

OUR FARM PAGE: ITEMS OF INTEREST TO EVERY FARMER

The Outlook for Wool

What is the 1940 wool clip going to be worth? Such is the burning question put forward whenever two or more shepherds get together. It is most often asked by those who sold at shearing time a year ago instead of consigning for co-operative sale on a graded basis and who as a result shared not at all in the higher prices ruling after the Declaration of War. They know now to their sorrow that their neighbours who consigned their clip to the Co-operative Wool Growers got 4 to 5 cents per pound more than they themselves realized by selling it outright at shearing time.

Just what wool will be worth this year no one can definitely state but the shepherds can rest assured he will get the average price for the year if his wool is marketed co-operatively. Last September the Canadian Wool Administrator established a fixed price for wool, namely, 45c per clean pound. This order was cancelled in January and it is anticipated that the wool clip will be allowed to find its own level from day to day in keeping with outside markets. The fact that one-third of the Canadian wool clip in 1939 was handled by the Co-operative Wool Growers, indicates that a large percentage of the most important shepherds have learned from years of experience that they get more on the average for their wool clip by marketing through their own organization than by marketing through any other channel. If you are going to get the most out of your wool it is important that you not only market co-operatively, but that fleece be tied properly, and to this end we would remind you that you can secure sacks and paper twine free of charge from the Agricultural Office in Milton.

In conversation with Agricultural Representative J. E. Whitehead, we also learned that his office is prepared to co-operate with Halton shepherds in controlling internal parasites in sheep by staging demonstrations wherever they may be requested. Those interested either in wool supplies or in securing further information re proposed demonstrations for control of internal parasites should contact the Agricultural Office in Milton.

Appeal to People Save Wild Flowers

Some of Canada's most beautiful wild flowers have disappeared forever. For many years the system of land development has been destroying the flowers. The woodman's axe, clearing and cultivating farm lands, building up cities, close grazing of fields and woodlands, forest fires, and erosion of the soil have all been responsible for the destruction of the natural floral beauty of Canada. The toll has been increased by ignorance or thoughtlessness of persons in regard to what is left of the wild flowers, and unless some care is taken by the present generation and its successors, there is the possibility that no wild flowers will be left in the Dominion.

The preservation of wild flowers does not mean that no one is to pick them but it does demand a little thought on the part of the picker. For example, some wild flowers should not be picked at all. Plants like the white trillium are best left alone because they cannot be picked without removing all the foliage upon which depends the maturing of the bulbous root for the following season's crop of flowers. Other species, like violets and hepaticas whose flower stem rises directly from the roots may be picked at will, provided the body of the plant is left undisturbed. Tearing up a plant by the roots to gain a bloom is wanton destruction and can end one way—the passing of beautiful wild flowers from the Canadian landscape. It is against reckless plucking of wild flowers that the various horticultural societies throughout the Dominion make an appeal to the people of Canada.

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Little Chats ON Farm Management NO. 9

VARIATION IN FARM EARNINGS

One of the striking facts revealed by farm surveys is the wide variation in yearly earnings from farm to farm. This has been demonstrated again by a project recently undertaken by the Economics Division, Marketing Service, Dominion Department of Agriculture, in co-operation with the Agricultural Economics Department of the Ontario Agricultural College, Guelph. Detailed records of the farm business year ending May 31, 1939, were secured from 268 operators of hog-producing farms located in Eastern Central and Western Ontario, including records from the Counties of Leeds, Lanark, Grenville, Wellington, Waterloo, Perth, Kent and Lambton. The range in farm earnings for the year was great in the Kent-Lambton area. Here the variation between the highest farm, which had earnings of \$4,316, and the lowest farm, which lost \$1,234, was \$5,550. The earnings of the 74 farms visited in this area were distributed fairly widely between these two extremes with an average for all farms of \$986. However, it is a significant fact that at least one farm had earnings approximately \$3,500 above the average, and considerable number had earnings one, two, and three times greater than average.

A similar variation in earnings from farm to farm was found in the Central and Eastern areas visited. On 107 farms located in the Counties of Wellington, Waterloo and Perth, the average earnings for the year was \$1,096, with a range of over \$3,000 between the highest and lowest farm. In the Leeds-Lanark-Grenville area, the earnings of 85 farms ranged all the way from a low of (minus) \$645 to a high of \$3,968.

How then can the fact be accounted for that in each of the three areas visited, some farms were highly successful and some relatively unsuccessful? The answer to this question lies largely in the individual farm business manager himself. By carefully comparing and analyzing the yearly records of the 268 farms, it has been possible to isolate the factors chiefly contributing to financial success in farming. The first essential is to build up a sufficiently large volume of business, consisting of a well-balanced and efficiently managed crop and live stock program. A small farm business, no matter how skillfully managed, cannot be very profitable because the difference between receipts and expenditures will not be large, and labour and capital will not be put to its most effective use. In this study the most successful farm managers were those with live stock above average in numbers and quality, supported by a cropping program featuring yields above average of the most profitable varieties of crops. Lack of success was generally due to failure to conduct operations on a sufficiently large scale, or as a result of poor crop yields and non-productive live stock.

