

NEED FOR POTASH OPENS NEW INDUSTRY

Imports From Germany Can Be Replaced by Salts Produced From Kelp

MUCH PROFIT IN PROCESS

Total Value of Ton of Dried Kelp is \$15.75, Comparing With Cost of Production of \$3.83.

In view of the large masses of seaweed growing off the coast of Canada and the cessation of the import of potash salts from Germany, a renewed interest has been aroused in the possibility of obtaining future supplies. A report, published in a United States Commerce Report, on the subject of potash production from kelp which was prepared by the supervisor of the chemical, physical, and fertilizer investigations of the United States surveys the situation pointing out that among the many varieties of seaweeds and rock-weeds growing along the Pacific Coast three are of pronounced commercial importance, containing large amounts of potash and occurring in vast quantities.

These are *Macrocystis purifera* (California kelp), *Nereocystis luetkeana* (bull kelp or bladder kelp), and *Alaria fistulosa* (straw kelp). Some other varieties contain higher percentages of potash, but occur only in scattered groups or are not available for other technical reasons.

The amounts of soluble salts and nitrogen compounds present in the various beds of the same kind of kelp vary very largely. Thus in different samples of *Macrocystis* potash varies from 3.1 to 27.7 per cent., nitrogen from 0.53 to 3.17 per cent. The averages of a great many analyses are as follows:—

Macrocystis.—K-2 O, 12.35 per cent.; N, 1.37 per cent.; iodine, 0.23 per cent.

Nereocystis.—K-2 O, 20.1 per cent.; N, 1.9 per cent.; iodine, 0.12 per cent.

Alaria.—K-2 O, 9.1 per cent.; N, 2.6 per cent.; iodine, trace.

Harvesting of Kelp.

Dried kelp contains ordinarily about 15 per cent of potash, 2 per cent of nitrogen, and 1.5 per cent of phosphoric acid. It serves admirably as a manure alone, and can be used most advantageously in the manufacture of special and complete fertilizers. The harvesting of kelp, as practised thus far, by "mowing" the beds at depths of 12 feet or less (usually 4 to 6 feet), is followed by a rapid reproduction of the plants in the case of perennials, very much as is the rule with clover or alfalfa. Along the southern section of the coast two cuttings annually are quite practicable without affecting the permanent value of a bed. *Nereocystis* is not harvested until the spores are well ripened. Otherwise enough plants must be left in each bed to insure re-seeding.

The shallow waters of the Pacific Coast, within the jurisdiction of the United States, are producing each year, without cultivation, a crop which, if simply collected and dried, possesses, as a fertilizer, at the customary rate of application, a value of \$90,000,000. If used as a source of commercial potassium chloride, the final product would have a value of \$90,000,000.

It would appear to be thoroughly feasible to so organize the harvesting and drying of kelp along the Pacific littoral that the fertilizer industry can be promptly emancipated from dependence upon the potash salts of Germany.

During the fiscal year 1913-14 the importations into the United States of potash salts from Germany, for use as fertilizers, amounted to 1,060,000 long tons. This total included 238,000 tons muriate of potash (containing about 80 per cent. KCl), 45,000 tons of sulphate (90 per cent.), 261,000 tons manure salts (averaging 20 per cent. K-2 O), and 525,000 tons kainit averaging 12.4 per cent. K-2 O. This entire amount was equivalent to 412,000 tons of pure potassium chloride. It represents approximately the current annual needs of the American fertilizer industry, as far as potash is concerned.

The important problem before American chemical industry is how to transform a sufficient portion of this floating mass of kelp into a dry product and transport it to our Gulf ports and Atlantic ports at a combined cost materially below what has normally been paid in the past for cargoes of German potash salts laid down at these points, where the fertilizer industry is chiefly centered.

Prices of German Potash Salts.

The prices for the German salts delivered at Gulf and Atlantic ports before the outbreak of the present war were as follows:—

	K-2 O (equivalent) (short tons)	Price
Muriate of potash, 80 p.c. KCl	50	\$28.05
Sulphate of potash, 90 p.c.	48	46.30
K-2-SO-4	28	13.30
Manure salts	40	8.25
Kainit	12.4	5.30

A discount of 15 per cent. from these prices is granted to purchasers of large quantities in bulk, c.i.f. The ocean-freight rates on these salts, in bulk, from Hamburg averaged \$2.97 per long ton. It is probable that transportation rates by water via the Panama Canal from San Diego and vicinity would not vary much from the Hamburg maritime rate.

