

1927.
NEW ZEALAND.

KAURI-GUM INDUSTRY

(REPORT ON THE) FOR THE YEAR ENDED 31st MARCH, 1927.

Presented to both Houses of the General Assembly pursuant to Section 5 of the Kauri-gum Industry Amendment Act, 1914.

Department of Lands and Survey,
Wellington, 30th July, 1927.

SIR,—
I have the honour to submit herewith the annual report under the Kauri-gum Industry Amendment Act, 1914, for the year ended 31st March, 1927.
The Kauri-gum Control Act, 1925, came into force during the year, and the Control Board was appointed in the terms of the statute.
I have, &c.,
J. B. THOMPSON, Under-Secretary.
The Hon. A. D. McLeod, Minister of Lands.

REPORT OF THE KAURI-GUM SUPERINTENDENT.
EXPORT OF KAURI-GUM.

For the year ended 31st March, 1927, the export amounted to 4,529 tons, of the value of £301,335, an average price of £66 per ton. The tonnage, value, and average price per ton of the export for the past eleven years are—

Year ended 31st March.	Tonnage Exported.	Value. £	Average per ton. £
1917	4,862	300,271	62
1918	4,636	304,852	66
1919	2,338	152,299	66
1920	4,726	310,614	66
1921	6,131	524,701	85
1922	3,968	391,304	98
1923	6,080	520,409	85
1924	6,923	640,712	92
1925	5,432	446,019	82
1926	5,495	414,420	75
1927	4,529	301,335	66

Details of the yearly export, and the country to which exported, from 1916 to 1927, are given below :—

Particulars of Kauri-gum exported from New Zealand from 1916 to 31st March, 1927, inclusive.

Country to which exported.	1st January to 31st March, 1916.		1st April, 1916, to 31st March, 1917.		1st April, 1917, to 31st March, 1918.		1st April, 1918, to 31st March, 1919.		1st April, 1919, to 31st March, 1920.		1st April, 1920, to 31st March, 1921.	
	Tons.	£	Tons.	£	Tons.	£	Tons.	£	Tons.	£	Tons.	£
United States of America	974	60,010	3,158	218,214	2,316	164,516	1,371	81,914	2,037	157,251	3,224	345,992
United Kingdom	336	13,548	1,484	68,378	363	13,982	346	19,977	1,650	90,422	2,544	149,422
Germany ..	..	..	..	..	..	..	..	..	..	..	..	..
Canada ..	118	8,972	133	7,718	1,929	124,271	572	45,588	1,016	61,005	314	24,481
Australia ..	5	314	29	1,982	18	1,577	49	4,820	23	1,936	49	4,802
Belgium ..	..	..	..	..	..	..	..	..	..	..	..	..
France ..	..	..	..	..	..	..	..	..	..	..	..	..
Austria-Hungary	..	..	..	..	..	..	..	..	..	..	..	..
Russia ..	..	..	50	3,440	..	..	..	..	..	..	..	..
Netherlands ..	..	..	..	..	..	..	..	..	..	..	..	..
Sweden ..	..	..	..	..	..	..	..	..	..	..	..	..
Italy ..	..	..	..	..	..	..	..	..	..	..	..	..
Japan ..	..	..	..	..	10	506	..	..	..	..	..	4
Hong Kong ..	..	..	8	539	..	..	..	..	..	..	..	..
Totals ..	1,433	82,844	4,862	300,271	4,636	304,852	2,338	152,299	4,726	310,614	6,131	524,701

Particulars of Kauri-gum exported, &c.—continued.