The Value of Hybrid Corn

During the past twelve months hybrid corn has been widely advertised throughout southwestern Ontario. The claims have been so favourable that many farmers are asking "What is the real value of hybrid corn?" For three years many corn hybrids have been tested at the Dominion Experimental Station at Harrow and, as a class, they have proved conclusively their superiority over the standard open-pollinated varieties now grown in the district, states O. F. H. Buckley, Senior Assistant, Forage Crops.

The major assets of hybrid corn are (a) greater vigor, (b) uniformity, and (c) increased yield. Vigor is expressed in the denser root systems and more robust stalks of the hybrids. The dense root system provides greater anchorage for the plant, and since it penetrates the soil more extensively in all directions, the source of food supply for the plant is much increased. This all has a great effect upon the plant's growth, making it robust and better able to withstand adverse conditions. Hybrid corn will not be as readily uprooted by winds or heavy rains as ordinary corn. The stalks being sturdier are less apt to break over or lodge. It also appears to withstand corn borer infestation to a higher degree, not that it is resistant to corn borer attack, but the sturdy stalks are able to tolerate more borers without breaking over.

Probably the greatest asset possessed by hybrid corn is its high yielding ability. During 1939 the Dominion Experimental Station at Harrow conducted tests at several points in southwestern Ontario. In these tests the hybrids outyielded the standard varieties by a considerable margin. Some by over thirty per cent, though the majority yielded between fifteen and twenty-five per cent more than the checks.

Farmers who are planning to grow hybrid corn for the first time are advised to communicate with their nearest Experimental Station or Agricultural Representative in respect to the choice of hybrid.

Importance of Organic Matter in Soils

Although by far the greatest fraction of an ordinary mineral soil is derived from the weathering of rocks, decomposed rock fragments alone do not constitute a soil, states H. J. Atkinson, Division of Chemistry, Dominion Experimental Farms Service. The presence of organic matter is necessary in order that this mineral matter may become a soil and grow crops successfully.

Most of the soil organic matter is derived from growing plants, but some of it also comes from decomposing animal remains. In the decomposition of these materials, complex chemical reactions take place which not only give simple compounds such as ammonia and carbon dioxide but also bring about the accumulation of a complex material commonly known as humus.

Soils containing less than 3 per cent of organic matter are considered to be low in that constituent; those containing around 10 per cent are very well supplied. The so-called organic soils, mucks and peats, have very much higher quantities of organic matter, varying from 20 per cent to 80 per cent or more.

It has been observed generally that soils well supplied with organic matter are more fertile than those of low organic matter content. This constituent has a number of very important functions in the soil. One of these is as a storehouse for certain plant nutrients, particularly nitrogen. The decomposition of soil organic matter is brought about through the activities of millions of bacteria. These bacteria derive their energy from the humus, and in the process, break it down into simple substances, releasing nitrogen, sulphur, etc. in forms in which plants can use them as food. Any cultural practice which will encourage the growth of bacteria in the soil without at the same time causing extreme loss of nutrients will result indirectly in improved plant growth because of the more rapid decomposition of the plant residues and humus which will take place.

Organic matter is commonly added to cultivated soil either in the form of manure, or the ploughing under of a growing crop, a process which is known as green manuring. The latter practice not only returns to the soil the nutrients taken up by the growing crop but also enriches the soil with humus-forming material. If the crop being ploughed under is a legume, it is also possible that considerable nitrogen which has been obtained from the air by the legume is added to the soil. The application of barnyard manure also adds organic matter to the soil and considerable plant food, especially nitrogen, phosphorus and potash, and in addition, it increases the active bacterial population of the soil, the benefits of which have been pointed out above.

Organic matter in soils also improves their physical condition. On clay soils it has a leavening effect, giving better drainage and aeration. On sandy soils, it tends to bind the particles together due to its greater cohesive power than the sand. It also increases the water holding capacity of the soil, a factor that is important in districts of low rainfall. In general, it improves till and thus facilitates drainage, root extension and bacterial activity.

The effect of organic matter on the physical condition of the soil is so marked that it is claimed that the presence of 15 per cent to 20 per cent of organic matter almost completely removes the distinctions between sands, loams and clay.

Canada's Mineral Resources in Wartime

The mineral resources of Canada rank among the greatest in the world. Rapid and successful development of these resources, especially during the past quarter of a century, has given the Dominion a leading position among the mineral producing nations. At the outbreak of the war in 1914, Canada's mineral production was valued at slightly less than one hundred and twenty-nine million dollars. In contrast with this figure the value of mineral production in 1939 reached a new record of over four hundred and seventy million dollars, and during the past decade mining has become Canada's second greatest primary industry. Now records were set up during 1939 in the production of gold, copper, nickel, zinc, antimony, cadmium, crude petroleum, natural gas, gypsum, sulphur and lime. The gold output which was valued at over one hundred and eighty million dollars, passed the five million ounce mark for the first time in history. The Dominion's known reserves of gold ore are sufficient to assure the present rate of production for many years to come and new sources of the metal are being steadily disclosed. During the past year a total of twenty-four new gold mining plants entered production.

