

RED ROSE TEA "is good tea"

If you want the very best, ask for Red Rose Orange Pekoe In clean, bright Aluminum

The Cereal And Forage Crops of P. E. I.

The following was an address given before the Charlottetown Rotary Club yesterday, by Mr. J. A. Clark, M.S.A., Superintendent Dominion Experimental Station:

The Rotary Club has been favored with a very interesting series of addresses on different phases of our Agricultural Industry. You have listened with great interest to those who spoke of the executive work of the Department of Agriculture and their search for markets for our farm products. You have heard how quality has been sought and attained in P. E. Island Live Stock, Dairying, Eggs and Poultry, Furs and Potatoes. You have heard many times that Agriculture is our basic industry. Today I wish to speak for a short time on the foundation underneath this basic industry, which is our field crops. Our basic industry cannot prosper without the profitable economic production of our field crops. "The farmer feeds the world," but he must first feed the plants through the soil; he must feed the animals that produce milk and its products, beef, pork, mutton, wool, furs and horse labor; he must feed the birds that produce eggs and dressed poultry; all these are fed with plants and their products, that are grown in co-operation with mother earth.

Crop Production.

We plant the seed. Like reproduces like. The seed should be the very best obtainable. We make the seed bed. The home of the plant. It requires much labor to secure the necessary tilth. Plants must have sufficient food available throughout their life period. The manure and waste products from live stock husbandry supplies the natural and best source of available plant food; just as dairy husbandry supplies as by-products the best and most economical source of protein foods for calves, poultry and swine. Barnyard manure has been referred to as the farmers' best bank. Carelessness and waste in its handling will bring greater and surer losses than speculative financial investments. To secure large crops of the best quality on increased areas, the supply of manure can be profitably augmented by the judicious use of chemical fertilizers. We have found that it is much better to apply both of these in moderate quantities and at more frequent intervals than was formerly done with the seven year P. E. Island rotation. This method gives greater average crops and more uniform products for our market production namely: moisture, soil aeration, heat, light and favorable climatic conditions are most bountifully supplied, without cost, as nature's contribution to this Garden Province of Canada.

From statistics supplied by the Provincial Department of Agriculture there were grown in P. E. Island in 1927 more than one-half million acres of field crops. This

did not include gardens, orchards, nor pasture lands. The estimated value of these crops was almost thirteen and one-half million dollars. Their total weight would be well over one million tons. If they had to be transported by rail it would require at least seventy-one thousand standard freight cars loaded to capacity. These coupled together would require 504 miles of track space. In other words, if the Prince Edward Island Division of the Canadian National Railway were double-tracked from Tignish to Elmira, including all its branches and loop lines, there would still not be standing room on all these tracks for the cars that would be necessary to hold at one time the 1927 field crops of this Province.

The January, 1928, number of the Dominion Census and Statistics Monthly gives a six-year summary by provinces of the yield per acre of the principal field crops of Canada. This shows that P. E. Island had a ten per cent. higher yield of roots than any other province; that it was second only to New Brunswick in yield of potatoes per acre; British Columbia was the only Province that had a higher yield of wheat per acre; Ontario was first, British Columbia second, and P. E. Island third in yield per acre of barley and mixed grain. We were fourth in oats and fifth in hay production per acre, with British Columbia, whose cultivated land lies in fertile valleys and rich delta areas, leading in both these commodities. The three-year average value of "Island" field crops per acre was \$29.12. This was second only to British Columbia and forty-four and one-third per cent. greater than the average for all Canada which was \$20.18 per acre. These records give the average yields of our principal field crops for a six-year period ending December, 1927, as follows: Oats, 33.6 bushels; barley, 22.4 bushels; potatoes, 186 bushels; roots 423.3 bushels and hay 149 tons per acre. These as already shown compare most favorably with the yields from the other provinces. Should we be satisfied or even pleased with this showing. No. These figures are so far below what our best farmers are doing that to maintain our standard as "The Garden of the Gulf" we must greatly increase our crop production per acre, for that is the way to make farming more profitable in this Province.

