

THE MANUFACTURE OF BEET SUGAR IN NEW SOUTH WALES.

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 BY JAMES BARNARD.

During my recent visit to New South Wales I bore in mind my connection with the Royal Society of Tasmania, with a view, if possible, to be useful to its interests upon my return, by bringing under notice any important facts that seemed to me to claim its attention.

Accordingly, I lay upon the table a Catalogue of the Inter-colonial Exhibition for 1869 of the Agricultural Society of New South Wales, representing the efforts of industry in the various departments of science and art, in addition to the more immediate results of the Society in the application of skill, energy, and capital, to pastoral and farming pursuits. The exhibits were 1708 in number, and none to my mind possessed more attraction than the sample of sugar, 28lbs. weight, manufactured from beet at Summer Hill, near Bathurst. I was courteously favoured with a specimen, which I placed in a phial; and although from the extreme smallness of the quantity it is scarcely worthy of presentation to the Society, still I thought, as coming from the first exhibition of the kind in New South Wales, and as a means of identity to those unacquainted with its quality, it might not prove altogether unacceptable.

Other considerations contributed to fix my interest upon this subject. One was, that the advantages of the growth and manufacture of beet root sugar in Tasmania had been recognised both by the Legislature and the Government, and had led to the wide circulation of a valuable pamphlet throughout the colony in recommendation of this industry.

Another circumstance was, that while staying up in the interior I met a gentleman, possessing a large establishment, who informed me that he grew the beet and manufactured sugar sufficient for his own domestic consumption; and he described to me his *modus operandi* pretty well in the following terms, viz:—

“Sow the beet in soil of medium quality; transplant in rows eighteen inches apart, and twelve inches distant; wash the beet carefully, scraping off all dirt, and remove the heads. Cut up, and press out juice thoroughly, which boil in a copper; then add lime, dredged in until all acidity is removed, as per test paper. Continue to boil until it draws out to a thread; then stop. Take a beurette or funnel to a pin's head point, with a false bottom, perforated. Then place animal charcoal

(shin bone of beef) on the false bottom or shelf within the beurette, and pour the syrup over the charcoal, which is to be beaten up fine, letting it drain through the funnel-head, this will be molasses, the grains of sugar being left on the surface of the charcoal, which scrape off. Then, to dry the sugar, put it into a pan, and place in "water-jacket"; *i.e.*, a square iron box, double, a space of two inches for water on each of three sides; the fourth is the door to one shelf in the middle, and the bottom forming another, on which shelves the sugar is placed, being completed by a closed door. Make a fire of vegetable charcoal on bed of sand, placing in the hot water. Place the "water-jacket" upon it until the sugar is dried. There is a valve on the top for escape of moisture. The object is equal temperature. Thus, sand, charcoal, water, shelves, sugar."

It had been my first intention to try this experiment myself on a small scale before submitting any communication to the Royal Society; but deferring to the suggestion made to me at a meeting of the Council this afternoon, I at once lay the process before the Society for trial, to enable any one willing to test it.

I will only add, in conclusion, that the Agricultural Society of New South Wales has a periodical for the publication of its transactions and correspondence; and that I had the pleasure, through a gentleman, of establishing relations between that Society and the Royal Society of Tasmania in the exchange of its papers. The first supply will, I expect, arrive by the next steamer from Sydney.