



Sugar Beet Experiments.

The results of experiments with sugar beets by J. J. Vanha and by H. Claassen have been summarized in the Experiment Station Record. In Vanha's experiments beets were grown 20, 25 and 30 cm. apart in rows 35, 40 and 45 cm. distant. The distance allowed each plant ranged from 700 to 1,350 sq. cm. The smallest yields were obtained from the 35 cm. rows with the plants at intervals of 30 cm. Planting the beets 30 cm. apart in rows 45 cm. distant gave much the best yields.

Mr. Claassen undertook to determine the effect on the development of the plant of removing or injuring the leaves of sugar beets, while the plants were still growing. In one row the small inner leaves of the plant were entirely cut away; in another row the larger outer leaves were removed; while from all except the smaller inner leaves of the plants in a third row, one-half of the leaf surface was cut away; and in a fourth row the leaves were mutilated in a manner approximating injuries due to hail. The smaller inner leaves were soon replaced after their removal by a new growth. The larger leaves were not replaced, but the remaining ones made a good vigorous growth so that by the end of the season the ground was again well covered. The injured leaves remained green and fresh and the smaller inner leaves of these particular plants were induced to make a better growth by this treatment. The results showed that the removal of the leaves and injury to the same had practically no effect on the sugar content, but that it reduced the weight of the beets. Cutting away the inner leaves had the least effect. It is estimated from the data obtained that the removal of the entire leaves or parts of the same whether by hail or otherwise, may cause a reduction of 30 per cent in the weight of the crop.

Potato Scab.

A Kansas reader asks for the formula of the Bordeaux mixture for potato scab. Bordeaux mixture is used on potato vines for the blight or on potato downy mildew, but not for potato scab. Potato scab appears on the surface of the potato. The best preventive is to soak the seed for about two hours in formaldehyde and refrain from planting on infected lands.

From Weed's "Fungi and Fungicides" we quote: "Experiments at the North Dakota Station by Professor Bolley, show that the disease may be prevented by soaking the seed in a weak solution of corrosive sublimate. Procure an ordinary barrel and fit into the base a common wooden faucet. Purchase of a druggist two ounces of finely-pulverized corrosive sublimate (Mercuric Bichloride). Empty this all into two gallons of hot water and allow it to stand overnight or until apparently all dissolved. Place in the barrel thirteen gallons of water and then pour in the two-gallon solution. Allow this solution to stand in the barrel four or five hours, during which time it should be several times thoroughly agitated, to insure equality of solution before using. Select as fair seed potatoes as possible, wash off all the old dirt, and immerse as many as possible, leaving them in the solution for one hour and thirty minutes. At the end of this time turn off the solution into another vessel. The same solution may thus be used a number of times if wished. After drying the potatoes may be cut and planted as usual. Plant upon ground that has not previously borne the disease. The potatoes may be cut before treatment if wished.

We believe the formalin treatment is the best, because formalin is less dangerous than corrosive sublimate.



Locating an Orchard.

The orchard and fruit plantation should be located on sloping land. The soil will be drained of surplus water and will not bake and become as dry and hard in time of drouth, says O. M. Morris of Oklahoma. The north and east slopes are the best. They are much cooler in summer and are not subject to as great variations of temperature in winter. The effect of the afternoon sun is somewhat weakened by the slope and the early blooming trees are not forced into blossom so early and more frequently escape the late frosts. The protection from the wind is perhaps the greatest benefit derived from such slopes. The warm dry winds of July and August do not strike the orchard with their full force and thus a great amount of moisture is saved for the use of the trees and fruit. This protection from the wind is also of great value to young trees while they are forming their root system and becoming well established. The southern slopes are warmer and earlier in the spring and for some purposes are to be preferred, but usually the fruit matures early enough and with apples in particular the latest varieties mature almost too early for winter use. A sandy loam soil with clay subsoil is best adapted to the use of all kinds of fruits. The trees set on heavy clay soil will produce a heavy growth of foliage and wood but will be slow to come into bearing, and the fruit will not be as bright in color as that grown on sandy soil. The trees grown on a poor sandy soil will usually make a poor growth and begin bearing young. These trees will be short-lived and weak. The poor, thin, gray and black soils are poorly adapted to trees. The trees set on such land are almost sure to make a very poor growth and be shy bearers. Good upland is the best for orchard land. The bottom land will grow better and stronger trees, but they will seldom be as productive. This is especially true of the peach, plum and apricot. The late frosts are more liable to destroy the crop while the trees are in blossom on low land. The lowland also maintains better conditions for the plant diseases that are sure to infest the orchards sooner or later. If the land was formerly in timber, it should be carefully examined for evidences of root-rot before setting out fruit trees.

Cantaloupe Seed.

The Rocky Ford is now the best known muskmelon in the country. It was originally "Burpee's Netted Gem." Under the warm skies of Colorado and the stimulating influences of water it developed into a melon that is probably without superior in the markets of the country. There may be better ones grown for home use, but if so, they have some characteristics that keep them from coming generally into the market. The Rocky Ford melon of the past was probably better than is the same melon to-day, for the reason that at first the eastern seedsmen were able to produce all the seed of this variety that could be sold. But as the demand increased, the seedsmen began to gather seed from almost all sources where cantaloupes were grown. The result was that much of it was not pure, some crossing having taken place with other and inferior varieties of melons. This has caused some deterioration in the case of Rocky Fords, and a good many melons have to be thrown out as culls when being packed.