The Secretary of the Potato Growers' Association suggested that the great increase in the quantities of fertilizer being imported and used would increase the yields of the other crops that follow potatoes, but is that what has happened? The statistics quoted (and they are the most reliable obtainable at present) do NOT show any such increase throughout the province. We have seen many instances of such increased crops on individual farms, particularly where the owners sought and obtained the most reliable information regarding the mixable and quantities of fertilizers that should be applied to secure economical returns from definite crops. The majority of farmers do not seem to be getting anything like

full value for the large quantities of chemicals that are being applied per acre or noticeable increases would appear in other crops besides potatoes. Neglecting last season, with its destructive storms and wet harvest conditions, still the tendency of the crop yields per acre, has not been upward in recent years. We endeavored some years ago and again last season to find out through our potato inspection service, what fertilizers were used? The total application per acre and the actual yield following different rates of fertilizer used by our farmers. From this data learned that not only individuals but certain districts were using formula that were not based on economy or good practice. Enough potash has been applied per acre, for a single potato crop as would be removed only by 636 bushels of potatoes or 1000 bushels of oats or 10 tons of clover hay. Some other factor limited the crop yield to 300 bushels of potatoes or less, and the potash that was probably bought for cash will lie idle in that soil for years. Dr. Frank T. Shutt, Dominion Chemist, estimates that to exhaust average soils of their natural potash would require 227 average crop years. Everyone using fertilizers should study Dr. Shutt's recent bulletin No. 92, on "Manures and Fertilizers." It can be obtained free by writing, The Chief, Publications Branch, Dept. of Agriculture, Ottawa. Our experience confirms Dr. Shutt's suggested formula, but for our hungry sandy loam soils, the quantities he recommends per acre may be economically increased by one or two per cent. We are frequently asked if fertilizers ever injure soils. They have, in the course of time at the Rothamsted Station and elsewhere, been observed to injure the physical nature of certain soils. We believe it is much safer to use them in a regular rotation to maintain humus and increase fertility. In other words to provide a suitable media for the development of myriads of our useful soil assistants, bacteria and other forms of soil life.

The soils of this province are naturally deficient in lime. Much has been written about the value of this amendment, particularly in connection with the growing of clover and alfalfa. There is no doubt in my mind that there is a significant co-relation between the decreasing activities in shell mud digging or the importation of agricultural lime and the decrease in the yield of farm crops throughout P. E. Island. We have taken soil samples from Palmer Road to Red Point and from St. Peter's to Wood Islands. The analysis of these show that the lime requirements of our soils range from 2,000 to 4,000 pounds of ground limestone per acre. Why are the little agricultural lime been imported or crushed at Miminegash? The only answer I know is because of potato scab, an external disease of potatoes. It ruins the looks and the sale of potatoes, but frequently improves their eating qualities.

The area of potatoes grown last year was about 4 per cent. of the area of the Island, or 6 per cent. of our cleared land. A three-year rotation of potatoes, grain and clover should produce large yields of certified seed potatoes, grain and hay. Such rotations should be located on suitable soil free from scab infestations. They would only require some 12 per cent. of the area of our province, or 18 per cent. of our cleared land. Should the potato industry double or treble with improved transportation facilities, which may be the limiting factor for years in the expansion of this business, there would still be one-half of our cleared farm lands that will not be required for potatoes. We, therefore, suggest that definite areas on our farms be set aside for the rotation containing potatoes and that the

balance which would be over 50 per cent. of our farm lands receive such soil amendments as shell mud, ground limestone and quick lime. If a slogan is required, we would suggest: "The use of lime with manure never made a farm or farmer poor," or "Our unseemly assistants in the soil. These require manure and lime to double the value of labor and toil, by producing field crops better than prime."

