corner and end posts, is very essential. The end or braced posts should be large and perfectly sound.

If possible, the posts should be seasoned, as a green piece of wood when it comes in contact with the damp earth, forms a breeding place for bacteria and fungi. There are several preservative methods in use, any one of which will aid if properly applied. Charring or plunging in burning coal tar is the most satisfactory as a usual thing.

Some, but their cost is so great that their use as end posts only is to be advised.

Rough and heavy braces are unsightly and should be avoided in the front fences and where cleanliness and neat appearance are desired.

Braces put in as shown in the cut herewith will be found to be very satisfactory when well put in.

All fence posts should be set perfectly perpendicular and the braces fitted in closely and tightly.

The pieces of timber put in the ground between the posts prevent their leaning toward each other and also prevent a hole being worn under the gate through which the shoats may go into the cornfield.

The short braces or blocks set on the pieces of timber and leaning against the posts will keep the wheels from running too near the posts.

A flat stone should form the foot of the underground brace. The earth should be well tamped around the braces and the posts.—J. W. Griffin.

NOTES FOR THE FLOWER LOVER.

It is useless to put most seeds into the ground until it is warmed up and dry enough to work up light. Corn planting time is about the average time for most flower seeds.

The sweet pea is a notable exception. The earlier it can be tucked into the ground the better. Do not wait for fine weather, but in the first pleasant days work up the soil as well as possible and plant the seed.

If you have a shady spot, try pansies and ferns.

A LITTLE OF EVERYTHING.

It is rather singular that American farmers first learned the value of their own cotton seed meal as a cattle food and milk producer from the more critical feeders of Europe.

Danish bacon, the bacon having the highest value in English markets, on account of its firmness and delicate flavor, is finished for market with American cotton meal.

Never set a duck egg over a week old. They lose fertility quickly.

WORLD-WIDE GLEANINGS.

Illinois has more than a million and a half of horses, worth a little more than \$100 each.

The world's production of sugar within the last twenty years has nearly doubled. In 1889 17 billion pounds were produced, while in 1909 32 billion pounds were placed on the market.

Last year the paper pulp manufacturers of the United States used 3,962,660 cords of wood.

WITH THE SOWS AND PIGS.

As farrowing time approaches we find that it pays to be on friendly terms with the brood sows, for even if they are on the best of food and care there are certain losses we cannot prevent. Many hog raisers will laugh at the idea of making friends with the brood sows, but we have found it a paying proposition to be able to go among the sows and their litters and handle them in a careful manner during the farrowing period and for a few days after. The young pigs must have dry nests and the bedding should be changed frequently and lime, or some other disinfectant sprinkled in the nest when it is cleaned. Many young pigs become infected with disease through their navels coming in contact with damp and foul nests.

A sow should be fed light rations during the farrowing period and for a few days after, although I do not believe in the starvation rations advised by many writers and authorities.

The feed may be gradually increased for the next few days until at three weeks she is giving all of the milk that she is capable of producing. At this time the young pigs should be fed separate from the sow, but where they can go in and out of the farrowing pens as they choose.

Skim milk, wheat middlings and shelled corn are excellent foods for the young pigs at this period.

By this method the pigs become accustomed to the change of food and there is no falling away in condition when they are removed from the sow.

A NEW POTATO DISEASE.

The wart disease is a new enemy of the potato crop which is attracting great attention in Europe, and which is liable to be introduced into the United States at any time. It affects the tubers, forming large rough unsightly warts, and, in severe attacks, completely destroys the crop. Once the fungus gets into the soil, it is impossible to grow a crop of potatoes on the land for several years.

The fungus which causes this disease was discovered in 1896 in potatoes grown in Hungary. It is now prevalent in many places in England and there is great danger that it will spread to Ireland. It is also found in Germany and some other European countries. It has been carried to Newfoundland, but has not yet appeared in the United States.

It is spread by using affected potatoes for seed, and, as this country imports considerable quantities of potatoes every year, there is danger that it may be introduced.

The U. S. Department of Agriculture has recently issued a circular, for free distribution, giving a brief account of this disease.

PICKED UP IN THE ORCHARD.

Young apple trees may be protected against the ravages of destructive annual pests by wire netting.

After trees are planted cover with loose soil for a mulch. When growing apply stable manure worked into soil, but do not let it touch the trees.

Cultivate cotton, peas and red clover in your young orchard. This will benefit the trees and at the same time give you an income.

Cultivate around your trees with a hoe several times during the year and keep a mulch of grass over the cultivated space.

In the warmer climates every one who wishes a beautiful shade tree, should plant the pecan. It will not only give delightful shade, but delicious nuts raised may easily be made a source of profit.

When trees commence to bear, use a fertilizer rich in potash, wood ashes can be used to advantage at that time.

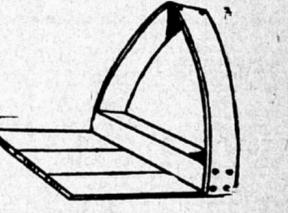
"As the twig is bent, so is the tree inclined." While the tree is young, give it the shape desired.

If spraying is done late and the fruit has formed, never use Paris green in the spray.

White hellebore is a substitute for Paris Green. It may be applied to the bushes dry, mixed with three times its weight of flour.

Sow seeds of aster, salvia, and cosmos in the window box.

FOR HARNESS MENDING.



This stitch-horse is intended to hold blankets and leather while one is sewing upon them. Made at home from two barrel staves by cutting them in two in the middle and fastening them securely to a four-inch block at the bottom. Sit upon a chair or hold the device between the knees and fasten it to a board eighteen inches wide. Sitting upon this holds the stitch-horse sufficiently firm to work.

That raising live stock pays was demonstrated recently by a Minnesota farmer, who took a bunch of cattle, which he had raised, to Chicago and brought back a check for \$5,132.