

Woodlots and Their Value

By Proper Utilization a Permanent Fuel Supply is Assured

Woodlots on the farms can be made an important factor in the relief of the threatened fuel shortage. Farmers and the residents of smaller towns and villages situated within hauling distance of woodlots, should, as a measure of practical patriotism, use wood in preference to coal.

Few farmers realize the value of the crop which can be obtained from their woodlots. If even a small proportion of the attention given to other crops were devoted to the protection and improvement of the "bush" a good financial return could be secured. Aside from its value in affording protection against wind and storms, its importance in the conservation of soil moisture and its aesthetic value, the woodlot has a considerable value for the crops which can be harvested from it every year at a minimum expense. It should have a place on every farm.

Live stock should be excluded as they destroy the natural reproduction, injure the larger trees and pack the soil so that the growth of the trees is retarded. Defective and diseased trees should be removed first; then those of poor form, such as very crooked or very branchy ones which interfere with the growth of better formed neighbours. The trees of the less valuable species such as dogwood, ironwood and hornbeam should then be removed. Every effort should be made to secure natural reproduction but, if that be impossible, planting will be found profitable.

The tendency has been to encourage the growing of soft-woods suitable for lumber, such as pine, spruce and cedar, but the function of a farmer's woodlot is better fulfilled by producing hardwoods for fuel.

The fuel value of one cord of several of the common kinds of wood is equal to the following quantities of anthracite coal:

Hickory and hard maple 1,800 to 2,000 lbs. of coal; white oak, 1,540 to 1,715 lbs. of coal; red oak, black oak and beech, 1,300 to 1,450 lbs. of coal; poplar, chestnut and elm, 940 to 1,050 lbs. of coal; pine, 800 to 925 lbs. of coal.

Therefore, hardwood is worth, to the owner of the woodlot, from \$6.00 to \$9.00 per cord, as compared with coal at \$10 per ton, plus the cost of hauling it out to his farm.

If a yield is to be sustained permanently, it should not exceed the annual growth which, in unmanaged woodlots, probably does not exceed $\frac{3}{4}$ cord per acre. This production can be considerably in-

creased by careful management. A woodlot may be considered as similar to a savings' bank account from which the annual interest, represented by the growth, may be taken out or allowed to accumulate. In the case of the woodlot, however, the withdrawals can be so made as to greatly benefit the condition of the stand and improve its productivity.

The Dominion Forestry Branch and the various provincial forestry organizations have done much to encourage farm forestry by sup-



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THE WOODLOT COMES INTO ITS OWN

The shortage of fuel problem has no terrors for the farmer who has a woodlot on his farm

plying advice and assistance. The Dominion Government distributes annually between 3,000,000 and 3,750,000 seedlings and cuttings among the farmers of the prairie provinces. In Ontario, the Forestry Branch of the Department of Lands, Forests and Mines also supplies seedlings for planting in farmers woodlots.—R.D.C.

Organization Needed

High Prices Due in Great Part to Speculation and Manipulation

High prices of food stuffs are due, partly, to the shortage of food, partly to waste in handling and, partly, to manipulation of the markets and to speculation. It is estimated that 80 per cent of the Canadian farmers sold their wheat last fall at \$1.40 per bushel. Who received the difference between that price and \$2.80 per bushel, the price which recently prevailed? Here is work for the food controller or a food dictator. The people are becoming restive respecting the speculation in wheat and in all other food products and would be glad to see the elimination of the speculator. Wherever profits are abnormal and unreasonable they should be confiscated.

The raising of cattle in Rhodesia has now reached the stage where meat canning plants must be provided to care for the excess output.

Douglas fir has been recommended for the reforestation of western Norway by the chief forester of that country.

Fertilizers and Farming

Fertilizers have a place in a rational system of farming; but farmers should first clearly understand what that place is, if our land is to improve rather than to deteriorate, and if financial loss, due to judicious purchase of fertilizers, is to be avoided. We must first have sound education, the outcome of science with practice, on the principles involved in the up-

clusive use. I feel assured we will never see the time when fertilizer can be profitably used as a substitute for those means which science and practice alike have shown to be necessary for the economic keep and increase of soil fertility.

But there is a place for fertilizers in farming, and we are asking our farmers to find it. There are those of the old school still on the land, however, who have faith in fertilizers, those who delegate them to the class of quack medicines, as frauds and fakes, who say they act merely as a stimulant to a tired horse—as stimulants, not food. The number of persons is happily decreasing. Again, there are others who, although ignorant of the principles of agriculture as those just referred to, argue that if fertilizers are sources of available plant food that is necessary to increase crop yields is to apply them generously. These persons are ignorant of the fact that there are limiting factors to crop growth other than the presence of available plant food. We may enumerate them. First, there is the nature of the physical condition of the soil, its capacity for holding moisture dependent upon its texture and humus content), in other words its power to withstand drought, its degree of aeration, its drainage, etc.—all those qualities of a physical character which make for easier development of the root system. Second, the character of the season, by which I mean the amount and distribution of temperature, hours of sunlight, etc. So far as we can see these seasonal conditions are the most potent of all determinative factors in crop yields in Canada, as probably also, all over the world. Thirdly, there is the inherent capacity for growth and reproduction in the crop sown. All these, with some others, are limiting factors that cannot be overlooked. They are factors which may and profoundly modify the effect of fertilizers. For instance, on heavy undrained clays, the chance is there that fertilizers will play their part in nourishing crops? On the other hand, if plants can only absorb their food in the form of a solution, how can fertilizers feed the crop, if, on account of lack of humus or want of surface cultivation the light is so readily dry up with a few days drought? Or, again, if we are sowing a variety of oats, the prolificness of which is measured at 40 bushels per acre, can we make yield 60 bushels by simply fertilizing? Many of these limitations may be in some degree overcome through the application of the teaching of science—of chemistry, physics and biology, but they will not be overcome simply by application of fertilizers.—Dr. T. Shutt at Annual Meeting of Commission of Conservation.

keep of soil fertility, on the composition, value, care and application of farm manures, on the desirability of moving live stock on the farm of the land's produce; on the importance of rotations; and especially the value of clover and other legumes in the rotation for maintaining the humus and nitrogen of a good seed bed. When all these matters are correctly understood and practised, then and not before, may we advocate the judicious employment of fertilizers with advantage, in general farming. Fertilizers are no panacea for the evils of poor farming—they cannot be depended on solely to give profitable yields, to leave the land richer for posterity than when first broken, or entered upon. That is what we ought to aim at, for our native fertile soils are a great and important national asset and inheritance. Our experience has shown that fertilizers cannot profitably be used as substitutes for manure, for the growing of clover, or for good soil management, but that their rôle is rather supplemental to all these rational means for the up-keep of soil fertility. I make this statement for two reasons. First: At the present time, those who are urging us to a large and practically universal, almost indiscriminate, use of fertilizers; and second, from our voluminous correspondence on the subject, it is evident that, for the most part, it is the man using poor farming methods who is clamoring for cheaper fertilizers, and who practically expects to conduct his farming profitably from their ex-