Assuming a freight rate from the Pacific Coast to the Atlantic Coast of \$2 per short ton, and deducting 15 per cent. for prices in bulk, the cost of production of dried kelp, L. O. B. California ports, should be such that it can compete easily with the German salts at the following net rates per short ton:—

Muriate of potash, 80 per cent.	\$30.50
Sulphate of potash, 90 per cent.	37.40
Manure salts	9.60
Kainit	5.30

The production of dried kelp as a commercial article involves two distinct items of cost, the gathering of fresh or wet kelp, and its desiccation, with the incidental charges of storage, handling, grinding, and loading on ocean vessels. The operation of cutting and collecting fresh kelp has now been well systematized and organized. As conducted at present, after the experience of two or three years, it does not exceed 20 cents per ton. Leaving out of the question for the time being the Alaria found only along the Alaska coast, and considering only the other two varieties, it is found that on an average 100 tons of wet kelp yield 10-15 tons of dried kelp containing 18-9 per cent K-2 O, 2 per cent N, and 1-5 per cent P-2 O-5. On this basis the operation of cutting and collecting material for 1 ton of dried kelp costs \$1.42.

Cost of Drying Kelp.

The cost of drying kelp has not yet been made a subject of careful study. On the Mexican coast of

PRODUCTION OF PULPWOOD AND PULP HIGHER IN 1914

In 1914 Canada produced approximately 924,700 tons of wood pulp in her sixty-six active pulp mills. This is an increase of over 9 per cent from the production of 1913. Of this total quantity almost 70 per cent was ground-wood pulp, produced by the mechanical process. The remainder was chemical fibre or cellulose, produced by the sulphate, sulphite and soda processes in the order of their importance.

The manufacture of chemical fibre is increasing more rapidly than that of ground-wood pulp. The increase in the case of chemical fibre from 1913 to 1914 was 14 per cent, while that of ground-wood was 9.4 per cent.

This increase in the quality of chemical pulp made in Canada is an advantage to Canada as it permits the use of a wider range of timber trees, thus developing more fully our Canadian forests. It is also nearly three times as valuable as wood-pulp and leaves that much more money in the country.

The introduction of the sulphate or kraft process for the manufacture of coarse, strong, dark-colored pulp used for wrapping and similar papers has permitted the use of jack pine and other so-called inferior pulpwoods in a greater proportion than had hitherto been possible.

In spite of the widespread disturbances to industry in general caused by the outbreak of war in the latter part of the year, the consumption of pulpwood in Canadian mills showed an increase of 10.4 per cent in 1914.

The pulp industry has steadily increased in importance since its establishment in Canada about thirty-five years ago. Since 1910 the consumption of wood for this purpose has increased from 598,487 cords in 1910 to 1,224,376 cords in 1914, an increase of 104.6 per cent, or over 26 per cent per annum.

The importance of the industry is shown by the fact that the value of the pulpwood used in Canadian mills in 1914 was \$6,898,868, while the value of pulpwood exported raw in the log was \$6,680,490, a total of \$13,579,358. The proportion of pulpwood manufactured in Canada to that exported raw is steadily increasing.

Quebec is the most important pulp-producing province, with 23 active firms in 1914 out of a total of 49 for Canada, producing over 55 per cent of the total quantity of pulp. Ontario, British Columbia, New Brunswick and Nova Scotia are the remaining pulp-producing provinces in the order of their importance. These facts are gleaned from the annual bulletin on "Pulpwood" just compiled at Ottawa and now in the hands of the printer.

DUN'S REPORT OF BANK EXCHANGES FOR JUNE

Clearings through American banks in June again make a fairly satisfactory comparison with those of a year ago, the total, according to the statement compiled by Dun's Review, which includes returns from 129 leading cities in the United States, amounting to \$14,006,172,676, an increase of 1.0 per cent., as compared with the same month last year and of 2.7 per cent., as contrasted with the corresponding month in 1913.