The Rotary Club has entertained on a number of occasions the operators of our Illustration Stations. These men have been assisting our Branch in demonstrating the value of good rotations, improved seed and good cultural methods, fertilizers and manure in the production of field crops. Some of these stations were in average fertility when started; others were in as low a state of fertility as could be located. An examination of the records of these show a steady increase each year in the yields of their field crops. The five Illustration Stations that have been in operation for five years gave during the following average yields: Oats, 38.5 bushels; potatoes, 325 bushels; roots, 720 bushels, and hay 178 tons. These yields are greater than the average for the province by 14 per cent. for oats, 72 per cent. for potatoes, 70 per cent. for roots, and 22 per cent. for hay. If similar increases could be secured on all the farms of the province we would have to add 22,000 more standard cars to those already mentioned, to hold one year's crop, and provide them with 156 additional miles of track for standing room.

Forage Crops.

There is a great future ahead of forage crops in this Province. Their estimated combined value last year exceeded the estimated value of our potato crop by about one million dollars. They are used almost entirely in the feeding of live stock. The exceptions to this being the very considerable export trade developed for table stock, swede turnips and Brown Top grass seed.

Roots.

To those near good shipping points swede table stock turnips has been one of their most profitable cash crops. On account of their weight and bulk and comparative low value per cwt. the distance that they can be moved profitably for shipment is not great. Labor and transportation are the factors that control the economic production of roots on our farms today. We recommend that wherever possible the roots should be grown as close to the homestead to reduce these costs. Varieties that are high in dry matter and resistant to the club-root disease, such as the Charlottetown strain of Bangholm Selected swede turnip are recommended. This variety will produce the same quantity of actual (drying material (dry matter) and save the grower from having to haul an extra ton of water per acre from the field to his cellar or shipping point. The consumer would also save paying extra freight on about one ton in every twenty-five. One

Sootha-Salva
THE GUARANTEED OINTMENT UNEQUALLED FOR BOILS AND ULCERS

LOADING LIVE HOGS AT NORTH WILTSHIRE. — Thursday, April 5th. Elmer Clow for Harry Jenkins. 3510-3-31-31

LOADING live hogs at North Wiltshire Thursday, April 5th. Elmer Clow for Harry Jenkins. 3533-4-2-21

SEED OATS — Now in stock No. 1 Ontario and Western White Banner and Victory Seed Oats. Book your orders early as we have only a limited supply. A. HORNE & CO. 4-3-tts.

SEED WHEAT — Marquis, White Russian and Red Pile Wheat, also Barley, Buckwheat, Peas, Vetches and Corn, all of which we are selling at lowest prices. A. HORNE & CO. 4-3-tts.

CLOVER AND TIMOTHY SEED — We have just received our season's supply of No. 1 Early, Late, Alder and White Clover and Sweet Clover, Timothy Seed, Turnip Seed and Mangel Seed, all of which we are selling at lowest prices. A. HORNE & CO. 4-3-tts.

RECEPTION AT CLYDE RIVER — On Tuesday evening, March the 27th, a number of young people of Clyde River and Dunedin gathered at the home of Mr. and Mrs. Kenneth MacNeil of Clyde River, to tender their earnest congratulations and best wishes for a long and happy wedded life. The large crowd, turning out on such a disagreeable night, showed their respect and affection for Mr. and Mrs. MacNeil, and also testified to the popularity of this young couple. During the early part of the evening many participated in the different games, such as auction forty-fives, five and several parlour games. Calling the gathering to order, Miss Viola MacKinnon read a carefully worded address which was accompanied by a presentation. Mr. and Mrs. MacNeil received a substantial sum of money. When Mr. MacNeil had briefly replied, thanking the "bunch" for their nice gift, he and Mrs. MacNeil were both bounced and everybody lustily sang "For They are Jolly Good Fellows." Then the ladies served a dainty buffet lunch, the excellence of which was proven, by the rapidly with which it disappeared. Evidently agreed Clyde River and Dunedin ladies are culinary experts of the highest order. Lunch being over, the floor was cleared and dancing held full sway. In the wee sma' hours the crowd departed for their homes well satisfied with their enjoyable evening.

