

# FOR FARMERS, STOCK BREEDERS AND GARDENERS

## REARING PULLETS

### Visit Your Experimental Station

(Experimental Farms Note)

Pullets must be well grown and healthy when put in laying quarters, if heavy egg production during the fall and winter months is to be expected. In order to secure the kind of pullets required, careful attention should be given to rearing them.

There is evidence to show that there is a correlation between size of egg and body weight. If pullets are allowed to commence production before they are well grown, their growth may be retarded and they may lay smaller eggs than if they were allowed to become more mature before coming into production.

Internal parasites have an important bearing on mortality and the general health of the flock. These can be controlled to a large extent by practising sanitary measures during the incubation and growing period of the flock.

At the Fredericton Experimental Station, the chickens are given clean clover yards as soon as possible and the pullets are separated from the cockerels shortly after the sexes can be distinguished. At about twelve weeks of age, they are put on grass or preferably clover ground where chickens are not ranged for at least two years. For shelter, they are given portable range roosting coops which are structures enclosed with wire netting with low roof. Colony houses may also be used, but care should be taken to give the birds plenty of roosting space. Grain and mash are fed in hoppers and water is available at all times. The growing mash consists of 100 pounds corn meal, 100 pounds wheat middlings, 50 pounds wheat bran, 100 pounds crushed oats, 15 pounds bone meal, 5 pounds charcoal and 4 pounds fine salt. The grain mixture consists of two parts wheat and one part each of cracked corn and whole oats. A limited amount of skim milk is fed during the early part of the summer, but is eliminated later if the pullets are developing too rapidly. Under this system of feeding and management, a few pullets may commence to lay too early but the majority of Banded Plymouth Rocks come into production at about six months of age. Leonard Griesbach, Dominion Experimental Station, Fredericton, N. B.

## Fox Feed Price List

- Beef Checks ..... Per lb. 4c
- Beef Hearts ..... Per lb. 3c
- Beef Tripe ..... Per lb. 3 1/2c
- Beef Trimmings ..... Per lb. 6c
- Beef Liver ..... Per lb. 8 1/2c
- Boneless Beef ..... Per lb. 6c
- Horse Meat ..... Per lb. 5 1/2c
- Weasand Meat ..... Per lb. 5c
- Calf Hearts ..... Per lb. 5c
- Lamb Hearts ..... Per lb. 3 1/2c
- Hog Livers ..... Per lb. 3c
- Hog Pluck ..... Per lb. 2c
- Cash Price 1/2c per lb. less.

## Island Cold Storage

1764-7-13-11.

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## White Pine Blister Rust

(Experimental Farms Note)

Blister rust is a disease, generally fatal to white pine, which is caused by one of the rust fungi. Certain of the rusts are unique in that they require two different host plants upon which to complete their life cycle. The fungus which causes blister rust is one of these as it must have white pines on the one hand and currants or gooseberries on the other for its full development.

Introduced into Canada about 25 years ago on white pine nursery stock imported from Europe, blister rust has gradually spread until now it is present in all districts in which this tree occurs. Blister rust kills trees of all sizes, though large trees withstand its effects much longer than young trees.

The rust enters a pine tree by way of the needles and grows downwards into the bark of the twig. For about three years after infection there is no conspicuous symptom of disease, but after that time the affected part of the limb swells and the edges of the diseased area assume a characteristic dull yellowish green to orange color. During May and June, conspicuous orange-yellow blisters break through the bark. These contain a powder composed of spores which serve the purpose of disseminating the rust. These spores are carried by the wind to the leaves of currants or gooseberries. Upon the under sides of these leaves the rust appears in the form of minute orange-yellow pustules. From these pustules arise spores which can only infect other currants and gooseberries. From midsummer onward to the end of the growing season a second type of spore is produced which carries the fungus back to the pines. The rust is annual in currants and gooseberries, but in the pine it is perennial, the diseased areas or cankers gradually increasing in size until the tree is girdled and killed.

Fortunately blister rust can be controlled. Since, as has been pointed out, two hosts are necessary for the perpetuation of the fungus, the removal of one of these effectively stops further development. In most cases currants and gooseberries are of less value than white pine, and it is these which are then removed. All species of wild and cultivated currants and gooseberries are susceptible to rust, but of them all the cultivated black currant is the most dangerous as the rust develops most abundantly upon it. Under forest conditions it has been found that pines can be protected from this disease by the removal of all currants and gooseberries within a distance of 900 feet, excepting the case of the cultivated black currant which should be removed for a distance of one mile from the pines.

An illustrated circular dealing with this serious disease may be had free upon application to the Dominion Botanist, Central Experimental Farm, Ottawa.