New York City reports gains of 2.3 and 3.5 per cent, respectively, over the corresponding months in the two immediately preceding years, which, while not so pronounced an improvement as was shown in May, may be considered as quite a favorable exhibit, inasmuch as there was a sharp falling off in the volume of operations in the stock and other speculative markets during the latest month, thus indicating that such expansion as has occurred is more directly due to increased activity in ordinary business lines.

While the returns of the cities outside New York continue to display more or less irregularity, improvement can be noted at a number of points, although the total of all centres is 0.6 per cent, less than last year and only 1.7 per cent, larger than two years ago, which is a somewhat better comparison than that of May.

FIRST NEWSPRINT PAPER SHIPMENT.

The Abitibi Paper & Pulp Company will make the first shipment of newsprint paper from its mill at Ironopolis, Ontario, on Monday next.

Newsprint is now being manufactured at the rate of approximately seventy tons per day. At present the entire output is being taken by consumers in the United States.

Mr. F. H. Anson, president, states that the output of the company has been contracted for until January, 1916.

South California, rapid air drying is feasible. Proceeding northward along the coast, climatic conditions become less and less favourable, and an artificial drying process seems unavoidable. According to the locality, kelp might be more or less dried by exposure to the open air for a short time. It would appear doubtful whether the cost of handling, drying, grinding, storage, and loading, at San Diego and vicinity, would much exceed \$1 per ton of dried kelp, when the industry is organized upon an extensive scale.

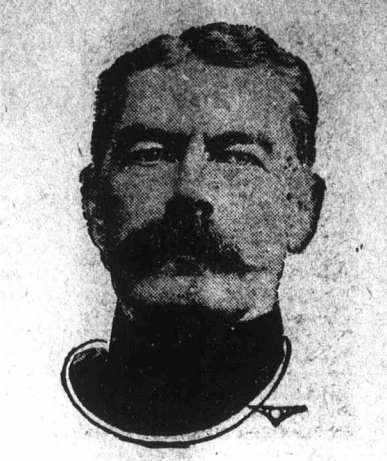
In considering the value of dried kelp for a fertilizer, especially in connection with transportation problems, the amounts of available nitrogen and phosphoric acid present are important factors. On the basis of 2 per cent of nitrogen and 1-5 per cent of phosphoric acid, a short ton of dried kelp contains the equivalent of 25 pounds of Chile saltpetre, valued at current rates at \$5.93, and of 192 pounds of superphosphate (15-5 per cent), value \$0.75. The total fertilizer value of a short ton of dried kelp, entirely apart from the potash present, is therefore \$6.68.

In point of potash content, the dried kelp approaches very closely the category of imported German potash salts, termed nature salts, with a minimum of 20 per cent K-2O. On the basis of the rate in the table given above, viz., \$9.60, the potash in a short ton of dry California is worth \$9.07. The total value based upon potash, nitrogen, and phosphoric acid is \$15.75.

Against this market value is to be placed the cost of production per short ton, as outlined above:—

Cutting and collecting \$1.83
Drying, grinding, handling, loading, etc. (estimated) 1.00
General expenses, interest, etc. (estimated) 1.00
Total \$3.83

The margin here of nearly \$12 is such that all closely identified with the interest of the fertilizer trade should study the possibilities of promptly utilizing the vast resources of the Pacific coast. Satisfactory proof that the productive power of the areas, now distinctly favourable to the growth of the most valuable variety of kelp, are economically susceptible of a pronounced increase, would be a powerful factor in attracting capital to this field.



EARL KITCHENER, Who has made a plea for more men, money and material.

NEW PERSPECTIVE TO BUSINESS IN B. C.

Speculation Caused Most of Troubles and Imminent Revival Will Find no Illusions

LUMBER TRADE SUFFERED

Shortage of Bottoms is Principal Handicap—Plans for Organizing Central Selling Agency—World's Stocks Need New Supplies.

Toronto, July 10.—It is evident from reports on trade conditions in British Columbia which have just been received by officers of the Canadian Northern Railway Company here, that the war in Europe was not the entire cause of the business depression. From the effects of which the people in the coast province are now recovering.

