



AGRICULTURE

Adapting Corn Varieties.

We are always learning something new about the corn plant. One thing, new at least to a good many students of the corn plant, is that corn varieties differ so greatly in their characteristics that success or failure with corn depends on the selection of the right varieties for certain fields. It is not unusual to hear of a man declaring that the variety of corn he grows is one of the most profitable in the world and will give most astonishing yields. The fact is that he is growing it on a location that is admirably suited to it. We are now coming to have varieties of corn adapted to uplands and to lowlands. The lowland variety may do very well on the upland in a wet year, but in a dry year proves almost a failure, while the variety adapted to the upland yields well even in bad seasons. At the present time this differentiation is only beginning to be made. During this summer corn growers would do well to watch the behavior of corn on lowlands and uplands. At the present time we have only very meager data by which to figure out what kind of corn a man should select for the bottom lands and what kind for the uplands. Some of our experimenters are only now just beginning to study the corn plant from this standpoint. We have, however, much to hope for from our agricultural colleges in this matter. The students are taking great interest in such matters and are taking up every phase of corn growing. This study of varieties is one that may well engross the attention of some of the brightest minds.

Green Manure.

Green manure is the name applied to a crop that is grown for the purpose of being turned under. Some of the lands that are exhausted to such an extent that they will not bear good crops of grain yet will be found growing up to some kind of weeds. Sometimes this weed crop is the best thing that can be grown on the land, if the farmer is smart enough to turn it under. It adds humus to the soil. We have heard of fields that were practically good for nothing, yet were reclaimed by having the weeds plowed under for three or more years. The fact was that the fields were deficient in humus and nitrogen and needed an application of both of these, which they got in the green manures given in the form of the turned under weeds.

The best green manure in most parts of the North is the clover plant. But cow peas and soy beans are excellent where they can be grown. All kinds of legumes are very good for turning under, as they always add nitrogen to the soil. Rye and such things are sometimes used, but they add little or nothing to the soil except fiber, which is not taken up by the roots of the growing plants. It may, however, do some good to the soil mechanically.

Question of Speed.

The general farmer has little or no interest in the trotting horse except in so far as he may be used to cross on slower horses to give their progeny enough speed to make them useful as carriage horses. The farmer cannot afford to waste his time trying to develop trotters. The trotting horse is not a farm horse, as his great speed can be of no use except as a means of gambling. Who wants to drive a carriage horse at the rate of a mile in two minutes? What we do want in horses for the farm is the speed that appears in the walking gait. If our fair managers wanted to really improve the speed of farm horses they could establish contests in walking.

See that the waste land is cleared up and put into service.



HORTICULTURE

Seeds of Forest Trees.

It is probably always best to purchase forest trees from nursery men that make a business of producing them from seed. But sometimes this is not convenient or advisable, both by reason of the number required and of the distance of the nursery from which the same might be obtainable. For instance there are some farmers that have bare hill tops that they wish to cover with trees for the protection of the land. They know that the tree that is to be good for lumber must be one that grows largely without branches and that therefore a large number of trees must be started per acre, most of which will be killed off by the shade of their neighbors. No man likes to pay for trees and go to the work of planting them and then have most of them die natural deaths. So the only way when a large plantation is to be put in is to buy the seeds by the pound if they can be obtained or gather the seeds from the woods. In thousands of instances the latter will be the plan that will appeal most to the farmer. Such seeds should be gathered as soon as ripe. If they are left till they fall to the ground it will be difficult to get the desired quantities, and often, too, the over-ripe seeds will not grow at all. The seeds that fall are also eaten to a great extent by various small animals, such as mice and squirrels. The seeds are also more easily gathered from the trees than from the ground, if they are left on the latter place for some weeks, and the difficulty of picking them up as soon as they fall naturally is that they do not fall at one time, but frequently take a period of weeks to mature fully enough to detach themselves from the woody stems.

The seeds that mature in the early part of the summer should be sown as soon as gathered, as that is the way that nature does it. If such seeds are left till the next spring they will not grow at all. The keeping of such seeds is one of the mistakes frequently made by amateurs. For the late-maturing seeds the keeping till spring before planting is the natural and proper thing to do. Seeds with soft shells should be carefully stored, but those with hard shells may be planted at once or put in a box buried in the ground, so they may be affected by the frosts of winter, which are necessary to break the shells. When seeds are planted they should be covered with at least three inches of soil, especially if they are planted in the fall.

Horticulture in New Brunswick

The New Brunswick government is encouraging the fruit industry of that country in a very practical way. It has undertaken to furnish the trees for the planting of four or five model orchards, mostly winter apples, and a man will be sent to direct the planting and laying out of the orchard. After the trees are set the owner is required to sign an agreement to care for the orchard for ten years in accordance with the instructions of the Department of Agriculture, he to have the product of same. These model orchards will not exceed two acres and it is planned to eventually have one in every county.

Japanese Plums.

According to a report of the Ontario station the Japanese plums are proving successful as far north as Georgian bay. Experts declare that the northern line of the successful growing of Japanese plums runs from northeast to southwest. West of Lake Michigan it begins at about the vicinity of Chicago, slanting in the direction named. This will show why Japanese plums have been so seldom profitable in Northern Illinois.

LIVE STOCK



Fattening Cattle in the South.

