

TELEGRAM from the MINISTER having Charge of the MARINE DEPARTMENT to the AGENT-GENERAL, London (sent by post from Auckland, 25th March, 1889).

Agent-General for New Zealand, 7, Westminster Chambers, London, S.W.

SALMON ova per "Arawa" arrived in capital condition. Those by "Aorangi," which arrived here yesterday, appear to be in equally good order.

G. F. RICHARDSON,

(For Minister of Marine.)

The MINISTER having Charge of the MARINE DEPARTMENT to the AGENT-GENERAL.

SIR,—

Marine Department, Wellington, 18th April, 1889.

I have the honour to acknowledge the receipt of your letters of the 24th January and 8th February last, with reference to the shipment of salmon ova sent by the s.s. "Arawa" and "Aorangi," and have to express my thanks to you for the trouble that you have taken in the matter.

The shipment that arrived in the "Arawa" turned out remarkably well, but I am sorry to say that that in the "Aorangi" was not so good. The accompanying copies of letters from the Otago and Southland Acclimatisation Societies will give you particulars. I have not, however, as yet, received the report of the Southland society on their share of the ova *ex* "Aorangi."

I forward, under separate cover, the record-books of the temperature kept by the chief engineers of the "Arawa" and "Aorangi." The engineers have been paid the gratuities promised to them. The boxes of ova, when being transported to the hatching-houses, were placed on straw in covered vans, ice being packed all around them. It was considered advisable to do this rather than place the insulated cases in uncovered trucks, the cases being too large to go into the vans.

I have, &c.,

The Agent-General for New Zealand, London, S.W.

H. A. ATKINSON.

The CURATOR, Southland Acclimatisation Society, to the MINISTER having Charge of the MARINE DEPARTMENT.

SIR,—

Wallacetown, 18th March, 1889.

I have the honour to report for your information that on the 13th March, 1889, I received three boxes of salmon ova, *ex* "Arawa," numbered 85, 88, and 90, from Mr. Lewis H. B. Wilson, who came with the ova to Invercargill. Mr. Wilson accompanied me to the Wallacetown hatchery, which the ova reached safely the same night.

As there was a plentiful supply of ice, I filled one of the upper hatching-boxes with the same, and as soon as the temperature of the water was reduced from 50°, the normal temperature, to 44°, I placed the trays from one of the boxes containing the ova in the water below the ice for the night. Next morning, with the kind and valuable assistance of Mr. Henry Howard, I proceeded to unpack the ova, and place them in the hatching-boxes.

I may here remark that there were four trays in each division of the boxes, in place of three, as in former shipments, and only two layers of ova in each tray, instead of three, as used to be the case. Thus, there were two layers less in each box than formerly. This is a very great improvement on the old plan, as the result will show. The lowest layer of ova used always to turn out very badly, in many cases being almost a total loss; whereas now there was very little difference between the two layers, or between the upper and lower trays. I also observed that whereas formerly there was sawdust between the false and the true bottoms of the boxes, which always gave forth a strong and disagreeable odour on removal of the trays, now there is only a sheet of bright metal like tin, which can be seen through the drainage-holes. This, also, I have no doubt is an improvement.

On proceeding to open out the ova it was soon apparent that it was in a very satisfactory condition; in fact, fully equal to the best of former shipments. Of course there was a sprinkling of dead eggs in most of the trays, but there seemed fewer ringed ones than formerly, and what there were were in isolated patches; and if there was a patch in the top layer there was generally a corresponding one in the lower. I think I observed more unimpregnated eggs than usual, but the number was inappreciable.

There is one matter that is very unsatisfactory to me, and that is the great discrepancy between the number of ova reputed to be in the boxes and the number they actually contained. I only today received from Mr. Wilson a list of the number of ova supposed to be in each box. According to that list the total number of ova contained in the three boxes I received was 53,300, and as there were 38,443 good ova, the percentage would only be 72.12. It has not been our practice to count the dead ova; in fact, it was not possible in previous shipments, as part of the ova was always so matted and grown together. In this case, fortunately, on Mr. Howard opening the first tray, he remarked to me, "There are so few bad ones in this lot that I will remove them first and keep count of them," which he did, and continued to do the same with each tray he unpacked—twelve in all, or the largest half, there being one empty tray in Box 88, which fell to my lot. The total number of ova unpacked by Mr. Howard was 23,300, of which 2,936 were bad, giving a result of 87.39 per cent. of good ova. These twelve trays were taken just as they came, four being from each box. Mr. Howard is very careful and accurate, and his figures may be strictly relied on. Further, if necessary, I can demonstrate that Box 88, supposed to contain 16,200 ova, was about 2,500 short of that number. If the number of ova wanting was inconsiderable I should have taken no notice of it, but, seeing that it amounts to 15 per cent. on the contents of the three boxes, I have thought it right to draw your attention to the fact.

I think under these circumstances I am justified in assuming that the three boxes yielded at the rate of 87 per cent. of good ova, which is a great advance on previous shipments. This is as nearly as possible the same percentage as there was in the two upper layers of ova in the five boxes I unpacked *ex* "Doric," in 1887.