Country to which exported.	1st April, 1921, to 31st March, 1922.		1st April, 1922, to 31st March, 1923.		1st April, 1923, to 31st March, 1924.		1st April, 1924, to 31st March, 1925.		1st April, 1925, to 31st March, 1926.		1st April, 1926, to 31st March, 1927.	
	Tons.	£	Tons.	£	Tons.	£	Tons.	£	Tons.	£	Tons.	£
United States of America	2,487	266,922	3,742	367,946	4,197	449,117	2,624	250,379	2,682	211,623	1,863	136,397
United Kingdom	1,297	104,094	1,960	129,082	2,409	170,785	2,360	169,975	2,350	179,868	2,036	133,032
Germany ..	58	3,574	70	3,363	66	2,832	117	6,367	107	4,670	127	5,432
Canada ..	89	9,641	109	7,462	118	7,714	97	5,726	101	3,569	144	7,181
Australia ..	37	7,073	84	6,679	7	787	24	2,006	9	1,198	15	911
Belgium ..	..	..	..	..	..	..	..	..	33	1,168	114	4,563
France ..	..	..	..	..	55	5,855	79	5,121	135	9,136	89	6,980
Austria-Hungary	..	..	..	..	..	..	..	..	..	..	..	..
Russia ..	..	..	..	..	..	..	..	..	..	..	..	..
Netherlands ..	..	..	90	4,381	38	1,582	53	1,917	46	1,809	34	1,950
Sweden ..	..	..	20	1,000	..	..	20	820	..	..	46	1,929
Italy ..	..	..	1	170	26	1,647	55	3,546	..	2	51	2,469
Japan ..	..	..	4	326	7	393	3	162	22	1,027	10	476
Hong Kong ..	..	..	..	..	..	..	..	..	..	..	..	..
Denmark ..	..	..	..	..	..	..	..	..	10	350	..	..
China ..	..	..	..	..	..	..	..	..	..	..	..	15
Totals ..	3,968	391,304	6,080	520,409	6,923	640,712	5,432	446,019	5,495	414,420	4,529	301,335

A very unusual feature of the year's export is the fact that the tonnage exported to the United Kingdom exceeds that exported to the United States of America.

A great deal of the kauri-gum exported to the United Kingdom is re-exported to the Continent of Europe, and there appears to be little doubt that the good showing made in the export to the United Kingdom is at least in part due to the fact that the new cellulose lacquers are not so freely used in Europe as in the United States. It would appear as if lacquers have permanently displaced varnishes to a very great extent in the motor-car industry in the United States, and that they have also made at least some headway in another form in the furniture trade. Whether the use of lacquers in the United Kingdom and on the Continent of Europe will have the same effect on the kauri trade as it has had in the United States remains to be seen.

So far as kauri-gum is concerned, it is possible that a new process may enable the fossil kauri-gum to come into general use in the lacquer industry. If so, the result would probably be that very large quantities of kauri-gum would be required, and that the cellulose lacquers, instead of diminishing the demand, may actually increase it and provide an outlet at payable prices for a large proportion of the kauri-gum recovered.

RESEARCH WORK.

Some four or five years ago a chemist commenced an investigation of the kauri-gum-bearing swamps and materials found therein. After a considerable amount of research he concentrated his work on the actual kauri-gum itself, with the result that he has discovered a solvent by the use of which the resin can be recovered in block form free from all impurities. It has, of course, always been known that the pure resin could be recovered by the use of a solvent, but the difficulty was that all known solvents were too dear to use on a commercial scale with any hope of financial success. He has now, however, worked up a process whereby the use of a new solvent can be carried on commercially with every promise of success. Samples of resin produced by this process have been introduced to the varnish trade, and the indications are that there is a ready market for this new-process kauri if it can be sold at prices which will meet the manufacturers' views.

MARKET CONDITIONS.

It was stated in last year's report that the trade was passing through the worst "slump" ever experienced, and little or no change for the better was apparent during the year under review.

It has again been found that the quantity of kauri-gum exported from the City of Auckland has exceeded the quantity received there from the gum-producing districts. This year the excess of the quantity exported over that received amounted to more than 600 tons, and it is expected that the quantity received at Auckland during the current year will not be much greater than that of last year, even though a fairly good demand should develop.

During the year gradings of all kinds, with the exception of good range grades, have gone off fairly well. Range gradings have been in poor demand, and as these are recovered mostly by men who specialize in digging range gum, and who are located in settled districts and can obtain other employment, the production has fallen off very considerably. It would require a very firm demand at better prices to stimulate any appreciable increase in the production of range gradings.

PRODUCTION DURING THE YEAR.

The kauri-gum received at Auckland from the gumfields for the past seven years is shown, month by month, in the following table :—

Kauri-gum received in Auckland.

	1920-21.	1921-22.	1922-23.	1923-24.	1924-25.	1925-26.	1926-27.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
April ..	612	191	543	480	439	483	338
May ..	532	331	514	613	501	330	332
June ..	370	358	654	459	344	395	362
July ..	434	404	548	352	363	399	401
August ..	376	368	689	522	407	326	392
September ..	577	508	781	450	373	403	287
October ..	447	420	610	490	471	299	229
November ..	371	482	601	612	427	486	341
December ..	339	285	667	576	591	410	325
January ..	289	331	590	506	525	365	265
February ..	301	466	658	475	492	396	198
March ..	359	608	700	537	520	541	441
	5,007	4,752	7,546	6,072	5,453	4,833	3,911

For the first two months of the new year the arrivals at Auckland were—April, 317 tons, and May, 277 tons. The exports for these two months were—April, 471 tons, and May, 386 tons.