## Increase in Cow Testing in Canada

Under the cow testing service of the Dominion Department of Agriculture, a total of 4,291 herds, including 41,868 cows, was recorded during 1932. This represents an increase of 3,096 herds and 29,726 cows within a period of six years. Also, an increase of 703 pounds of milk and 55.08 pounds of butterfat per cow is recorded, as compared with six years ago.

However, the most impressive feature of the cow testing report of 1932 is the genuine interest and perseverance in the work evidenced by the owners of herds who are now quite convinced as to the usefulness of production records as a basis for tackling their feeding, breeding and management problems. This past year, of the 41,868 cows, 22,382 or 53.45 per cent, were recorded for eight or more months, averaging 5,903 pounds of milk and 237.80 pounds of butterfat, with an average test of 3.99 per cent. Cows averaging 300 lbs. and over of butterfat in the year numbered 4284.

The following are the cow testing results by provinces for eight months or more in the calendar year of 1932:—

Alberta—Cow testing associations, 29; herds 422; cows 5098, of which 3189 averaged 7275 pounds of milk and 274.28 pounds of fat, with a test of 3.77 per cent. One thousand and eighty-two cows produced, and 92 herds averaged, over 300 pounds of butterfat per cow in the year.

Manitoba—Associations 64; herds 707; cows 7378, of which 3168 averaged 6032 pounds milk and 227.84 fat, with test 3.77 per cent. Forty herds averaged, and 533 cows produced over 300 lbs. fat.

New Brunswick—Associations 52; herds 638; cows 3484, of a total of 5573, averaged 5612 lbs. milk and 236.75 lbs. fat, with 4.21 per cent. test. Sixty-three herds averaged,

## NEWSY NOTES

BY AGRICOLA

### TWO LEAF EATING BEETLES

For the second year in succession one of the Blister Beetles, *Macrotis unicolor* Kirby, is damaging the leaves of the broad beans. It is a rather slender beetle, 8 to 15 millimetres long, black, but so thickly clothed with greyish hairs that it appears of an ashy hue. It is known in some parts as the "Ash-grey Blister Beetle," from this circumstance. It has been known to attack the potato and a few other plants.

There is a European variety of blister beetle which is commonly called the Spanish fly. These creatures are killed, dried and powdered, and when the powder is moistened and applied to the skin it produces a blister. The so-called "fly blister" is a commercial application of this fact. Our own blister beetles, however, have the same properties; that is, they possess a peculiar principle called cantharidin which when extracted and applied to the human skin is a strong vesicant.

The larvae of the blister beetle have curious ways of getting a living. Some species search out and feed upon the eggs of grasshoppers, while others climb up the stems of flowers and remain till a wild bee comes along. The larvae seize and cling to the bee till she flies to her nest; then leaving her, it eventually eats the egg in the cell it enters. It then "moults" and feeds on the store of bee-food in the cell. Several changes take place before it emerges as the perfect beetle.

The other beetle is not so economically important, seeing that, in our district at least, it feeds only on the alder leaves, which it riddles in an irregular manner. This is a little dark blue beetle, moderately shiny, called *Halicta bimarginatissima*. It is only 5 to 6 millimetres long but that is large for a *Halicta*. One might designate it as the "Alder Flea-beetle," if it were not for the fact that it was first discovered, in the U. S. A., on Knotgrass and Smartweed, (both *Polygonums*). It is present in large numbers on our alders, and its damage is quite noticeable. The flea-beetles get their popular name, from their habit of leaping like a flea when disturbed.

### FRAGRANCE IN THE GARDEN

Just at this time, if one has planned for it, the garden should be delighting the senses and particularly the sense of smell. To accomplish this, both annuals and perennials must be brought into the scheme. The Siberian Wallflower (*Cheiranthus Allionii*) and the annual Fairy Wallflower (*Erysimum peroffskianum*) are both scented, and in color alike too; a warm rich orange. The former is a biennial and stands our winters well, but the latter is as its popular name shows, an annual. I saw to my great delight, the English wallflower in bloom in a garden in Charlottetown this summer. It requires a glasshouse to winter it here. This wallflower is grown by the thousand in English parks, and the perfume is like "Araby the Blest."

No garden should be without *Dianthus pumarius*, Mrs. Sinkings. This is a noble white "pink" of great substance and a strong sweet odor, rather like the old Clove Pink. It is a perennial and will flower every year; but the best blooms are produced on young plants. I therefore pull the plants to pieces after flowering and stick the cuttings in where they are to grow. Rather rough! but they make nice little plants to flower next summer.

