

ever, there was still an abundant wood supply within two or three miles and from these forests of fir and tamarac the entire village drew its fuel for all domestic purposes. Although wages for wood choppers were \$2.50 to \$3.50 per day, timber itself was cheap and the price of fuel delivered to the householder was \$3.50 a cord. Coal in the same village cost \$16.00 a ton and was quite beyond the reach of even the local magnates. Wood fuel was universal and not only were we supplied with a satisfactory fuel at reasonable cost but a profitable local industry was maintained, an essential industry supplying an essential need and yet of such a character that it could be organized on a seasonal basis and resorted to when other industries were compelled to close. Producer and consumer were in direct touch with each other, the market was always fully supplied but never over-supplied, and not only was intermediate handling and profit taking avoided but there was no huge transportation charge to be met. This, however, was a pioneer community, in a heavily forested region.

Logging in Brittany

Turn now to another and far different locality. For nearly a year the author was located in the ancient French province of Brittany in a region whose forest industries antedate the appearance of the Roman legions under Cæsar. His work was the logging and milling of wood products of all kinds from piles and dock timbers to duck boards and fagots for military use. He was in constant daily touch not alone with the military and official side of wood utilization but also with the local civil population and its problems of fuel supply. Here was a community, a purely rural community to be sure, but one of great density of population and possessing a forest history 2,000 years old, a community as far removed as can well be imagined from the pioneer settlements of the Cœur d'Alenes and yet solving its problem of domestic fuel supply in exactly the same simple, direct, economic and thoroughly efficient manner in which it is solved in the Cœur d'Alenes; that is, by drawing on the inexhaustible source of fuel residing in the forest producing capacity of its soils. It is true that here resort is had to materials and parts of trees not considered at all in regions of more abundant wood supply. Dead and defective materials of all kinds, branches and twigs, even stumps and roots are used. Also trees are produced in places unthought of in

other regions. Roadsides, the tops of earthen walls forming field boundaries, all the unnoticed and neglected corners of fields and orchards that here in Ontario when summed up are found to constitute no insignificant portion of our farm areas.

But what is even more significant than this utilization of lands which we ignore is the use of lands for forest production which could just as readily be employed for pasture or for other crops. The notion that the only lands economically adapted to forest production are those which have no value for any other purpose needs very careful limitation. In France alternation of lands from forest to agriculture or vice versa is by no means an uncommon procedure. And even in the Touraine, the garden spot of France, trees and forests are abundantly present. Two factors of great importance, but often ignored, enter into this problem. One is the small labor and other investment required for the production of wood crops. The other is the high cost of transporting so bulky a material as wood over great distances. Both of these contribute directly to make wood a profitable crop on lands which in many cases might also be profitably employed either for agriculture or for grazing.

Wood Fuel Employed

In France coal is available in the North, from Germany and from Britain. In Brittany, indeed, coal in normal times comes in very cheaply by sea from Wales and as no part of the ancient province is far removed from salt water, it may be said to be very favorably situated as regards coal supplies. But in all parts of the country wood fuel is commonly employed and this industry of supplying the essential need for fuel is as widely diffused as is agriculture itself and has all of agriculture's stabilizing social and economic characteristics.

Without wishing to minimize in the least the legitimate claims that may be made for the use of the most suitable fuel materials, for production in regions where production can be carried on most efficiently, for interchange of products on a most generous and far-reaching scale, nevertheless the writer believes that all too often the tremendous cost of carrying products over vast distances and of maintaining great distributing organizations is largely overlooked and that the more local and smaller scale production is really the more efficient in the long run.

Observe now the immediate situation which the writer faces. He

resides in the rural community of Trafalgar, Halton County, Ontario. His home is equipped with four fuel-consuming elements, a furnace, a water heater, a cook stove and an open fire-place beside sundry small electrical apparatus. His choice of fuel is limited to coal, wood and oil, electricity, though available, being prohibitive in price. Coal costs \$16.50 a ton delivered. It is brought 500 miles by rail, from Pennsylvania, and the bulk of the \$16.50 goes to support industry and industrial workers in a foreign country. A few years back it is said this same coal could be had for \$7.00 a ton. In the meantime, however, a railway award here, a miners' agreement there, a freight rate decision somewhere else, all by foreign boards or officers entirely beyond the control and entirely oblivious to the problems of the rural dweller in Halton County, Ontario, have so increased the cost of placing coal in Halton County coal bins that now the Halton County worker finds it necessary to give more than twice as much of his productive energy as once he did to satisfying his primary need for fuel.

If he turns to kerosene as a solution the situation is the same. Oil from a foreign source, produced by foreign workers, carried over foreign railroads, has responded to foreign economic and labor conditions and been affected by foreign rate and wage decisions just as has coal. Nothing is to be gained except in a minor way by the employment of oil in place of coal.

Wood vs. Coal

The only other alternative is wood. Wood, be it noted, is a local product. It can be produced in local wood lots, harvested by local labor, distributed with a minimum of effort by local means of transport. Admittedly it lacks the concentrated heat-producing capacity of coal or oil but it has certain advantages of its own, among them cleanliness, quick ignition and low ash product. It is not claimed by the writer that wood is a complete substitute for coal but as a partial substitute for purposes for which it is specially suited he believes it could be much more extensively employed than at present. In his own case he believes that he could advantageously replace at least three tons of coal with five or six cords of wood if he could get wood at the same price on a basis of heating values as he does coal and would gladly do so. Such uses would include employment for all cooking operations requiring a quick hot fire as well as for use as a supplementary heating agent in open fire places. And in the use of wood in