

and a preliminary sizing by screening is also necessary, each size (seeds, chips, &c.) being treated separately.

The voltage and position of electrodes depend on the size of the particles to be treated, and an experienced operator is necessary to get the best results.

This process, while more costly to operate than one such as that of McMillan Bros., is said to save the whole of the gum content. It is also claimed that it separates the charcoal from the gum. Considering that charcoal is as non-conductive as gum, it would appear an exceedingly difficult matter to get the material through the machine with sufficient moisture in the charcoal to cause it to be drawn past the deflector and yet dry enough to allow the gum to drop clear.

SALT CLEANING OF KAURI-GUM.

The cleaning of the material from the washing-tub by immersion in salt-vats has made good headway in some quarters. So far as the individual diggers are concerned this process received a set-back when the majority of the Auckland exporters refused to buy it. The difficulty was that, owing to either negligence or lack of sufficient water, the diggers failed to wash out all the salt from the chips, with the result that in wet weather or in the holds of the overseas steamers the salt attracted moisture and rotted the sacks: this, of course, quite apart from the fact that the exporter has no desire to purchase common salt at chip prices. Some of the larger companies with a good supply of water have marketed good lines of salt-cleaned chips and seeds quite free from salt and containing a high gum content.

There is no doubt that a number of plants are able to turn out chips containing from 85 to 95 per cent. real gum. As stated in this report in previous years, such chips apparently are not good enough for the varnish trade and are too dear for the linoleum-makers. The latter appear to be satisfied with a grading containing up to 70 per cent. gum. Large quantities of chips, seeds, and dust gradings are still exported with a very low gum content. At the present time the diggers and plants turning out gradings from 60 to 65 per cent. gum appear to be getting much the best of it. The higher gradings can command prices to meet the difference in gum content, but the difficulty seems to be to get sufficiently high prices to recoup the gum-washer for the extra cost of producing the good gradings.

SHRINKAGE IN WEIGHT OF "CHALK" GRADINGS.

A point of very great importance to the exporter and the dealer or user abroad is the shrinkage of weight in some gradings through the partial evaporation of the moisture content.

The following tabulation of weighings of a sack of chalk gum under test for shrinkage at this store illustrates one of the many risks incidental to holding stocks of gum during a depression. This grading certainly loses more weight than any other, but there is a comparatively large shrinkage of weight in most gradings if kept on hand for any length of time. This especially applies to gum in sacks. When piled in good quantities so that the air cannot circulate through, the shrinkage is not nearly so large.

The chalk selected for this test had been purchased in the country, had been worked over a sieve before being sacked, and was quite dry from a commercial point of view. The sack was stored in a warm sunny room with a good draught of air passing through, and the shrinkage is probably the limit without using heat or spreading the gum in thin layers out in the sun. As will be seen by the last weighing, the shrinkage is still going on.

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	..	1922—Dec. 1 ..	1 0 14	18·18
Mar. 1 ..	1 1 5	5·84	1923—Jan. 3 ..	1 0 12	19·48
April 1 ..	1 1 0	9·09	Feb. 1 ..	1 0 11	20·13
May 1 ..	1 0 25	11·04	Mar. 1 ..	1 0 9	21·43
June 1 ..	1 0 23	12·33	April 4 ..	1 0 7	22·73
July 1 ..	1 0 21	13·63	May 1 ..	1 0 6	23·38
Aug. 10 ..	1 0 19	14·93	June 1 ..	1 0 6	23·38
Sept. 1 ..	1 0 19	14·93	Aug. 1 ..	1 0 5	24·03
Oct. 6 ..	1 0 17	16·23	1924—Feb. 1 ..	1 0 0	27·27
Nov. 1 ..	1 0 16	16·88	July 1 ..	0 3 24	29·87

BLED BUSH GUM.

For several years past the demand for "bled" bush gradings has been very poor. It has been possible to get orders for the chip grading, but there has been very little demand for the bold gum. The Auckland exporters are unable to buy the chips without the bolder portion, and are therefore usually compelled to ask their agents to take both gradings, which is not always feasible.

The quantity of bush gum coming forward during recent years has not been large, and it is understood here that, with no certainty of supplies being available when required, manufacturers abroad are not prepared to use bush gum to any extent.