

1920.
NEW ZEALAND.

KAURI-GUM INDUSTRY

(REPORT ON THE) FOR THE YEAR ENDED 31st MARCH, 1920.

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

REPORT.

SIR,—

Office of the Kauri-gum Superintendent, Auckland, 4th September, 1920.

This Department has now been in existence for over six years. It owes its origin primarily to a recommendation of the Royal Commission which reported on the kauri-gum land in 1914, and secondarily to the passing of the Kauri-gum Industry Amendment Acts of 1914 and 1915.

In the Act of 1914 authority was given for raising the sum of £50,000 for the purpose of carrying out the provisions of the Act, and subsequently, in the Appropriation Act of 1918, a further authority was given for raising an additional £25,000 for extending the Department's operations. Under these authorities up to the end of the financial year the sum of £53,000 has been raised. Full particulars with regard to the expenditure of the same are given in the Statement of Accounts and balance-sheet on another page.

For the first two years the Department's operations were confined altogether to giving relief to the gum-diggers engaged in the industry. With that end in view advances were made to the diggers of 50 per cent. on the value of the gum, fixed on the basis of prices current in July, 1914. In addition to making advances on the gum, face-digging works were carried out in three localities on the gum-fields—namely, at Mangawai, Waiharara, and Waihopo; a large number of Maoris and Europeans were employed for a considerable time on these works, the men being paid wages at the rate of 1s. an hour and a bonus on the value of the gum produced. These works were the means of giving relief to a large number of men who would have otherwise been in a more or less destitute condition.

Early in 1916 the position began to improve, and with a few temporary slumps since then the industry has been in a progressive state.

Early in 1916 the Kauri-gum Superintendent visited America in order to complete arrangements in connection with the appointment of an agent to represent the Department in the United States and Canada, and to take steps to establish the Government gradings of kauri-gum among the American varnish and linoleum manufacturers. The result of this visit and of the agency established has been very satisfactory.

Of late years the Department's business has been conducted on a strict trading basis, and, as indicated later on, the business is making steady and satisfactory progress.

ADMINISTRATION OF THE DEPARTMENT.

From the constitution of this Department until the 31st March, 1916, the administration was under the control of the Under-Secretary for Lands. In the early part of 1916, however, it was decided by Cabinet that the Department should be administered in conjunction with the Department of Imperial Supplies. This arrangement remained in operation until the end of last year, when the Lands Department again assumed full control.

RIDDLING AND WASHING PROCESSES FOR GUM-SAVING.

In the early days of the industry only the large or bold gum was saved, but as this began to be exhausted, finer particles which before had been discarded had to be given attention, and during the last ten years gum-digging operations in the kauri-peat swamps have developed very largely into a process of washing and riddling the gum soils to recover, as far as possible, all the gum they contained.

A few years ago it was estimated that the export of the low-grade or small gums, including chips and dust, represented about one-third of the annual export. At the present time the proportion would probably be nearly two-thirds.

The feature of the past year has been the boom that has set in in regard to the exploitation of kauri-chip areas, and various plants and processes have been installed for the purpose of recovering the gum. The methods adopted range from the small hand-sieve and bucket to very pretentious plants worked by motor-power and capable of handling large quantities of the gum soil.

Dredging for gum has also been given a practical test by Mr. F. V. Raymond at Awanui, in the Kaitaia district, with what is claimed as good results, while at Mangawai a fairly large sludge-pump has been in operation for some time with some degree of success.

In theory all these plants are very much the same. The whole of the gum soil is puddled in water and forced through holes of various degrees of fineness, the residue saved on the sieves consisting of gum not small enough to pass through the holes, and foreign matter such as wood, dirt, stones, &c. The recovery of the gum is eventually effected by drying and further sieving, the resulting grades of gum depending largely on the methods used and the amount of labour expended.

Areas of these kauri-chip basins fit for being treated by these riddling processes are selling at high prices, and many syndicates have been formed for the purpose of exploiting them.