Two subjects with an unusual time of wasting their sweetness, are the Night-scented Stock (*Matthiola bicornis*) an annual, and the Dane's Rocket (*Hesperis matronalis*) a perennial. The former is indeed a hardy annual, seeing that it sows itself and comes up next spring in unexpected places. A plant in the wrong place is a weed, but I like the perfume so much that even if it comes up among the vegetables its life is spared. The flower remains closed and scentless all day, but opens at nightfall, and the powerful scent attracts the night-flying moths that fertilize the flowers.

This year I am trying the new "Golden Gleam" *Nasturtium*. Seed of this variety is very scarce yet, so I think myself lucky to have secured three plants. One has not flowered yet, one turned out to be

## COMMITTEE DISCUSSES WHEAT LIMIT

### World-wide Co-operation in Raising Price of Wheat Aired.

LONDON, July 20—(C.P. Cable)—A special drafting committee representative of the Big Four exporters, the smaller European exporters and the chief world importers of wheat discussed world-wide co-operation towards increasing wheat consumption and raising the price, tonight, without being able to reach any agreement on a draft resolution. They meet again tomorrow.

The committee was set up after representatives of the Big Four—Canada, Australia, the United States and the Argentine—indicated they were not satisfied with the first offers of the big importing nations. These were not sufficiently concrete to enable the exporters to agree to restriction of production and regulation of exports, it was indicated.

The special committee was then established, with representatives of Australia and Canada, the Danube basin exporters, Great Britain, France and Italy. Under discussion they have a draft resolution of five articles. Only two of them have so far been discussed. One touches on measures the importing nations are prepared to adopt to stimulate consumption. The other provides the importers agree to reduce tariffs on wheat 1 per cent accordingly as the price rises in favor of the exporters.

The committee was still discussing the second article when adjournment was taken.

The attempts failed. Now the subject is again to the fore, and the British Chambers of Commerce are to press Parliament to re-open the question. They propose to consider the "pound" or sovereign as 200 pence, instead of 240 as it now is. This will, I take it, leave the half-sovereign as the unit, divided into one hundred pence. The present "three-penny bit" is to be re-valued as 2 1/2 pence (like our five cents) and so we have "Warbles" as the poor man's coin, and there are many poor men. It is amazing what one can get for a penny (2 cents) in the big cities. There may also be some opposition to the proposal since it seems to augment the value of the penny by some 20 per cent. But for ease in calculation there is nothing like the decimals!

Alas, poor human nature! During the course of a somewhat long life I have observed that when an adventurous individual made a success of some venture, i. e., made money by it—for so we count success—then his neighbors or at least some of them, would regard it almost as an injury to themselves. On the other hand, if he tried and failed, his neighbors or some of them would either pity him or condemn him for the folly of his attempt, and show to how much better a conclusion they could have brought it themselves. This was the wrong view-point entirely, for individual success is reflected on the whole neighborhood: one should be able to regard every honestly successful man as an asset to his community, an example to his fellows, and a perennial fountain of good deeds. What kept me from cynicism and restored my faith in human nature, was the splendid and even heroic manner in which these same folk would run forward and help in case of misfortune or sickness. Let a neighbor, for example, lose house or barn by fire and how quickly it was replaced!

Pyrethrum Powder. This is the basis of all the fly-sprays, and produces intense nervous excitement in the insects, usually but not always fatal. This product is known in Europe as Dalmatian insect powder, and the little port of Trogir, in Dalmatia, may be said to exist for the export of the dried daisy-like flowers. There they may be seen, millions of them, lying on canvas-covered pavements, drying in the sub-tropical sunshine. They are afterwards ground to an exceedingly fine powder, containing the very volatile principle which acts as the nerve-excitant. When this powder is kept in an open drawer in a heated store (as is the practice of many druggists) it pro-

### ODDS AND ENDS

Prices rising. A paragraph in a Canadian weekly sees signs of returning prosperity. Hides, it says, have risen 1 cent per pound, and boots and shoes have advanced 50 cents to \$1.50 per pair according to quality.

Royal Botanical Garden, Kew. The Director of this world-famous garden, from its commencement under George III. has always been selected from the most distinguished botanists of the British Isles. The two Hockers, father and son, did much to bring the gardens to their present state of perfection: the latter, Sir Joseph D. Hooker who died in 1912, was in his youth a great explorer and collector, and is now remembered for his "Student's Flora of the British Isles."

The present Director is Sir Arthur Hill, to whose kindness I am indebted both for plants and information. Many scientists, now in responsible positions in the various nations of the Empire, had their early training at Kew, where there are laboratories, museums and libraries of every description, connected with plant life.