PRODUCTION ON A LARGE SCALE.

The chief difficulty in the way of production on a large scale has been the inability to obtain labour-saving machinery, especially in the direction of enabling the companies to deliver gum-bearing material into the washing-machines at a cheaper rate than could be done by small parties of diggers working on their own account and in competition with these larger concerns. This was largely accounted for by the presence of considerable deposits of buried timber in most gum swamps.

During the past year one company operating at Sweetwater, near Awanui, has made what appears to be the best attempt so far at large-scale production. Those connected with the operations have been carrying on investigations in regard to the digging and handling of gum-bearing soil for some considerable time, and a good deal of capital has been expended in bringing the company's plant to its present stage of efficiency. The process is a continuous one, the soil being carried on tram-lines to the plant, where it is dumped into hoppers, and from that point gravity is applied and the material is washed, freed from impurities, dried, and graded as it passes through the various stages.

SHRINKAGE IN WEIGHT ON CHALK GRADES.

In the report for the year ended the 31st March, 1924, particulars were given of a test which is being made to illustrate the shrinkage of chalk gradings as a result of the almost continuous evaporation of moisture.

The "chalk" selected for the test was a typical lot which had been purchased in the ordinary way, and which had been worked over a sieve at the store in Auckland, the chips and dust having been taken out as well as any woody pieces and any "hearty" chalk present. The gum was considered dry when first purchased, and had remained in the sack awaiting grading for some weeks. From a commercial point of view it was quite dry when graded.

The trial sack was stored in a warm, sunny room with a good draught passing through. It is doubtful if any further loss will result while the gum remains sacked, since there has been no loss since April, 1926; but if the gum were crushed and air-dried it is very probable that a further appreciable shrinkage would take place as a result of the evaporation of moisture still contained within the larger pieces. A number of experiments made with what the trade regards as "dry chalk" showed shrinkages up to 35 per cent. when crushed and air-dried, and the shrinkage of the gum in this test when crushed and air-dried later on, will probably approximate that figure.

The weighings to date, with percentages of shrinkages since the first weighing, are as follows :—

Date of Weighing.	Weight.	Percentage of Loss to Date.	Date of Weighing.	Weight.	Percentage of Loss to Date.
	Cwt. qr. lb.			Cwt. qr. lb.	
1922—Feb. 1 ..	1 1 14	..	1923—Feb. 1 ..	1 0 11	20.13
Mar. 1 ..	1 1 5	5.84	Mar. 1 ..	1 0 9	21.43
April 1 ..	1 1 0	9.09	April 4 ..	1 0 7	22.73
May 1 ..	1 0 25	11.04	May 1 ..	1 0 6	23.38
June 1 ..	1 0 23	12.33	June 1 ..	1 0 6	23.38
July 1 ..	1 0 21	13.63	Aug. 1 ..	1 0 5	24.03
Aug. 10 ..	1 0 19	14.93	1924—Feb. 1 ..	1 0 0	27.27
Sept. 1 ..	1 0 19	14.93	July 1 ..	0 3 24	29.87
Oct. 6 ..	1 0 17	16.23	1925—Jan. 15 ..	0 3 24	29.87
Nov. 1 ..	1 0 16	16.88	1926—April 26 ..	0 3 20	32.47
Dec. 1 ..	1 0 14	18.18	Nov. 26 ..	0 3 20	32.47
1923—Jan. 3 ..	1 0 12	19.48	1927—June 13 ..	0 3 20	32.47

H. J. LOWE,
Kauri-gum Superintendent.

KAURI-GUM INDUSTRY ACCOUNT.

RECEIPTS AND PAYMENTS ACCOUNT FOR YEAR ENDED 31ST MARCH, 1927.