A question of much concern to those engaged in the industry is whether the use of machinery in the production of these smaller gums will result in an overproduction. Having regard, however, to the high prices now being paid for these gum-bearing areas of private lands, and the scarcity of labour on the gumfields, it is doubtful if any great reduction in the price of chips and small gums will result in consequence of these various projects for production on a large scale. Unless a material reduction in the price of chips takes place it is suggested that there is not likely to be any great increase in demand once the present extraordinary post-war requirements have been filled.

One thing, however, seems certain, and that is that if these machines can do anything like what is claimed for them, then the days of the "dirty" chips are numbered and must soon pass. The exporter will be able to pick and choose, and the digger or company who has been in the habit of sending in samples containing 50 per cent. or more of pure dirt, as is the case to-day, will either have to clean his gum better or go out of business. Another probable result of the increased activity in these riddling processes is that a fairly uniform grading will result, and that it will be found practicable to establish a standard grading of gum for export, a reform which has been for so long advocated.

PURCHASES AND SALES.

During the year kauri-gum to the value of £23,743 15s. 7d. was purchased by the Department, while the sales amounted to £44,496 4s. 3d. As in past years, most of the gum was sold in America, but a fair proportion of the sales were made to British buyers.

The world-wide demand for raw materials generally has been reflected in the kauri-gum market, and during the past year record prices have been obtained for all classes of gum. This has been to a great extent caused by the fact that the pound sterling, instead of being worth the par value of 4·866 dollars, fluctuated between 3 and 4 dollars in New York, while the exchange has been all against the European countries in London, enabling the London dealer to meet the American competition on possibly even terms so far as benefits accruing from exchange are concerned.

Full details of the expenditure under the various headings are given in another part of the report.

It will be seen that the amount standing in the Public Account to the credit of the Kauri-gum Industry Account on the 31st March last was £16,322 10s. 6d.

KAURI-GUM EXPORTS.

For the year ending 31st March, 1920, the export was 4,726 tons, of the value of £310,614. During the last five years the average yearly export has been 3,569 tons, of the value of £223,880; while for the previous five years the average annual export was 8,288 tons, of the value of £461,721.

The following table gives particulars of the exports for the last twelve years:—

Particulars of Kauri-gum exported from New Zealand from 1909 to 31st March, 1920, inclusive.

Country to which exported.	1909.		1910.		1911.		1912.		1913.		1914.	
	Tons.	£	Tons.	£	Tons.	£	Tons.	£	Tons.	£	Tons.	£
United States of America	5,127	375,126	4,149	263,375	3,514	209,216	3,894	232,566	3,995	308,456	4,531	316,200
United Kingdom	2,290	140,235	3,253	151,319	2,378	130,767	2,468	114,640	3,390	187,547	3,335	148,370
Germany ..	639	24,111	913	28,016	1,142	34,062	1,053	32,964	833	27,880	373	21,193
Canada ..	24	2,555	66	7,687	9	1,061	40	3,370	62	4,618	70	2,114
Australia ..	149	8,576	66	4,465	75	2,559	39	2,487	80	3,933	19	1,720
Belgium ..	17	1,770	29	1,899	78	3,990	123	5,088	126	5,120	34	1,519
France ..	1	85	19	1,656	75	5,774	37	3,037	45	3,995	42	3,599
Austria-Hungary	1	68	124	3,011	131	3,968	159	4,611	112	2,617	14	329
Russia ..	..	..	15	1,976	80	1,859	2	184	53	1,725	3	225
Netherlands ..	..	..	6	133	55	1,206	42	974	60	2,495	8	664
Sweden ..	2	172	30	720	35	803	35	952	15	420	20	560
Italy ..	..	..	23	779	15	417	15	410	9	300	23	855
Japan ..	..	..	..	..	..	25	1	22	..	..	1	96
Hong Kong ..	..	..	..	..	..	..	..	..	..	..	..	..
Argentina ..	..	..	..	8	..	..	..	..	..	..	..	..
Totals ..	8,250	552,698	8,693	465,044	7,587	395,707	7,908	401,305	8,780	549,106	8,473	497,444

