

If it is done by letter, the instructions would not reach London till the 22nd December, by which time every preparation for shipping the ova should already be made, December being the month at which the ova can be most readily collected.

I am not aware that there is anything more that I can add upon the acclimatization of salmon with which you would desire to be acquainted. I can only add, therefore, that if there is anything I have omitted which you desire to be informed of, I shall be happy at all times to communicate it, if in my power to do so.

I have, &c.,

EDWD. BUTTS,

Late Hon. Secretary, Southland Acclimatization Society.

W. A. Murray, Esq.,  
Chairman, Industries Committee.

### No. 11.

INFORMATION respecting the produce of Coal and Iron in the Colony of New Zealand. In answer to questions put to me at a meeting of the Industrial Committee (General Assembly) on the 8th instant.

Lion Foundry, Wellington, New Zealand, 15th September, 1873.

1. Cost of producing pig iron in New Zealand? This I estimate at from £5 to £5 10s. per ton, taking for granted that the works will be erected in close proximity to both ore and fuel.

2. Cost of plant for producing bar, rod, and sheet iron from pig iron? I estimate the necessary plant for turning out about fifty tons of bars and rods per week can be set up in New Zealand for about £18,000. If required to produce rails, say, £21,000.

3. Cost of producing bar and rod iron from pig iron? I believe the cost of converting pig iron into bars and rods would be about £5 per ton, so that the total cost of production would be about £10 or £11. A very considerable quantity of wrought iron scrap is shipped away from New Zealand every year: this could be made into first-rate bars for about 90s. per ton.

4. Best means of encouraging the foregoing productions? I consider a bonus of so much per ton, the fairest means of encouraging the production of iron and steel. Bearing in mind the large outlay required for the necessary plant and buildings, I am of opinion the Government should extend the bonus to a much larger quantity than now offered—say to 4,000 tons, extending over one, two, or three years. I would also suggest that a bonus of say £3 per ton be offered for the production of bar and rod iron and rails made from New Zealand pig iron, and that the above bonus be extended to bars and rails made from the titanite iron sands of New Zealand.

5. Reason of failure of the Fitzroy Iron Works, Sydney? I believe to be as follows:—The ore, which is a rich brown hematite, gave considerable trouble in smelting with the flux obtainable, which was not well suited for the purpose; and the iron having to be produced in competition with that imported, which could be laid down at that time at from 80s. to 85s. per ton, together with the high price of money, and scarcity of labour. The above conditions are now nearly reversed, money being plentiful and cheap in the Colonies, and iron dear in England: it cannot be landed here under £8 to £8 10s. per ton.

6. Coal? I have used a considerable quantity of Grey coal both for smiths' fires and steam purposes, and consider it preferable to New South Wales. It also makes a most excellent coke. The present and probable future high price of Australian coal, offers the greatest encouragement to the development of our own mines.

7. Fire-clay? I believe there are excellent clays in the Province of Canterbury and in the West Coast district, suitable for the manufacture of fire-bricks. I have not yet had an opportunity of testing them myself.

8. Labour? I consider it absolutely necessary for the development of the above industries, as well as the ordinary requirements of the Colony, that a considerable influx of labour should take place. It is now dearer, at any rate in this portion of the Colony, than before the re-commencement of immigration some two years back.

Bearing in mind the general good that must result from the development of our coal fields and mineral resources, I am of opinion that the Government should assist, by every legitimate means, the speedy realization of the above objects.

A large area of the waste lands of this country will then become the source of the greatest wealth, and we may look forward to New Zealand in a few years deserving the name of the Britain of the South.

E. W. MILLS.

P.S.—Accompanying this is a sample of wrought iron made from the ore obtained in the Collingwood District.

E. W. M.

### *Additional Memoranda.*

Lion Foundry, Wellington, New Zealand, 15th September, 1873.

I CONSIDER the producing powers of the plant stated in the report handed to me, greater than is required in New Zealand. I estimate the cost of erecting, in New Zealand, one furnace with the necessary plant and buildings capable of turning out 180 tons of pig iron per week, at £15,000.

The estimated cost of producing pig iron, I think, is a fair one, and almost identical with that made by myself, the difference being as follows:—