Representative business men from Vancouver and Victoria, almost unanimously advance the opinion, that speculations of the boom period in real estate, account for the greater portion of their troubles. They add that the European conflict has had the effect of complicating conditions of trade, but contend that the slowing down of provincial commerce may justly be attributed to the economies British Columbians were forced to resort to in order to meet the payments for the real estate they had purchased long before, in the hope of obtaining a prompt and excessive profit. But it also seems from the reports, that the days of discipline have resulted in the formation of a new perspective towards business generally, and the revival which now appears to be imminent will find a people without illusions and with a more intelligently directed courage waiting to take advantage of its opportunities.

These reports to the C. N. R. are supplementary to those published recently in connection with the survey of trade conditions in Canada, which was conducted by that company.

In British Columbia, the worst effects, commercially, of the war overseas, have been experienced by the men engaged in the lumbering industry. The demand for building material from the people in the Prairie Provinces fell so sharply, almost immediately after the outbreak of hostilities, and has not yet returned to its former volume. This undoubtedly adversely affected a number of smaller operators, or at least those enterprises lacking adequate backing, but the larger concerns which were well financed have been able to easily weather the re-adjustment period. At present, it would appear that the mills in British Columbia would be doing a much larger business if ships were available to move the product to its destination. A shortage of bottoms as a matter of fact, appears to be the chief handicap. While prices have eased off somewhat, the shrinkage has been taken up, possibly more than taken up by better, and what a manufacturer describes as "more tractable" labor. A remedy for the price trouble is being sought in plans for the organizing of a central selling agency, similar to that operating in the State of Washington.

The mill men on the coast say that stocks of lumber all over the world are badly in need of new supplies. If from the confidence engendered by the harvesting of a good crop, building resumes its former activity in the Prairie Provinces, and vessels are able to clear to newly developed markets in Great Britain, the West Indies, and the American Atlantic Coast States, they expect a business which will tax all their available facilities. In the meantime, it is shown that one mill in Vancouver is working overtime on new orders, which will keep it busy for a considerable period, and other lumber men are in daily expectation of orders for large quantities of building materials for reconstruction in Europe.

There are evidences that the clear spruce of British Columbia is meeting with favor for the construction of aeroplanes, and several small supplies have been delivered.

The credit situation in the province is improving, and it seems to be the general opinion that obligations have been well met when conditions are considered. Lumbermen report that their collections are satisfactory. The weaker dealers are not in the market to any extent, and the stronger firms are able to meet demands made upon them. Export lumber is sold on a basis of cash on delivery.

The Department of Agriculture for British Columbia, reports by wire that the agricultural situation is distinctly encouraging, and that weather conditions are favorable for growth. Increases are reported in land clearing, and in the areas devoted to crops of all kinds. The profits of poultry raising have been reduced to some extent owing to the high price of grain, but there has been satisfactory increase in dairying. In small fruits, there is a fair crop. The selling organizations have been improved, and prices have been excellent so far. Truck farming is increasing, and the British Columbia produce is largely displacing imports from the United States.

The prices for beef, pork and mutton are good and likely to so continue. There is a satisfactory increase in hog raising. The establishment of public markets is proving very satisfactory, and is reducing the cost of living. Unskilled labor at low prices is plentiful, skilled labor is difficult to obtain, and fairly good prices are paid. The report adds, that comparatively little grain will be imported from the Prairie Provinces this year on account of the

ALASKA RAILWAY RUSH LIKE GOLD STAMPEDE OF 1895

Town Springs up and is Named Anchorage—News-paper Begins Publication—First Extra Issued—\$3,000 at Ship Creek at Present Time.

Washington July 10.—The announcement of the route to be followed by the Government railroad in Alaska has already resulted in a rush of Alaskans to the tidewater terminus of the road qualling, in part the famous gold stampedes in the Territory since the Bonanza Creek discoveries. Already more than 3,000 persons have assembled at the mouth of Ship Creek, on Cook's Inlet which will be the main base of operations, and the town thus established has been dubbed "Anchorage." A newspaper has begun publication, and recently a single sheet "extra" about the size of a handbill, announced that the Government would soon begin the sale of town-site lots.