Country to which exported.	1915.		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.	
	Tons.	£	Tons.	£	Tons.	£	Tons.	£	Tons.	£	Tons.	£
United States of America	3,312	222,856	974	60,010	3,158	218,214	2,316	164,516	1,371	81,914	2,037	157,251
United Kingdom	1,172	48,585	336	13,548	1,484	68,378	363	13,982	346	19,977	1,650	90,422
Germany ..	..	..	..	..	..	..	..	..	..	..	..	..
Canada ..	56	4,550	118	8,972	133	7,718	1,929	124,271	572	45,588	1,016	61,005
Australia ..	9	594	5	314	29	1,982	18	1,577	49	4,820	23	1,936
Belgium ..	..	..	..	..	..	..	..	..	..	..	..	..
France ..	5	430	..	..	..	..	..	..	..	..	..	..
Austria-Hungary	..	..	..	..	..	..	..	..	..	..	..	..
Russia ..	21	2,118	..	..	50	3,440	..	..	..	..	..	..
Netherlands ..	..	..	..	..	..	..	..	..	..	..	..	..
Sweden ..	..	..	..	..	..	..	..	..	..	..	..	..
Italy ..	..	..	..	..	..	..	..	..	..	..	..	..
Japan ..	..	..	..	..	..	..	10	506	..	..	..	..
Hong Kong ..	..	..	..	..	8	539	..	..	..	..	..	..
Argentina ..	..	..	..	..	..	..	..	..	..	..	..	..
Totals ..	4,575	279,133	1,433	82,844	4,862	300,271	4,636	304,852	2,338	152,299	4,726	310,614

ACCOUNTS.

Reference to the accounts covering the whole period of the Department's existence shows that, after providing 4 per cent. interest on the debenture issue, there has been a loss up to the 31st March last of £10,706 15s. 9d. In reviewing this position consideration must be given to the special circumstances under which the Department was created. As before pointed out, the Department was not set up with any idea of trading in gum on a commercial basis, the main objects being, firstly, to generally assist the industry, and, secondly, to provide relief to the large number of gum-diggers who were seriously affected by the slump in kauri-gum in 1914-15. For instance, the face-digging works were undertaken purely as relief works, and not with the expectation of commercial results.

During the past two years or thereabouts the Department has resolved itself more into a purely trading concern, the result of which is reflected in a steadily improving position, and present indications are that the initial losses will entirely disappear in the near future.

ADULTERATION OF KAURI-GUM.

For many years past it has been suspected that some unscrupulous traders were adulterating kauri with cheap gums from the South Sea Islands. It was suggested that New Caledonian gum was either being mixed with kauri in Auckland and exported as pure kauri, or else was being exported separately and mixed with kauri and fraudulently sold as such in America and elsewhere.

In the early part of this year an Auckland firm imported 100 tons of "yacca" gum. Some time later the Customs office detected an attempt to export a mixture of kauri and yacca described as kauri-gum, and the offending firm was prosecuted. The matter having been brought under the notice of the Government, an Order in Council was issued prohibiting the export of kauri which had been adulterated by mixing with any other gum. The effect of this order will be, I think, to put an end to this harmful practice.

GUM-CLEANING PROCESSES.

Negotiations have been proceeding for some time past for the purchase of the patent rights of the salt vacuum process for cleaning gum, invented by Dr. Maclaurin. It is proposed to enter into an agreement with Dr. Maclaurin in regard to the use of the process upon a royalty basis for two or three years. At the expiration of that time the Government is to have the right of purchase at a price to be subsequently arranged. A full description of this process was given in the annual report for 1918 (C.—12, p. 9). The process is particularly adapted for separating the dirt and foreign matter from the chips and dust and small gums. It is hoped that this process will be made available for the use of all producers and exporters engaged in the industry.