The pure-bred animal is more likely to transmit its qualities than is the animal of mixed breeding.

The value of manure depends on the feed from which it was made.

POULTRY



Green Food for Poultry.

To be kept in a healthy condition poultry must have a constant supply of green food. In the winter this is not always done nor is it frequently done, and when the spring comes there is all the more reason why green food should be supplied. On the farms where the fowls are given the run of the fields in the spring and early summer, there is no particular need to provide for a supply of green food, but on thousands of farms the hens are kept shut up, especially during the season of garden planting and the early periods of growth of the vegetables. As farmers are coming more and more to growing fruits and vegetables and raising flowers this is necessary; for hens and gardens do not work well together.

Too often the hens are shut into a yard and are given no systematic attention in this regard. The yard may have had green grass in it at the time the fowls were put in, but in a few weeks not a green thing is to be found there. This in itself shows the great craving the fowls have for green food. A little system in this matter will supply the fowls with the things they desire in the way of green food. In the first place the yard should be divided into two parts by a cross fence. There will have to be two places through which the fowls can enter the house, so that the two yards may be readily used. Then keep the fowls in one of the yards while green stuff is being grown in the other.

Rape is one of the best things to put into such a yard and it has the advantage over some other things that the ground will not have to be prepared for it—provided the grass has been eaten down to the roots by the fowls. The rape seed is quite large in size and the sprouts readily take hold of the ground. In a couple of months a good crop should be growing. It is best not to turn the fowls in before the rape has become twelve or more inches high. Then they may be turned in and will quickly convince anyone that they have a fondness for rape. They will strip off all the thin parts of the leaves leaving only the midveins. This may take them a month to do. But in the meanwhile the rape goes right on growing, and when the hens are taken out of the yard, the plants grow again from the midveins. This produces a second growth more quickly than the first. In the same yard should also be sown lettuce, of which the fowls are very fond if they can pick it themselves. Fowls never seem to care much about green stuff if it is cut for them. Doubtless this is because they find a blade of grass or the like too difficult to eat. When it is growing on its own roots they pick off just the amount they can swallow at a time, while if it is cut for them they cannot easily divide it.

Oats are sometimes sown for poultry, but the writer has not generally found that the fowls cared for the oat plant. However, at the North Carolina experiment station we saw oats growing in the poultry yards, and the superintendent of the poultry declared that the fowls ate them readily. Of any single green feed we are more pleased with rape than anything else, which is both easily grown and readily eaten by the fowls.

Soaking garden seeds is a commendable practice when the soil is not moist enough to readily supply the water to swell the seeds. The seeds may be soaked in water at a temperature of 100 to 120 degrees, and should be continued only till the seeds have fully swollen. This is often practiced in the starting of sweet corn and garden peas.



An Outrageous Practice.

The men that buy and sell cows at the Union Stockyards, Chicago, are frequently charged with practices that are far from humane. A story we recently heard illustrates the point. A lady living in the outskirts of Chicago visited the stockyards to purchase a milk cow. She happened upon a cow with very fine development of udder and milk veins. As it happened the cow had not been milked that morning, and the dealer at once had a man attend to that important function, in the presence of the lady. The milk yield of the cow was very great and the dealer assured her that he got the same amount of milk each time he milked the cow. The lady paid the price asked for the cow and took her away. In a few days she returned, saying that the cow gave only a moderate—very moderate—amount of milk, and wanted her money back for the cow, as she claimed deception had been used in selling the animal. The dealer told her he could not give her back the money, but that no deception had been practiced. "Madam," said he, "how often do you milk that cow?" "Why," replied the lady, "I milk her twice a day, as everyone else does that milks a cow." "Ah, madam," said the dealer, "that accounts for it; I only milked her twice a week."

The Jersey-Holstein Rivalry.

Many, no doubt, have heard of the Holstein and Jersey breeders' tests for their respective breeds. A Holstein breeder was boasting about the rich milk that his cows were giving. The Jersey man said: "Friend, are you sure that your cows are full-blooded Holsteins? I have a sure test for determining Holstein cows." The Holstein man wanted to know what his test was. He said: "When you begin to milk, put a silver dollar in the pail. If the milk is thin enough so that you can see the dollar when the pail is full of milk, you may be sure that you have a Holstein cow." The Holstein breeder replied that he had a test that never failed to detect a Jersey. When asked for an explanation he said: "Put a silver dollar in the milk pail when you begin to milk, and if the milk does not cover the dollar when you are through you can be sure that you have a Jersey cow."—Prof. G. L. McKay.

Sawdust as Mulch.

Sawdust makes a good mulch for various kinds of fruits, especially for strawberries. Many of our readers doubtless live near saw mills where sawdust can be obtained at a very low cost. This will save the strawberries from becoming dirty and will prevent the loss of moisture between the rows. It also makes a good mulch for gooseberries and currants. In the case of tree fruits it is also useful, but should not be permitted to pack too closely around the trees. Perhaps it is most useful where it is not turned under. Some men are of the opinion that pine sawdust is rather harmful to the soil, but it would be difficult to demonstrate this.

Failure of Orchards.

Orchards fail for various reasons but chiefly for lack of care. In some of these cases the owners declare that they have given their orchards the best possible care; but the fact is that the people in charge have not known what was good care. Sometimes manure has been put on when the ground was rich enough anyway. In that way a growth has been stimulated that has resulted to the detriment of the trees. If a man wants a good orchard he will have to study along several lines before he will understand the various factors entering into the care of an orchard of any kind.