<i>Receipts.</i>		£	s.	d.	<i>Payments.</i>		£	s.	d.
Cash in Public Account, 1st April, 1926..		3,441	18	5	Wages to workmen and gum-buyers ..		621	5	1
Sales of gum		6,913	5	2	Purchase of sacks and cases		379	15	3
Credits in reductions of expenditure under section 4 of the Kauri-gum Industry Amendment Act, 1914		192	16	5	Purchase of gum		166	0	5
Miscellaneous receipts		3	4	6	Freight, cartage, &c.		687	16	11
					General expenses		1,331	4	4
					Refund of portion advances from Consolidated Fund		5,000	0	0
					Cash in Public Account at 31st March, 1927 ..		2,365	2	6
		£10,551	4	6			£10,551	4	6

TRADING ACCOUNT FOR YEAR ENDED 31ST MARCH, 1927.

	£	s.	d.		£	s.	d.
To Gum on hand, 1st April, 1926 ..	58,797	8	6	By Sales of gum	5,860	12	2
Purchases of gum	74	18	9	Gum on hand, 31st March, 1927 ..	53,152	17	0
Wages	625	10	11	Balance—Gross loss carried to Profit and Loss Account	568	14	3
Freight inward	84	5	3				
	£59,582	3	5		£59,582	3	5

PROFIT AND LOSS ACCOUNT FOR YEAR ENDED 31ST MARCH, 1927.

	£	s.	d.		£	s.	d.
To Trading Account—Gross loss for year ..	568	14	3	By Balance—Net loss for year carried down	5,759	3	1
Freights outward	423	3	11				
General expenses	91	6	3				
Cables, &c.	19	9	1				
Sacks and gum-cases	273	8	1				
Fire insurance	170	8	8				
Printing and stationery	22	12	3				
Depreciation	50	2	6				
Travelling-expenses	2	4	11				
Rent	500	0	0				
Salaries	536	7	10				
Debenture interest	3,101	5	4				
	£5,759	3	1		£5,759	3	1
To Balance—Loss carried forward from previous years	17,478	9	0	By Balance—Accumulated loss to 31st March, 1927	23,237	12	1
Net loss for year brought down	5,759	3	1				
	£23,237	12	1		£23,237	12	1

BALANCE-SHEET AS AT 31ST MARCH, 1927.

<i>Liabilities.</i>	£	s.	d.	<i>Assets.</i>	£	s.	d.
Loan Account—				Land at face-works and elsewhere, with building, fences, and improvements ..	5,046	15	0
Debentures issued	75,000	0	0	Vacuum-tank, fittings, and plant, and royalty short workings	2,900	6	10
Crown Lands Account	500	0	0	Plant and store fittings	150	13	1
Consolidated Fund (net)	5,000	0	0	Tools, Auckland and depots	28	18	4
Sundry creditors for supplies, &c. ..	270	14	9	Live and dead stock	34	11	9
Sundry creditors for gum-purchases ..	48	17	2	Furniture and office fittings	77	6	11
Sundry creditors for miscellaneous ..	184	11	8	Sacks, gum-cases, &c.	283	13	6
Consolidated Fund, for interest paid on debentures	6,422	17	8	Charges paid in advance	87	3	5
Interest accrued but not due on debentures ..	1,262	13	5	Gum on hand	53,152	17	0
Reserve Account	617	13	10	Gum on consignment	782	17	2
				Sundry debtors, miscellaneous	64	2	8
				Advances on gum	477	14	5
				Investment in Public Debt Redemption Fund at 31st March, 1927	617	13	10
				Profit and Loss Account	23,237	12	1
				Cash in Public Account at 31st March, 1927 ..	2,365	2	6
	£89,307	8	6		£89,307	8	6

H. J. LOWE,
Kauri-gum Superintendent.

I hereby certify that the statements of Receipts and Payments, Trading, and Profit and Loss Accounts, and Balance-sheet have been duly examined and compared with the relative books and documents submitted for audit and correctly state the position as disclosed thereby. The following comments are appended: (1) The value of stocks on hand has been accepted on the certificate of the Kauri-gum Superintendent. (2) In the absence of statutory authority the account has not been charged with any portion of the amount paid by the Consolidated Fund for the redemption of the loans raised for the purposes of this account.—J. H. FOWLER, Deputy Controller and Auditor General.

NOTE.—No profits have been earned in respect of this account against which a charge for debt-redemption could in any case be made.—J. H. O'DONNELL, Controller of Accounts.

Approximate Cost of Paper.—Preparation, not given; printing (850 copies), £5 7s. 6d.

By Authority: W. A. G. SKINNER, Government Printer, Wellington.—1927.

Price 3d.]