APPENDIX TO THE REPORT.

THE ST. JOHN AGRICULTURAL SOCIETY OFFERS THE FOLLOWING SPECIAL PREMIUMS:

For the best Report on Draining, founded on experiments made in this County, in conformity with the annexed conditions, *Ten Pounds.*

For the Second best, *Five Pounds.*

For the Third best, *Two Pounds Ten Shillings.*

CONDITIONS.—A portion of upland, not less than half an acre, to be drained early next summer; the drains to be from three to five feet deep, and from twenty to forty feet apart, running parallel and emptying into a main drain, sunk at a lower level and six inches deeper than the others. The land to be afterwards ploughed to the depth of twelve inches, and after a light manuring, to be sown with turnips, barley, oats or buckwheat, and ploughed again in the fall, or summer fallowed. The next season to receive a dressing of *well-rotted* manure, and after sufficient ploughing and harrowing to bring the soil to a fine tilth, to be sown with turnips, carrots, beets and cabbages, or either of them, in drills. When the crop is out, after a dressing of sixty bushels of quick lime to the acre, to be ploughed. The third season, to be sown in April with wheat or barley and grass seed.—The Report to give in detail the mode and cost of these operations, and the amount and value of produce; also, for the purpose of showing the profit or loss arising from this mode of farming; a similar account of the crops from an equal portion of the same field, to be cultivated in the ordinary manner.—The Report to be furnished in October, 1852.

DIRECTIONS.—The drains may be opened to the depth of twelve to eighteen inches with the plough, then sloped down to six inches wide at the bottom. As there are no draining tools here, a shovel should be ground to a point of five inches for the last shovelling. After the drain is thoroughly level and clean, in the absence of tiles, broken stones should be laid carefully in by hand, to the depth of fourteen inches, an inverted sod laid on the top, and the clay or soil closely packed down. The filling in and levelling should be done with the plough. The main drain should be twelve inches wide at the bottom, and have a pipe formed, with eighteen inches of broken stones on top. Cedar or fir branches may be laid on top of the stones in the main drain. —The cost of opening and closing drains in Britain is about 7d. per rod; in this County, drains have been opened at 6d. per rod.—The first ploughing may be done with a common and subsoil plough, with two common ploughs following one another, or the ground may be trenched.

OBSERVATIONS.—As a knowledge of the effects intended to be produced by these operations will enable the farmer to work understandingly and intelligently, it may be observed, that land in its ordinary state is saturated with water coming from the bottom upwards, and is therefore not only impervious to the air, but cannot even be penetrated by the rain, which flows over the surface, and instead of adding to, carries off, the nutritive particles from the soil. Manure and lime are, comparatively, inoperative on land in this situation, and from the coldness and sourness of the subsoil, crops are weakly, subject to disease and the attack of insects, and liable to injury or even destruction from vicissitudes of the season; from all which diseases and accidents a state of vigour and high health is the only preservative.—After thorough draining, the till in immediate contact with the drain first parts with its moisture, the place of which is supplied by air, and becoming porous, it forms a conduit for the moisture of the next adjoining portions, and so the process goes on until the whole land becomes dry to the surface. Being thus porous, every shower adds fertility and heat by percolating slowly through the soil until it reaches the drains, leaving in its progress the rich stores of carbon and ammonia which it had derived from the atmosphere. The earth also becomes more capable of decomposing the vegetable remains and manure deposited in it: in other words, it is enabled to digest the food supplied, and furnish the plants with the life-blood necessary for their vigorous growth.—It may also be noticed that, by the old mode of draining, (the drains being either shallow or stoned up nearly to the top) the surface water found its way in and eventually filled up the drains with sand and gravel. By this new mode (a small quantity of stones or a tile being sunk to a considerable depth and the earth packed closely upon them) no rain or surface water is allowed to come in directly from above, all the water enters at the bottom, and the rain goes through the soil so slowly that the drains do not begin to run for some hours after a shower; and so may last for centuries.

D. B. STEVENS, *Recording Secretary.* R. JARDINE, *President.*

St. John, 4th January, 1849.

THOMAS DAVIDSON'S STATEMENT OF TURNIP CROP.

LITTLE RIVER, OCTOBER 16, 1849.

To the President of the Agricultural Society.

SIR,—The way in which I cultivated my field of turnips was thus:—The extent is nine acres; it is a hillside, and the soil is gravelly loam, naturally poor, and had never been in crop. The year before last, I ploughed it in the fall, after pulling the bushes out. In the following spring, I sowed oats and had a fair crop. After the oats were out I drained it with stone drains three feet deep, I then ploughed it