

Some Suggestions On The Grafting Of Fruit Trees

Many Varieties Can Now Be Grown on One Tree.

By W. S. BLAIR,
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Grafting is done to secure fruit similar to that produced on the tree from which the grafting wood is taken. One-year-old wood is used for scions. The growth habit above a graft does not influence the growth below, and vice versa, nor is the fruit changed because of the variety grafted into. Many varieties may be grown true to kind on the same tree. Because this is possible the changing over of trees from one variety to another is extensively practised by apple growers.

Growth takes place between the wood and the bark, in a layer called the cambium. The important thing in grafting is to have the cambium layers united. Because new layers of bark are made each year, it is obvious that the bark on an old branch is thicker than that on a year-old branch, and to place the outer edges of the bark in line would not bring the cambium layers together and growth would not result. Judgment and care when doing the grafting are of the utmost importance in order to effect a proper union.

The wood in which the scion is to be placed may be several inches in diameter, or only a little larger than the scion itself. Wood up to two and a half inches in diameter is generally grafted by cutting off the stem six inches above a lower branch. This stub is split through the centre and spread apart for inserting two wedge-shaped scions, one at each side. This is called cleft-grafting. These scions are firmly held in place by the pressure of the split wood. The parts of the injured wood are covered with grafting wax to keep out air and water, and prevent drying out of the wood, thus insuring a proper growth. Large branches not readily cleft-grafted are grafted along the edge of the bark, placing the scions two to three inches apart. Branches too small for cleft grafting are usually side-grafted.

Below the stub to be grafted a branch should be left to insure sap circulation and growth in the branch. If the scions grow, these branches that were left are removed the following year, in part at least.

It is not advisable to remove more than one-third or one-half of the top of a tree the first year. By a judicious selection of branches evenly spaced around the tree on the main branches, the tree may be grafted over at one time.

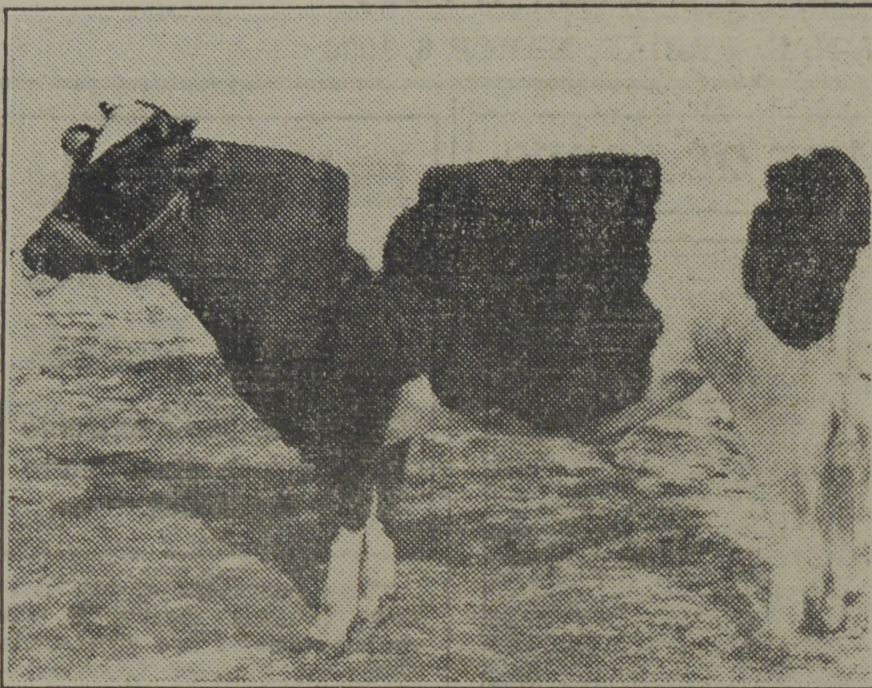
Grafting should be done before the buds start to swell, usually from the first to the middle of May. A good wax is made of five pounds of rosin, one pound of beeswax and one pint of raw linseed oil melted together. This is poured into water and when cool enough is worked by pulling until light yellow in color. This is later made pliable for use by slight heating in the sun, or by the hands, using a little soap to prevent sticking to the hands. Information on grafting and varieties to use is available at the Dominion Experimental Station, at Kentville, N.S., or other similar stations.

BEEF QUALITY

Quality in beef cannot exist without a reasonable amount of fat. However, it should not be assumed that, because beef must be fat in order to be good, all fat beef is good beef. Cows may carry a considerable amount of fat, but neither the fat nor the lean from an old animal possesses the desired quality. The fat on beef from an animal of this kind can usually be distinguished by its softness and high color. The best beef to buy is branded beef.