In the annual report for 1916 (C.—12, p. 3) full particulars are given of the sand-blast process invented by Mr. F. V. Raymond, formerly of Invercargill, but now of Auckland. A plant was established in a well-equipped factory at Dargaville early in 1915. This sand-blast process, judging from two trials I saw of it, was a satisfactory method for cleaning the larger gums. I have always regarded it as unfortunate that this plant and factory had not been erected in Auckland, so that the exporters would have had the opportunity of testing it on a commercial scale.

KAURI-PEAT SWAMPS.

The production of oil from the kauri-peat swamps has received much attention during the past few years, and the subject has been gone into at length in previous reports.

Under the authority of the Kauri-gum Industry Act, 1915, an area of 3,000 acres situated near Kaimaunau, in the Mangonui County, has been leased to the New Zealand Peat Oils Company (Limited). This company has now begun work in the field, and a few months ago let a contract for the excavation of the main outlet drain from the area included in the lease. The company hope that by the time the drain is completed arrangements will be in readiness for commencing the distillation of oil on a fairly large scale.

KAURI-GUM LICENSES AND CONTRIBUTIONS TO THE LOCAL BODIES.

For many years past it has been recognized that local bodies in gum-producing districts were not receiving a fair contribution towards the upkeep of their roads from the gum licenses collected, owing to the amount of the licenses having been fixed on such a low scale. The licenses at present paid are: Digger's license— to a British subject by birth or naturalization, 5s. a year; to an alien digger, £5 a year; buyer's license, £1 a year; broker's license, £5 a year. It has been from time to time urged that the local bodies should be empowered to levy a rate on the value of the gum produced, which is all carted over the roads they have to maintain.

With the development during recent years of the gum riddling and washing processes already mentioned, the old method of digging for gum, as far as it applies to kauri-peat swamps, has to a very large extent been abandoned, and it is suggested that in future, instead of giving a gum-digger a license entitling him to dig over all the gum-producing lands, he shall be given a small area of, say, from 1 to 3 acres, on which he shall have the exclusive right to work and recover the gum by whatever process he may find most profitable. At the same time the condition could be imposed that he should fill in the holes made during the course of his work and leave the land in a fairly fit state for future agricultural purposes.

These leases, as indicated, may be granted by the Minister under section 3 of the Kauri-gum Industry Amendment Act, 1915, and it is proposed to obtain legislative authority this year enabling the Minister to make a much larger contribution to the local bodies from the kauri-gum revenue than has hitherto been possible. Instead of issuing a license to dig, the digger will be required to pay a royalty on the value of the gum recovered, and the suggestion is that this royalty, after deducting a sufficient sum to cover administrative costs, will be handed over to the local bodies in whose districts the leases are situated.

R. P. GREVILLE,

Kauri-gum Superintendent.

The Hon. D. H. Guthrie, Minister of Lands.

STATEMENT OF ACCOUNTS FOR THE YEAR ENDED 31ST MARCH, 1920.

Receipts and Payments Account.

<i>Receipts.</i>		£	s.	d.	<i>Payments.</i>		£	s.	d.
Cash in hand, 1st April, 1919 ..	..	3,291	18	5	Wages and bonuses to workmen, overseers, and gum-buyers ..	..	2,449	18	1
Sales of kauri-gum ..	..	44,496	4	3	Plant, machinery, stores, &c. ..	..	1,919	12	8
Debentures raised ..	..	6,000	0	0	Final payments to gum-diggers and purchases of kauri-gum ..	..	23,743	15	7
					Freights, &c. ..	..	5,962	17	8
					General and office expenses, administration, &c. ..	..	1,402	1	4
					Interest on debentures ..	..	1,987	6	10
					Cash in hand, 31st March, 1920 ..	..	16,322	10	6
		<u>£53,788</u>	<u>2</u>	<u>8</u>			<u>£53,788</u>	<u>2</u>	<u>8</u>

Loan Account.

(Authority under Section 4 of the Kauri-gum Industry Amendment Act, 1914, £75,000.)