Any man that travels through the South, especially if he is acquainted with the great stock raising districts of the West and Northwest, will be struck by the fewness of the beef cattle he sees on southern meadows. Here and there a family cow is to be seen, but, for the most part, the beef animal is wanting. Yet the South needs live stock, and, on account of the mildness of the climate, live stock should be easily and cheaply raised. This is the view taken of the matter by some of the leading agriculturists of the South. As a demonstration of the ability of the southern states to fatten and market cattle of high quality the Louisiana station undertook the growing of 16 Angus calves which they purchased in November, 1901, in Illinois and immunized against the Texas fever. The calves were then taken to Louisiana and fed largely on by-products from the three great staples of that state, cotton seed oil, rice bran and molasses. This last winter the 16 steers were sold in the Chicago market at the top price for the week. The journey to Chicago required six days from Baton Rouge, and some severe weather was encountered during the trip. As the animals took the highest price for the week, the natural inference is that as good beefs can be made on the by-products of Louisiana crops as on the corn of the corn belt; and the by-products of Louisiana are cheap in price, and labor is also cheap there. At Baton Rouge the calves were grazed on the pastures during the spring and fall, but received all the time an extra feed of the materials we have mentioned. This test was of calves born above the quarantine line. The station is now about to enter on another test of feeding calves born below the quarantine line, to demonstrate that it pays to raise calves in Louisiana as well as to feed them there.

A few tests of this kind will doubtless start the southern farmers to the growing and feeding of cattle. The great bugbear has been Texas fever, and it was supposed that no live stock industry could thrive below a certain badly defined line. If the South goes into stock raising, a new day will have dawned there, and agriculture in the South will receive a new impetus. There are northern stockmen who have been for ten years predicting that the farms of the Gulf States would yet carry great herds of well-bred cattle.

Wheat and Corn.

The wheat and corn crops of the United States for the past 25 years have been as follows.

Year—	Wheat.	Corn.
1878.....	420,122,000	1,388,219,000
1879.....	448,757,000	1,547,902,000
1880.....	498,550,000	1,717,435,000
1881.....	383,280,000	1,194,916,000
1882.....	504,185,000	1,617,025,000
1883.....	421,186,000	1,551,067,000
1884.....	512,765,000	1,795,528,000
1885.....	357,112,000	1,936,176,000
1886.....	457,218,000	1,665,441,000
1887.....	456,329,000	1,456,161,000
1888.....	415,868,000	1,987,790,000
1889.....	490,590,000	2,112,892,000
1890.....	399,262,000	1,489,970,000
1891.....	611,780,000	2,060,154,000
1892.....	515,949,000	1,628,464,000
1893.....	396,131,000	1,619,496,000
1894.....	460,267,000	1,212,770,000
1895.....	467,103,000	2,151,139,000
1896.....	427,684,000	2,283,875,000
1897.....	530,149,000	1,902,968,000
1898.....	675,149,000	1,924,185,000
1899.....	547,304,000	2,078,144,000
1900.....	522,230,000	2,105,102,000
1901.....	748,460,000	1,522,520,000
1902.....	670,063,000	2,523,648,000
1903.....	637,822,000	2,244,177,000

In land plants the branches of the roots depends very much upon the amount of free oxygen and available plant food the soil contains.



Don't Forget the Grit.

It would seem unnecessary to remind poultry raisers of this very essential element in the feeding of poultry, yet a very large number of people annually forget, and their fowls suffer in consequence. This is more usually the case on the farm than in the poultry establishment of the poultry fancier. The reason for this is plain. The poultry fancier has to keep this factor in mind the year round. His fowls are kept shut up all the time and have to be supplied with grit to make ready digestion of the food possible. But the fowls of the farmer run out during a considerable part of the year, especially in the fall when the garden has passed its bloom, the fruit is ripe, and the grain is harvested. During this time at least the birds pick up all the grit they can use. When the snow comes the grit is buried out of sight and is frozen hard to the soil when it is not so covered. The farmer seldom thinks of this matter. It would not be hard for some of our farmers to collect the proper substance from pits of coarse gravel, but most of them have no nearby supply of such material. Doubtless the readiest way out of the difficulty is the purchase of some of the commercial grits. In any case grits must be secured or the food used by the poultry will be poorly ground or not ground at all, and before spring the digestions of the birds will be seriously impaired. We believe the lack of grit is one of the chief causes of the winter indisposition of our fowls. Also in the summer time, lay in a store of grit for winter, if it is obtainable from natural sources.

Good Breeding Stock.

Very few men can make money out of hogs if they have poor breeding stock. It may be that here and there a man can raise scrubs and make money out of them, but it has to be under conditions where the feed costs practically nothing. That is not the circumstances under which most of our readers are raising swine. With them the competition with other breeders is strong, and feed has to be purchased often at a very high price. This high-priced feed must be put into an animal that can make the most possible out of it in a short time, and this is the reason why good breeding stock only is safe for the farmer on high-priced land. Then the farmer must have good breeding swine because he wants animals that will give him numerous progeny. It is safe to buy sows from men that make a business of breeding and who consequently feed their animals in a way to give them both strong bone and muscle. Such animals have vitality and tend to produce a large number of pigs rather than the small litters that some are in the habit of bringing forth every year. It is no easy matter to secure the kind of stock a man needs. A good many herds will need to be looked over before the purchases are made. The good animals will cost considerably more than the poor ones, but, for the foundation of a herd, the expensive ones are likely to prove the cheapest in the long run.

Whitewash for Trees.

In the New England states whitewash is frequently applied to fruit trees, especially apple trees, and seems to have the effect of keeping off fungus and insect pests. The whitewash as used there is generally made by simply slaking the lime with cold water. But it would be better to slake the lime with hot water. It may be made to stick better by adding some skimmed milk. Some even heat some glue and when it has become a thin liquid dilute it with hot water and add it to the wash. This still further helps the sticking quality.