AGRICULTURE

BOUGHT FOR BREEDING IN JAPAN



The fourteen-months-old Holstein-Frisian bull, "Springbank Expectation," pictured above, has just been sold to the famous Japanese dairy specialist, Kanichi Kuzuhara, representing the great Kowai Farm, Iwate-Ken, Japan. The purchase price was \$5,000. This young bull will be remembered as the calf that topped the Canadian National sale in Toronto at \$1,050 when he was purchased from his breeder, T. R. Dent, Woodstock, Ontario, by a syndicate of six Ontario breeders. His dam is the world's famous champion lifetime butterfat producer, Springbank Snow Countess, and he is recognized as one of the best bred bulls in North America.

VALUE OF SELECTION OF SEED POTATOES IS VERY IMPORTANT

High Standard Can Be Maintained in This Way.

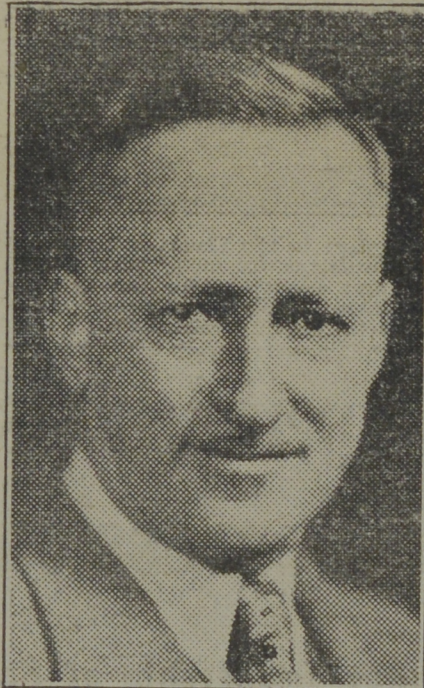
By H. S. MACLEOD,
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During recent years virus diseases have been given much attention and it has been found that the best way to eliminate them from the potato crops is to select healthy plants for seed purposes during the growing season. In this manner, the yield per acre has been increased and the type and quality of the potatoes have been improved. Several years ago, a system of seed potato certification was organized by the Division of Botany, of the Dominion Experimental Farms and is now conducted in every Province of Canada. Before crops are certified they must pass careful inspections of the plants and of the tubers. The most important of these inspections is that given to the plants during the growing season. Only those crops that conform to rigid standards, in regard to freedom from disease and purity of variety, are certified for seed purposes. In this manner seed potatoes of very high standard are made available to potato growers.

In order to maintain high standards of seed, the growers have found it advisable to make careful selections each year of the healthy good type plants for their foundation stock. Before they dig the main crop, they carefully harvest the tubers from the most desirable plants. If any of these plants do not conform to the required standards in yield, type, etc., they are discarded. The selected tubers are given the best storage available. In planting these in the seed plot, advanced growers generally use the "tuber unit" method, by which all the seed pieces from any one tuber are planted in sequence. This method assists greatly in more efficient roguing and in making better selections of the healthy plants. If the plant from one seed piece of any tuber does not conform to the required standards in freedom from disease, type, etc., every plant from that tuber is rogued out and discarded.

The selection of plants and of tubers has been conducted, according to this method, by the Dominion Seed Potato Certification Service in British Columbia.

Dominion Chemist



CLIFFORD H. ROBINSON,
of the Central Experimental Farm,
Ottawa, who has been promoted to
the position of Dominion chemist,
Dominion Experimental Farms, Department
of Agriculture. He succeeds Dr. Frank Shutt, who retired
in 1933.

The results obtained with several varieties, have demonstrated that a worthwhile increase in yield is obtained by proper selections of plants and of tubers for seed purposes.

As a result of the selection of plants and tubers over a three-year period, with 30 samples received from growers for testing in the experimental plot, the average yield was increased by one and a half tons per acre.

In selecting, the grower should become familiar with the best type of plants, as well as of the tuber, of the variety he is growing. By continually selecting this most desirable type he will eventually develop a good uniform strain. This is undoubtedly the best method of maintaining a high standard of seed potatoes.

TO PLANT MILLION TREES

Farmers in Norfolk County, close to the St. Williams reforestation area, in Ontario, will plant over one million trees this spring.

Be a good citizen—buy Maritime-made goods.