A preliminary report has been received by Secretary of the Interior Lane from Lieut. Frederick Mears, who is in charge of the work, which shows the steps taken by him to head off raids on the Government Treasury by persons who would have taken advantage of the lack of dock, lighterage, and unloading facilities at Ship Point. Lieut. Mears arrived there on April 26, bringing with him a force of engineers and assistants, and immediately began the landing of materials and supplies. Apparently he anticipated, as did those who prepared themselves to relieve the Treasury of any surplus that might have to be expended to accomplish the work, the conditions at Ship Point.

THREE LARGEST ENGLISH BANKS TAKE UP WAR LOAN.

New York, July 10.—The London City & Midland, Lloyds, London County and Westminster, the three London Joint Stock banks, which have subscribed \$100,000,000 each to the new British war loan, are the three largest institutions in London.

On January 1st last, their deposits were as follows: London City and Midland \$603,516,000 Lloyds 564,768,000 London County & Westminster 485,856,000

Owing to the vast accumulation of funds at the English Capital that has taken place since then their lines of deposits are doubtless considerably larger at this time.

It is interesting to note that our largest bank, the National City Bank, has gross deposits of \$359,171,000.

INCREASED ACTIVITY IN AMERICAN COMMODITIES

New York, July 10.—The markets for the principal commodities displayed a decided increase in activity this week, with the tendency of prices still strongly upward, there being 101 alterations in the 322 quotations regularly received by Dun's Review, of which 66 were advances and 25 declines.

Considerable irregularity prevailed in dairy products, all grades of butter displaying more or less easiness, but cheese being fairly steady, while increased strength in choice quality eggs contrasted with weakness in the poorer sorts.

In the grain markets, wheat was moderately higher and substantial advances have been established in corn and oats while quotations on some grades of flour are firmer.

Live beef has moved to a slightly advanced level, but hogs and sheep have declined and the values of provisions are barely maintained.

Notable strength and activity remains the feature in the hide markets, and this is reflected in a better demand for leather, prices for the latter being held with much confidence.

Further improvement can be noted in iron and steel, more active business resulting in an upward revision to quotations of numerous products.

In the minor metals spelter, lead and antimony are very firm, but an easier tendency has developed for the moment in copper and tin. Wool, burlaps, coffee, sugar, naval stores, teas, paints, oils, tobacco, salt and many kinds of chemicals and drugs are among the articles showing the most steadiness, while cotton, spices, vegetables and seasonal fruits tend downward.

larger area sown. The tendency appears to be for city people to exchange town properties for farms, and many appear to be anxious to leave the town and engage in agricultural work. A large increase in production is looked for in the next few years.

BRITISH IMPORTS HAD AN INCREASE IN JUNE

Increase Amounted to \$81,176,755—Exports Declined \$33,199,880—Manufactured Goods Less

FOOD IMPORTS HEAVIER

British Imports Show a Greater Increase Than Exports Show Decline, as Compared With Last Year—Wool Trade Heavy.

London, July 9.—An increase for June was shown in the import figures of the British Board of Trade. There was an increase in the value of imports of £17,835,347, as compared with the corresponding month last year, while exports decreased £6,629,875 during the same period. Imports of food, cotton, and raw material were heavier, while the principal decrease in exports was of manufactured articles.

The exports of cottons amounted to 424,948,000 yards, as follows:

To—	Yards.
United States	3,954,000
India	150,759,000
China	29,316,000
Netherlands	4,670,000
France	23,922,000
Egypt	26,536,000
Central and South America	23,228,000

The exports last year for the same month were as follows:

To—	Yards.
United States	4,511,000
India	207,712,000
China	33,839,000
Netherlands	4,719,000
France	674,000
Egypt	17,886,000
Central and South America	32,135,000

During the month there were also shipped to the United States 7,000 pounds worsted yarns, 454,000 yards of woolen goods and 1,455,000 yards worsteds, against the following for the same period last year: 948,000 yards of woolen goods and 2,821,000 yards of worsteds.

The following table shows the trade of the United Kingdom in June, compared with June, 1914, also from January 1 to June 30:

	1915.	1914.
Imports	£76,117,000	£38,251,655
Exports	33,233,000	39,572,074

Excess of imports £42,884,000 £18,405,677

From January 1 to June 30.