1920.				1919.			
		£	s. d.			£	s. d.
March 31.	To Balance forward	..	53,000 0 0	April 1.	By Debentures issued under the Kauri-gum Industry Amendment Act, 1914 ..	47,000	0 0
				1920.			
March 31.	Debentures issued during year			March 31.	Debentures issued during year	6,000	0 0
		<u>£53,000</u>	<u>0 0</u>			<u>£53,000</u>	<u>0 0</u>

Trading Account.

		£	s.	d.			£	s.	d.
To Gum on hand, 1st April, 1919 ..	..	20,742	17	3	By Gum on hand, 31st March, 1920 ..	..	20,981	3	5
Purchases of gum ..	..	23,871	6	8	Sales of gum ..	..	43,995	17	7
Wages ..	..	2,464	14	0	Interest, exchange, &c. ..	..	48	0	3
Freights ..	..	1,572	2	5					
Balance, being gross profit to Profit and Loss Account ..	..	16,374	0	11					
		<u>£65,025</u>	<u>1</u>	<u>3</u>			<u>£65,025</u>	<u>1</u>	<u>3</u>

Profit and Loss Account.

		£	s.	d.			£	s.	d.
To Freights (general) outward ..	..	6,272	19	1	By Trading Account ..	..	16,374	0	11
General expenses ..	..	195	4	0					
Cables, &c. ..	..	82	7	4					
Consumable supplies, vacuum tank ..	..	49	1	8					
Sacks ..	..	481	15	4					
Gum-cases ..	..	1,081	3	6					
Fire insurance ..	..	156	7	3					
Marine insurance ..	..	50	12	2					
Printing and stationery ..	..	25	14	0					
Travelling-expenses ..	..	19	15	10					
Rent ..	..	300	0	0					
Consumable stores (general) ..	..	50	19	0					
Salaries ..	..	665	12	6					
Depreciation ..	..	255	12	6					
Sundries ..	..	0	10	11					
Balance carried down ..	..	6,686	5	10					
		<u>£16,374</u>	<u>0</u>	<u>11</u>			<u>£16,374</u>	<u>0</u>	<u>11</u>
To Balance on 1st April, 1920 ..	..	15,305	14	9	By Balance brought down ..	..	6,686	5	10
Interest on loan debentures ..	..	2,087	6	10	Balance as per balance-sheet ..	..	10,706	15	9
		<u>£17,393</u>	<u>1</u>	<u>7</u>			<u>£17,393</u>	<u>1</u>	<u>7</u>

Balance-sheet.

<i>Liabilities.</i>		£	s.	d.	<i>Assets.</i>		£	s.	d.
Loan Account Debentures issued under Kauri-gum Industry Act, 1914 ..	..	53,000	0	0	Land at face works and elsewhere, with buildings, fences, and improvements ..	..	5,330	18	3
Crown Lands Account ..	..	500	0	0	Vacuum tank ..	..	1,500	6	10
Sundry creditors ..	..	4,143	4	2	Plant and store fittings ..	..	360	7	2
Interest on debentures ..	..	883	6	8	Tools, Auckland and face works ..	..	161	14	10
					Live and dead stock ..	..	52	14	0
					Furniture and office fittings ..	..	52	5	2
					Timber ..	..	20	7	6
					Sacks, cases and consumable stores ..	..	483	10	0
					Sundry debtors ..	..	121	16	6
					Insurance paid in advance ..	..	66	10	0
					Gum on hand ..	..	20,981	3	5
					Gum on consignment ..	..	2,358	1	11
					Suspense Account ..	..	7	9	0
					Cash in hand ..	..	16,322	10	6
					Profit and Loss Account ..	..	10,706	15	9
		<u>£58,526</u>	<u>10</u>	<u>10</u>			<u>£58,526</u>	<u>10</u>	<u>10</u>

R. P. GREVILLE, Kauri-gum Superintendent.

Examined and found correct. ROBERT J. COLLINS, Controller and Auditor-General.

Approximate Cost of Paper.—Preparation, not given; printing (750 copies), £7 10s.