Canada produces a wide range of the non-metallic minerals, chief of which is asbestos, but the list also includes gypsum, salt, sodium sulphate, magnesite, dolomite, sulphur, rock wool, nepheline syenite, clay products, and other structural materials. For the most part these minerals occur in abundance but with the exception of gypsum and asbestos are marketed mainly within the Dominion. Many of them form the raw materials for the chemical industries and are thus of strategic importance in wartime. For instance, 45% of the salt output is used for this purpose.

In the last war Canada's production of the leading base metals in refined form was of very small importance, but today the opposite is the case and most of the base metal output is now refined within the country. This change has been brought about by an abundance of cheap electrical power and by the expenditure of hundreds of

millions of dollars in the erection of smelters, refineries, and other metallurgical plants; and in the development of mineral properties. The rated capacity of most of these plants could be enlarged to meet any likely increase in the demand for metals for war purposes with very little additional expenditure. Modern mechanized warfare creates a tremendous market for base metals and Canada holds an exceptionally strong position with respect to these. Her ore deposits have been developed to a point where she has attained a leading position among world producers, ranking first in nickel, second in zinc, third in copper, and fourth in lead.

Considering iron a base metal, perhaps one of the most significant developments in the past year was the entry into production of an iron ore property located in north-western Ontario, the output from which represented the first production of iron ore in the Dominion since 1923. Of importance also was the discovery about the year 1935 of a large deposit of high-grade iron ore about one hundred and forty miles west of Fort Arthur in Ontario. This property is now being actively developed. The development of these properties is being followed with keen interest, for although Canada has long been an important producer of iron and steel, her entire requirements of iron ore have been imported.

The new record of 7,743,000 barrels in 1939 was the fourth in succession for the production of crude petroleum in the Dominion. About 97% of the output came from the Turner Valley of Alberta where crude oil was first disclosed in June, 1936. Between ninety-five and one hundred crude oil wells are now in production in this field, and twenty other wells are being drilled for oil. The remainder of Canada's crude oil production comes from wells in southwestern Ontario, the Moncton field in New Brunswick, and Fort Norman in the Northwest Territories. Oil from the Norman Wells is used to supply the fuel needs of the radium mines at Great Bear Lake and other mining properties in the Northwest Territories, as well as supplying the motive power for most of the transportation in this area.

The administration of mineral lands in Canada is either under Federal or Provincial jurisdiction, the Provinces having control of the minerals occurring within their boundaries while the Dominion Government administers the mineral resources of the Yukon and the Northwest Territories. The Department of Mines and Technical Surveys at Ottawa is organized to meet the requirements of the mineral industry of Canada in the fields of geology, method of ore treatment, and uses for minerals. It assists the industry, and particularly the prospector, by the examination of promising mineral areas and by publication of detailed maps and reports on these areas. It follows up these activities by maintaining fully equipped metallurgical laboratories at Ottawa, and full

use of these is being made by mining operators throughout Canada. Matters relating to plant operation, ore treatment processes, alloys, and metallurgical problems of all descriptions, are dealt with daily. Enquiries as to suitable types of equipment for new milling operations are handled, and most of the gold mines in Canada which have entered production during the past decade are using ore treatment processes in some form or other that have been devised in the Department's laboratories.

The variety and abundance of Canada's mineral resources places her in a favourable position to help the cause of the Allies by supplying in large quantities their mineral and metal requirements for war purposes. The Canadian mining industry, which played such a notable part in helping the Dominion to fight the depression of a few years ago, seems destined now to make a still greater contribution to the wider struggle against dictatorship and aggression.

—By revenge a man is even with his enemy but by forgiveness he is superior.

FARM RADIO LISTENERS SHOULD TUNE IN TO ANTI-WEED CAMPAIGN PROGRAMME

During the first Great War, weeds became a serious menace to Ontario farmers. In order to prevent a recurrence in this war of that situation, Provincial and Municipal authorities are co-operating with farmers in staging a serious weed campaign this year. The CBO Farm Broadcast Department plans to do its bit in this worthwhile endeavour by having someone in close touch with the weed campaign interviewed by Don Fairbairn on the Farm Broadcast for the Ontario region every Thursday for the next few weeks. The Farm Broadcast is on the air Monday to Friday inclusive over stations CBL, Toronto, CBM Montreal, CBO Ottawa, and CHLT Sherbrooke, 1.30 p.m. EDST (12.30 p.m. Eastern Standard Time).

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