Decimalize the Pound? Some time ago these notes contained an account of former attempts to introduce a decimal currency into Britain, and an explanation why

## Value of Barn-yard Manure

(Experimental Farms Note)

The value of barn-yard manure varies to a great degree, depending upon the kind and quality of manure used, the types and fertility of soils on which it is applied, the methods of handling and time of application, the seasonal conditions during growing season, and on the crops grown following its application. Bearing these in mind, it would be impossible to place any set value that would apply at all times and under all conditions.

Some of these factors are demonstrated very clearly in an experiment being conducted at the Experimental Farm, Nappan, N. S. Nine years results are available on seven series of four plots each, carried in a four-year rotation. The soil is medium clay loam, uniform in character and in treatment prior to the start of this experiment. No commercial fertilizer has ever been used.

Series number one receives 16 tons of manure applied previous to the root crop in the rotation, series two, 12 tons and series three, 20 tons. Series four is a check and receives no manure applications. Series five receives 16 tons manure as a top-dressing on the clover sod, while series six has 8 tons manure applied previous to the root crop and 8 tons as a top-dressing on the oat stubble. Series seven is a duplicate of series one.

Using the increase in yield of the different crops over series four as due to the manure applications and valuing these increases at the market value, we find that the value of the manure in series one and seven, (averaged), is \$3.07 per ton; series two, \$3.15 per ton; series three, \$2.77 per ton; series five, \$2.38 per ton and series six, \$3.19 per ton. The average valuation over the entire area is \$2.94 per ton.

Assuming that the root crop uses 40 per cent, oats 30 per cent, clover 20 per cent and timothy 10 per cent of the value of the manure applied to the root crop, we find that the value of the manure on series one, from the increase in yield of swedes, is \$4.28 per ton, oats \$1.83 per ton, clover \$2.36 per ton and timothy \$2.26 per ton.

While these data show clearly that manure has a high valuation per ton, it demonstrates the effect of the methods of handling and time of application of the manure and of the crops grown following its application. Care should always be taken to preserve the full value of all manure by careful handling and in this way secure the greatest benefit from its application.

Probably loses 50 per cent of its strength: it should always be kept in some sort of an air-tight container. The pyrethrum producing this powder is now successfully cultivated in California, and I have heard that experiments with it are under way in Canada.

## Methods of Staking Tomatoes

(Experimental Farms Note)

Training the plants to one or two stems on stakes has been found an advantage in the home garden, and also in commercial production. Stakes five feet long and about one half inches square will be found very satisfactory. Steel rods are also very satisfactory. These should be five feet long and three eighths of an inch in diameter. The cost is quite reasonable since the life of these stakes is much longer than that of wood.

A wire trellis may be constructed, having the wires spaced nine to twelve inches apart, says Mr. T. F. Ritchie, Dominion Division of Horticulture. As soon as the plants are set out, one or two stems should be tied with soft twine or raffia to the stakes or wires, and all lateral growth or branches developing from the axils of the leaves should be pinched out. This has been found to produce very symmetrical smooth clean fruit, and in sections of Western Canada, or where the nights are cool in summer, the tomatoes have been found to ripen sooner than where the plants were allowed to grow on the ground. Another method that has been found advantageous in the higher altitude in British Columbia, is to set the plants in rows two and one half feet apart, with the plants one foot apart in the rows. Tying to stakes is resorted to and the plants are allowed to set from two to three trusses of fruit, after which, all new growth is kept removed.

In sections where it is difficult to get a quantity of ripened fruit, it may be found necessary to pull the crop before it is frozen. Fruits that have developed colour can be pulled and successfully ripened in the house, or the entire plants may be pulled and hung up indoors in a dark room, where it is moderately warm, and where a large amount of the fruit will ripen quite well.

PLANT 30,000 CAULIFLOWERS  
Nine years ago a Belgian family named Vanderbosch, experienced gardeners, emigrated to Canada and located in Saskatchewan. After working in various employments for five years, the father, Frank Vanderbosch, and his three sons purchased a small tract of land near the city of Regina, the capital of the province, and established a market garden. Today they have a thriving business in garden produce. This year they have set out 30,000 cauliflower plants and thousands of tomato plants and acres of other stuff. When the hot houses are not being used for other purposes, they are utilized for growing mushrooms and exceedingly profitable alderine and hundreds of pounds are sold in Regina and neighboring towns. The Vanderboschs are enthusiastic about Western Canada—"It is a very good work," says Vanderbosch Senior, "and if one is careful he can soon make a comfortable home and competence to boot."

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