

the general public should not be led to erroneous conclusions, and probably pass immature judgment on our factory should the name of our firm or factory be prominently mentioned in the Press or elsewhere.

Yours, &c.,

For the Christchurch Meat Company (Limited),  
W. MURRAY, Manager.

The Chairman, Wool-fires Royal Commission, Wellington.

DEAR SIR,—

Christchurch, 18th January, 1907.

In reference to the incipient fire in wool from wool recovery yesterday, I was afforded an opportunity to see the nature and condition of the wool affected, and since numerous analyses of this quality wool have been made I believe that this throws a very important light upon the subject of fire in wool.

This wool contained only 6 to 10 per cent. moisture, and 34 to 36 per cent. fat, and since the moisture could not possibly be a consideration, the whole weight is thrown upon the fat content, which is not a natural wool fat, but an animal fat of poor quality.

The outside temperature of the heap was 87° Fahr., and strong pungent odours of pyridine and burning albuminous substances were plainly noticeable. On removing the outer wool the mass was charred and smouldering; the thermometer read 450° Fahr. immediately above the discoloured material, and on insertion into the charred mass registered over 660° Fahr., which is the highest temperature that this instrument records.

Some of this wool had been kerosene treated, but since kerosene evaporates completely at much below 450° Fahr., and since if kerosene had been present it would have ignited the whole material, the fact of some of the wool having been kerosene treated had no connection with the outbreak.

The rays of the sun were striking the heap, but since the charred material was at least 3 ft. inside the mass this consequently was not a cause of the outbreak.

Yours, &c.,

A. M. WRIGHT.

The Manager, Christchurch Meat Company.

### EXHIBIT No. 40.

To the Wool-fires Royal Commission, Wellington, New Zealand.

Petone, Wellington, 25th January, 1907.

HAVING been deputed by you to carry out some experiments and tests of various classes of wool as usually shipped from New Zealand, similar as possible to a ship's hold, I beg to report that I have done this, and the method adopted by me was as follows:—

After obtaining the qualities of wool that I thought suitable, I had the wool opened and added the different percentages of moisture to the different qualities; had them repacked and dumped, placing an iron tube 18 in. long, closed at the end, in each bale, to enable me to take the temperatures. This tube was securely closed by a plug, or cork, and kept so, excepting when taking the temperatures. After the bales were dumped they were placed in a large box, 11 ft. long, 6 ft. high, and 6 ft. wide, double lined, and insulated with sawdust; all timbers and joints were securely nailed, and the box closed up after the wool was put in. The temperatures were taken through small port-holes at the side, which were kept closed and securely locked.

The wool was damped on 4th December, 1906, repacked 5th December, dumped on 6th December, and closed in the box on 7th December. The temperatures were first taken on 11th December, six days after repacking and five days after dumping. All wools were examined by the Commissioners after damping and before repacking. Attached is a description of the wool used, together with the moisture added, date of reading and the temperatures of the respective bales, weight of each bale before adding the moisture, amount of moisture added, and the weight of wool after the box was opened. The wool was reweighed on the 16th January, 1907. You will note the low-quality skin pieces show a large decrease in weight, while most of the good qualities show a slight increase. I may say that on opening the bales Nos. 13, 4, 5, 7, 9, 11, 14, and 16, when the Commissioners were present, the wool showed very little signs of damage either to colour or staple; but on careful examination of the different lots of wool after cooling down some of it showed signs of discoloration, and the staple tender. The following is a general summary of each lot after examination:—

- No. 1 (greasy pieces): Slightly discoloured, but sound staple.
- No. 2 (greasy fleece): Discoloured on top of staple; very tender.
- No. 3 (scoured pieces): Rather discoloured; tender in staple.
- No. 4 (skin pieces): Bad colour; staple very tender; very strong smell of tallow; inclined to cake. I consider this quality suffered more than any other, and had a very brown appearance.
- Nos. 8 and 9, which are much similar in quality to No. 4, show a heavy decrease in weight.
- Nos. 5 and 6, slipe C, are only slightly discoloured.
- The greasy locks are much discoloured, and have a heavy, brown appearance; staple tender.
- The bales of skins after being opened and allowed to cool became very much discoloured in the wool; the pelt sound, but very hard, and had a very strong smell, like burnt tallow.
- The bales of skin pieces were free from all particles of skin, which is not the case with many lots shipped.

This particular quality of wool (skin pieces) is very treacherous, unless care is taken to have it properly dried and prepared for shipment, on account of the animal-fat mixing with the wool while removing it from the skins.

Those bales which I have opened and examined I have redried and packed, and can be examined at any time. The balance of the bales, which have not been opened, may be shipped when necessary.

Yours, &c.,

S. V. BURRIDGE.