Imports	£429,660,426	£376,013,748
Exports	189,821,328	255,457,611

Excess of imports £239,839,098 £120,556,137

The following table gives the trade of Great Britain for the year to date, by months, compared with the corresponding months of last year:—

Imports—	1915.	1914.
January	£67,401,005	£68,005,000
February	65,268,814	62,053,651
March	75,930,918	66,947,315
April	73,678,288	61,628,820
May	71,604,400	59,099,250
June	78,117,000	58,218,552
July	.....	59,383,722
August	.....	42,362,031
September	.....	45,051,937
October	.....	51,559,250
November	.....	56,987,006
December	.....	67,504,560
Exports—	1915.	1914.
January	£28,247,592	£47,826,164
February	26,176,937	41,261,787
March	30,176,066	44,518,461
April	32,169,733	39,848,422
May	39,618,000	42,051,139
June	33,233,000	39,872,975
July	.....	44,405,339
August	.....	24,211,271
September	.....	26,474,191
October	.....	25,601,815
November	.....	24,601,819
December	.....	28,073,923

ST. JOHN POPULATION LOWER.

St. John, N.B., July 10.—The city directory for 1915-16, which has just been published, estimates the present population of St. John at 58,650. Last year's estimate was 58,902. The difference this year can easily be traced to the war, which has called many of our young men away.

THE STANDARD BANK OF CANADA

QUARTERLY DIVIDEND NOTICE NO. 99

Notice is hereby given that a Dividend at the rate of THIRTEEN PER CENT PER ANNUM upon the Capital Stock of this Bank has this day been declared for the quarter ending the 31st July, 1915, and that the same will be payable at the Head Office in this City and the Branches on and after Monday, the 2nd day of August, 1915, to Shareholders of record of the 23rd of July, 1915.

Toronto, 22nd June, 1915.

By Order of the Board,
G. F. SCHOLFIELD,
General Manager.

LLOYDS BANK LIMITED.

HEAD OFFICE: 71, LOMBARD STREET, LONDON, E.C.

Capital Subscribed	£31,304,200
Capital paid up	5,008,672
Reserve Fund	3,600,000
Deposits, &c.	118,173,859
Advances, &c.	59,439,647

THIS BANK HAS OVER 880 OFFICES IN ENGLAND AND WALES.

Colonial and Foreign Department: 17, Cornhill, London, E.C.

London Agency of the IMPERIAL BANK OF CANADA.

French Auxiliary: LLOYDS BANK (FRANCE) LIMITED, with Offices at PARIS, BORDEAUX, BIARRITZ and NAYRE.

BOSTON LEATHER MARKET QUIET THROUGH

Boston, July 10.—The past week in the shoe and leather trade was normally in the period immediately following the month of July. Not a few men have taken stock. Manufacturers, however, have kept operating. Jobbers have begun to arrive in that sales rooms have been busy with activity. Buying has thus far been looking around for weather conditions and continued restraining influence on both the leather buying of shoes, and also on leather for domestic use.

Shoe jobbers will be in the market at least two weeks and some will be in throughout the entire month. Men who have been out on the market samples have reported unsatisfactory sales and slow buying, but the fact that the visit of jobbers to the market is an unusually large amount of business. The fact is that holding back and limiting their purchases must have shoes for the coming season. In spite of unsatisfactory results, however, the improvement in general throughout the country, the market and the continued ease in money will result in an expanding shoe market. Foreign buying of heavy leather in volume and leather quotations hold tendency to advance.

RICE MARKET QUIET

New York, July 10.—The rice market and interesting. The business being quiet needs of the distributors and movement is seasonably light for holds off previous to the inauguration of crop harvesting.

The Cuban sugar production for the total 1914-15, against 144,112, 1914. Production for the campaign 1914-15, against 2,358,319 tons last year.

Measures have been adopted to protect from England of metals used in the manufacture of war munitions.

NAVAL STORES MARKET

New York, July 10.—There was a naval stores reported in the trade yesterday. Savannah is rather devoted to the receipts are accumulating. Speculated at 4 1/2 cents in the trade, taking supplies for requirements.

Tar is repeated at the basis of \$1 demand dollar. Pitch is neglected at Rosin, common to good strained.

The following were the prices for rosin: B. C. \$3.00; D. \$2.55; E. \$2.70; F. \$1.85; I. \$3.90; K. \$4.75; N. \$5.00; W. \$5.00.