Soybeans Become More Popular Due To the Wide Range

Can Be Grown Almost Any Place Corn Is Grown.

By W. J. BREAKEY,
Dominion Experimental Station,
Norden, Manitoba.

The soybean is adapted to a rather wide range of climate. In general, the climatic requirements are about the same as those of corn. The soybean plant or seedling in the early spring has proven less sensitive to frost than corn, thus permitting earlier planting than corn, and allowing a longer period from planting to maturing.

Soybeans being a legume have value as a forage crop. The plant can be cut green and cured as hay, or ensiled and fed as silage. However, since there are other heavier yielding legumes that can be grown more easily, it does not seem likely that soybeans will become important as a forage feed here.

Seed production appears to be the greatest and most economical method of employing this crop. The seed having a high protein content can be fed to good advantage to all classes of stock, when fed in proper proportions. Soybean flour is also used as human food, in proportions of one-quarter bean flour to three-quarters wheat flour.

Considerable attention has been directed to the production of soybean seed for oil extraction, for commercial use. This outlet is very limited and is controlled entirely by the price paid for crude soybean oil in bulk that is imported in large quantities from Manchuria and laid down in Winnipeg around \$5.75 per 100 pounds.

Approximately nine bushels of seed are required to produce 100 pounds of oil. The cake after the oil has been extracted competes in the market against meat meal, oil meal and tankage. With the Prairie's variable climate it does not appear that this commercial aspect will become very important.

In the three years preceding 1935, drought and blister beetles did not permit seed formation on plants at the Morden Experimental Station. The blister beetles have a great fondness for the flowering parts.

In the 1935 test at Morden the variety yields were:

	Bushels per acre
Manitoba Brown	24.5
Mandarin	23.7
Manchu	22.7
Wisconsin Black	19.8

No increase was secured in the inoculated seed over non-inoculated. Fertilizer seeded at the rate of 35 pounds ammonium phosphate per acre did not increase yields.

Best results were secured when seeding was arranged to permit inter-tillage between rows.

YOUNGEST GRANDMOTHER

Mrs. Michael Rapa, of West Melbourne, was married when she was 13 years and 11 months old. Her eldest daughter, born ten and a-half months later, married at 16 and had her first child a year later, the day before Mrs. Rapa was 30.

BACON SHIPMENTS

Bacon shipments to the British Isles in 1935 totalled 125,000,000 pounds, or about 5,000,000 pounds more than during 1934. Exports of pork in 1935 were more than double those of the previous year, the total amount being slightly over 7,000,000 pounds, as compared with 3,330,000 pounds in 1934.

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WASSONS DRUG STORES

Blossom End Rot Of Tomatoes Most Serious Disease

At the Same Time, It Is One
of the Most Common.

By H. HILL,
Central Experimental Farm,
Ottawa, Ontario.

One of the most common and serious sources of loss to the grower of tomatoes, both under glass and in the field, is the disorder known as blossom end rot, or blossom end rot. The trouble is characterized by a dry rot of the blossom ends of either green or maturing fruits, commencing as a dark-green water-soaked area. The affected tissues cease to grow and turn first brown then black with the spot flattened or sunken. The losses may be moderate, but in severe case practically an entire crop may be ruined.

This trouble is not due to any organism but is caused by faulty growing conditions. During the progress of studies carried on in the horticultural greenhouses at the Central Experimental Farm, Ottawa, it was observed that nutrition or the plant food supply had a marked effect on the occurrence of blossom end rot.

Care should be taken to avoid cultural or fertilizer treatments that promote plant growth too rapidly. Too heavy applications of manure or fertilizer, especially nitrogen, bring about to rapid and luxurious top growth and increase susceptibility to this disorder. Too rapid growth should be especially avoided on light soils or where moisture is apt to be a limiting factor. In the greenhouse serious loss is more apt to occur during the winter months, when the days are short, and special care must be taken then not to force growth by heavy feeding of manures or fertilizers. Too high greenhouse temperatures also tend to increase this disorder.

It has been found that more slowly available organic fertilizers such as tankage or blood meal are less likely to encourage this trouble than quickly acting nitrogenous fertilizers such as nitrate of soda or sulphate of ammonia.

CO-OPERATIVES

According to available statistics summarized in "Farmers' Business Organizations in Canada, 1935," just issued by the Dominion Department of Agriculture, there were 690 farmers' co-operative associations in Canada in 1933 actively engaged in business, compared with 686 reporting in 1932. The 690 associations had 2,533 branches, making in all 3,223 places of business engaged in the marketing of farm products and the purchase of supplies for farmers.