There is not time to discuss at any length the individual cereal or forage crops. Mention should be made, however, of a few outstanding ones. It is safe to say that the majority of the two and three-quarter million dollars worth of oats grown last year was Banner. We recommend this variety as suitable for well-drained early land. Victory oats has outyielded Banner at all of our Maritime Experimental Farms, and may replace it in time. Alaska oats is recommended for late seasons or late heavy land. It is a very early variety and last season it was ripe before the rust struck which ruined so many fields of Banner. We have a very promising new introduction this year, but will have to test it out under our conditions before distributing it.

The Charlottetown No. 80 barley is so well known that a few words will show its metric rise and growth. We selected several promising strains out of the "Old Island Two Rowed" barley in 1912. The original was purchased from Mr. Ernest Bullman, whose father, Mr. Frederick Bullman, had grown it for many years. The Woolfingers of Rustico, brought it out from England some fifty years previously. It closely resembles English chevalier, but contained many plants differing from that type. This may have been due to natural crossing which occurs more frequently with cereals in P. E. Island than has been reported elsewhere. We are at present testing many strains originated here by natural crosses. We have established a pure line of Charlottetown No. 80. This variety was first registered in 1916 C.S.G.A. No. E8856. Our veteran seed grower, Mr. James E. Murphy, of Augustine Cove, refers to it as the "Farmer's Barley." It has practically replaced all other sorts in P. E. Island, due partly to the decided character of its awns, but mainly to its high yields of superior quality grain. It is gaining in popularity rapidly in the other Maritime Provinces and is spreading throughout Canada and the Northern States.

Huron wheat has been a leader at many of our Experimental Stations, but has not become popular probably due to its being an awned variety so flinty hard that it requires tempering even in our climate before it can be satisfactorily milled. Garnet wheat is receiving well merited attention at present. For those needing an early sort for late heavy land or who wish an early variety that can be harvested and out of the way before potato digging, Garnet is recommended. The heaviest yielding sort of high quality wheat at the Charlottetown Station will have to remain some years yet in our testing plots. For those needing evidence occasionally of its hybrid origin by producing unlike plants from an individual head.

Grasses.

Our Province became famous almost overnight by the discovery that our fly-away-grass (wild natural grass) was none other than Brown Top (Rhode Island Bent) one of the best turf grasses for lawns and golf courses. Mr. Gordon MacMillan, Federal seed inspector, has furnished me with the following facts concerning the extent of this trade from the records of the P. E. Island Grass Growers' Association. This co-operative organization was organized in 1926 for the grading and marketing of Bent grass seed. They own a valuable cleaning property on the C. N. Railway line between the Charlottetown Condensed Milk Co. and the Charlottetown Can Co., Ltd.

Table of quantities and values of Bent grasses marketed from Prince Edward Island:

Continued on Page 8

Central Guardian
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Zam-Buk Will Soon Put You Right. Zam-Buk quickly invigorates the tissues and clears them of all impurity. Zam-Buk is a natural preparation of extraordinary fineness and purity and not a mere ointment compounded from pore-clogging fats and mineral drugs. The potent herbal essences in Zam-Buk soak through the tiny pores and heal from below, thereby regenerating the entire tissue. In this, the only natural way, does Zam-Buk expel impurities, ails, pain, irritation and inflammation, and restore perfect skin health. "Then 'Spring-cleaning' remember that Zam-Buk heals and prevents sore hands and takes all pain and danger out of cuts, scratches, burns, scalds, abrasions, etc. Zam-Buk is also a fine remedy for eczema, salt rheum, shaving soreness, boils, abscesses, poisoned wounds, ringworm, bad legs, ulcers and piles. Soc. No. 3 for \$1.25 all drugists.

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The cost of food is so small compared with the value of the Silver Foxes that ranchers consider it only a matter of good business common sense to feed the best which is always the most economical.

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Honey Beige, Cut-out Tie, as shown at Style Show.

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Dainty and Beautiful, Honey Beige Tie, Swede Panel.

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Many Styles from \$3.45 to \$10.00

Beautiful New Colours in Hosiery
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