

Now take fuel in its widest sense, i.e., coal, oil, etc. The coal industry is declining in production relative to population. We have only found so far a relatively small amount of flow oil. Anyone viewing the growth of motor transport and use of oil fuel will realise that we cannot prudently continue to import at the necessary rate. Now most geologists are confident that the chances of finding payable flow oil in quantity in New Zealand are at least 66 per cent. in spite of the legend about the country being too broken up. We need, through geological survey, modern methods of prospecting, and thoroughly organised scientific search by competent people. I notice from the Press that certain foreign interests are to commence a search in certain areas in the North Island. Even supposing they are unsuccessful, and others also, then we shall be thrown back on production of 40,000,000 gallons of oil from coal, and it has been calculated that a production of 40,000,000 gallons of petrol per year by hydrogenation of coal in New Zealand would cost overall 8d to 9d per gallon, inclusive of all charges, obsolescence, etc. Five thousand miners could be employed steadily. This is, of course, a larger cost per gallon than the present imported price. Other methods for profitable utilisation of the coal might perhaps be suggested.

Next take the electrical industry; so far we have developed but a tithe of the water-power available from rivers

Industrial Development means Prosperity

(Concluded from last week.)

and lakes or from thermal sources, and we have obtained considerable experience in this development, and have carried out widespread reticulations, so that future developments can be carried out at a very considerably less cost per horse-power than the developments to date. Moreover, such cost of development is mainly labour, cement, etc., which are not imported.

So far we have used this electricity more or less for domestic purposes. The question is, can we develop electro-chemical industries on a big scale to take advantage of cheap power. Unfortunately we have not fully explored supplies of bauxite, so that we cannot easily develop an aluminium industry, nor have we many other minerals to operate on by present methods, yet it is not improbable that a careful search will indicate raw materials on which to operate provided we can get the power cost low enough. It is unfortunate that only one-quarter of New Zealand has yet been subject to systematic geological survey.

An interesting case in point is the production of nitrogenous fertilisers. It is true that at the present time

there is a glut of nitrogen products in the world, and these can be bought at less than cost price, yet before developments can take place this condition of affairs is not likely still to continue. Nitrogen is one of the principal factors in more intensive farming, dairying, fruit truck crops, etc., and there is no reason why it should not be produced almost as cheaply here as anywhere else in the world. Moreover, its raw materials are air, which costs nothing, and coal.

Let us take the fruit industry next, this has shown phenomenal increase during the last fifteen years, and now we export one and a half million cases of apples, yielding a revenue of some £700,000. It is probable that within six years we could double this export.

The conditions of transport (thanks to the enterprise of the Fruit Board and the shipping companies) have improved enormously, and the standard of knowledge among fruit growers as to production of good products is high and increasing, and a research service is operating. There is no reason why the cost of production should not be as low

in New Zealand as anywhere else in the world. The question as to where and whether we could market the extra fruit depends on the outcome of the negotiations of the next six months. If we have a continued tariff preference from Britain we should be able to replace some of the American importations there. If tariffs on the Continent and in America are lowered, we should find ready markets there. So far our apples have been marketed in almost every country on the Continent, but only in homeopathic doses. There is reasonable hope that other small fruits, such as passion fruit, may be transported satisfactorily to London. Moreover, chemists working with suitable equipment would probably solve such problems as preservation of fruit juice.

Developments in the canning industry might well allow expansion of market and small scale farming, though probably for home consumption only, e.g., peas, tomatoes, strawberries, asparagus.

Tobacco also offers interesting possibilities, provided technical guidance is good, some experts even hope for exports of tobacco.

Flax.

Now take the flax industry. Apart from present operations its successful development will, if accomplished, be one of long range and steadfast purpose. High yielding disease-resisting varieties are available, but they take several years before they can be multiplied up to commercial quantities. The day is at hand when flax must be recent varieties grown for different industrial uses.

Where the variety chosen is for weaving, softer fibre is needed, or where for cordage, a stronger fibre, or where for transformation into cellophane, a high yield of cellulose is needed. The latter development may offer interesting possibilities. The use of cellophane wrapping and rayon for art silk is increasing very rapidly; also for plastics. Whereas flax pulp would have difficulty, even under conditions such as I have indicated, in competing with wood pulp, yet the so-called alpha cellulose content of this pulp, i.e., the part suitable for transformation into cellophane, etc., is a far greater proportion in the case of flax than in the case of wood pulp.

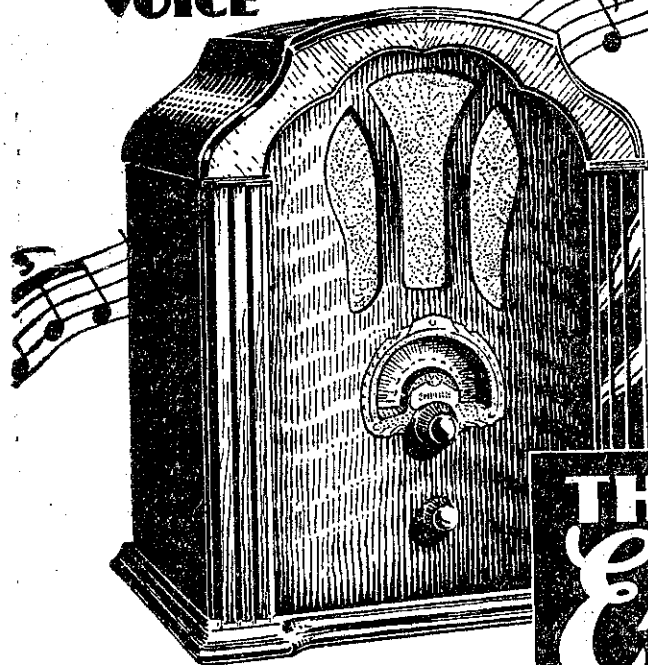
The future of the flax industry depends on our tenacity of purpose whatever direction of utilisation is contemplated.

Let us take as our next industry grass and clover seed. We export roughly £200,000 worth per annum. We can very easily double this within five years as the work of the Plane Research Station and the seed certification of the Department of Agriculture has shown the superiority of many of our lines. Many parts of New Zealand are pre-eminently more suited to seed production than the Old Country, for example.

Wheat.

As regards the wheat industry, about which there is so much discussion, undoubtedly the future will see increased yields per acre and less cost of harvesting. At present there is growing up a contract system whereby small farmers are provided with the use of harvesters, which harvest the grain at a cost of 9d. per bushel, whereas under the old method the cost was at least 18d. per bushel. This development can mean the extension of wheat-growing to lighter land. It is true that in the growing of wheat the cost of land is a large item and the elements of risk

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