

Reduction in Fire Losses

Practical Results Obtained in Fire Protection Service by Railways.

As the Fire Inspection Department of the Dominion Railway Commission was not organized until the month of June, the railway fire statistics for Canada for the season of 1912 are not complete. Figures are, however, available for all except the spring fires of 1912. The entire season of 1913 was covered, but the reports for 1914 have not yet been received from the field.

To give a general view of the situation in western Canada in 1912 and 1913, the statistics of the Canadian Pacific Western Lines, Canadian Northern, Grand Trunk Pacific and Great Northern Railways have been combined. These four lines include practically all the railway mileage in western Canada.

The total number of fires reported as having started within 300 feet of the railway track was 196 in 1912, and 467 in 1913. Of these, in 1912, 160, or 82 per cent, were reported as having been started by trains, while in 1913, 295 fires, or 64 per cent of the total for that year were reported as having been due to that cause. While the total number of fires reported in 1913 was greater than in 1912, the area burnt over was less; the figure for 1912 was 25,008 acres and for 1913 only 2,360 acres. The total area burned in 1913 was thus only 9.4 per cent of the area burned in 1912 by fires originating within 300 feet of the railway track. The total value of property destroyed by such fires in 1912 was \$83,380 and in 1913, \$12,250. It will thus be seen that in 1913 the railway fire situation showed a great improvement over that of 1912. There was a material reduction in the percentage of fires caused by trains as well as in the total area burned and value of property destroyed.

While the figures of 1914 are not yet available, it is known in a general way that there has been continued improvement in the railway fire situation, due to the increasingly efficient organization of the railway companies on the one hand and of the Fire Inspection Department of the Railway Board on the other, in the handling of this work.—C.L.

Tree planting in the west is important; the renewing of the white pine is important; the pulpwood question is important; many other phases of the question are important, but the all-essential thing in regard to the question of forests is to get the community wakened up to the idea that at any cost the destruction of forests by fire must be stopped.

Farm Losses

MANURES

The manure problem is a fundamental problem for the farmers of today and tomorrow. One of the most important lessons for them to learn is how to obtain good barnyard manure; and then, to care for it and use it intelligently.

In many parts of Canada, the manure is simply thrown away.



Cut No. 81. Saucer-shaped bottom to barnyard of concrete, preventing loss of valuable liquid manure.

In Ontario, 186 farmers out of 200 visited exercised no care to prevent waste, and in Quebec conditions are nearly as bad. In other places, notably in the west, it is burned; and, in places where the manure has accumulated, the stables have been moved away, instead of making use of the manure. This means a great annual loss. At the present price of plant food, the amount of manure produced in the United States every year is worth nearly \$2,500,000,000. In 1908, the value of the whole corn crop in the United States was only \$1,601,000,000. These figures show the enormous importance of manure production.

The greatest sources of loss are from allowing the liquid portion to drain off, from leaching by rain, and from heating and fermentation.

The liquid is much more valuable in plant food per pound than the solid. In cow manure the total liquid portion is about the same as the total solid portion. Yet many farmers arrange their stables to drain off the liquid. *Don't do it.* In this way from \$10 to \$15 worth of fertility, per cow, can be lost annually.

Where possible, the manure should be spread on the field as made. It saves handling twice, and there is a greater tonnage than at any other time. This can be done provided the land is not so hilly as to cause the manure to be carried away by rain or melting snow. The effect of green manure will be seen for a longer time than that of rotted manure on account of the decomposition taking place in the soil. If this can-

not be done, by all means have a covered shed where the manure can be stored, where it will be packed by stock tramping on it, and where it will be kept moist. If it is kept tramped and moist, and if the shed has a cement floor, there will be very little loss.

Experiments in the west have shown that a very light application of barnyard manure in the spring after sowing, as a top dressing on soils having a tendency to blow, gives excellent results, not only preventing blowing but giving increased yields from the added plant food.—F.C.N.

Larger Profits as Final Result

Temporary Advantage only Gained by Neglect of Systematic Farming

The report of the Commission of Conservation's Agricultural Survey for 1913, specially emphasizes the absence of a systematic rotation of crops in every province. In some of the older districts of Ontario, the rotation followed approaches more nearly to the ideal than in any other portion of the Dominion, but, even there, the area in horse crops is not large enough nor are the rotations arranged systematically, so as to cover the whole tillable area of the farm within a reasonable length of time. In Manitoba, practically no clover and no hoe crops are grown. Although summer-fallowing is commonly practised, yet the continual cropping of wheat from the same field is of too frequent occurrence.

If a western farmer were asked why he does not vary his crops, he would probably answer that he grows wheat because it pays better and that he will continue to grow it so long as it yields him the maximum return. It may be true that wheat yields a higher net return per acre than any other crop and yet this does not justify the raising of wheat on every available field.

Other factors, besides the net return per acre, enter into the problem of the selection of crops. One must consider the effect of a crop upon soil fertility, the demands it

makes upon farm labour, and the necessity of keeping fields free from weeds. It may even be profitable to grow a crop which, valued by itself and without relation to the farm operations as a whole, is produced at an apparent loss. Such a crop must be regarded as a by-product, i.e., as something which is not profitable for its own sake, but which gives adequate returns when produced as a part of a larger enterprise.

For instance, by varying crops it is possible to distribute the year's work more evenly and thus to reduce the cost of labour. The saving so effected should be credited to the apparently unprofitable crop. Or again, it pays to grow a crop at a loss when it exercises a beneficial effect upon the soil, as raising mangels for the sake of the cultivation or clover to plough under to supply nitrogen for future crops. It pays to put good wheat land into pasture for two or three years to kill weeds and to obtain the manure. The same principle applies to live-stock as well as to crops. Hogs may not pay for themselves but they may give handsome returns in conjunction with cows. The principle which the farmer must keep in mind is to so combine his various enterprises that he utilizes his land, labour and working equipment to the best advantage and thus secures the largest net return from the farm as a whole.

Fires and Some Results

According to the reports to the *Monetary Times*, the fire losses for October in Canada were, approximately, \$772,115, as against \$1,383,572 for October, 1913. This shows a considerable decrease, but there is yet room for a further reduction. Seasonal causes were responsible for a large number of the fires. Defective flues, sparks, over-heated stoves, furnaces and stovepipes, together with defective wiring, caused 16 fires out of a total of 35 fires reported in Canada, amounting to \$10,000 or over. All these fires could have been avoided. It is the duty of every person to give special attention to the prevention of fire. Canada needs all her resources for general business conditions. Destruction by fires requires the payment of large sums by insurance companies, but which must, in the end be paid by the policy-holder. Again, the insurance companies do not carry their resources as cash on hand, but have the money invested in interest-bearing securities. In the event of heavy losses the insurance companies must provide money to meet them and to do this they must of necessity dispose of these securities. With the stock exchanges closed this is a very serious problem. To overcome it, the banks have to advance the money, and this again reduces the amount in their hands for the accommodation of the mercantile community and manufacturers.