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NEW ZEALAND.

AGRICULTURAL DEPARTMENT

(REPORTS OF OFFICER IN CHARGE).

Presented to both Houses of the General Assembly by Command of His Excellency.

REPORT ON THE AGRICULTURAL MACHINERY SHOWN AT THE INDUSTRIAL EXHIBITION HELD IN WELLINGTON, 1885.

THE agricultural implements and machinery shown at the New Zealand Industrial Exhibition, held at Wellington this year, were, considering the time of year and distances from the chief centres of implement factories, very creditable indeed. In two classes especially—ploughs and chaffcutters—the show was quite as complete and good as is to be seen at some of our largest agricultural and pastoral shows, but in some other classes, such as grass-mowers and winnowing machines, it is to be regretted that no specimens were exhibited at all.

There can be no gainsaying the workmanship and practical utility of the implements exhibited; most of them, in fact, have stood the searching tests of continued use in the fields, and owe their excellence to the careful watching and constant alteration of defects by the makers. Messrs. Duncan and Co., of Christchurch, were the largest prize-winners, but it must be remembered that Messrs. Reid and Gray did not compete, but sent their implements for exhibition only.

Ploughs.—The double-furrow plough class was particularly well represented by implements of the pattern now so extensively used throughout the colony from the works of Reid and Gray and Duncan and Co. There is little or no practical difference in the ploughs made by these two firms, both patterns making excellent work in practice; but possibly the Reid and Gray may make better work on downs or hilly ground. Messrs. Duncan show a plough with a slight improvement on the old plan of clamp and set-screw for raising or lowering the front wheel, otherwise they are the same as have been in use for the last few years. Both makers show a double-furrow plough convertible to a subsoiler, by removing the front plough and substituting a share for breaking up and loosening the sub-soil; a very useful implement, and one too seldom used by farmers. The slight extra cost in working would be repaid very quickly over and over again by the improved condition of the land. The same makers show single ploughs; a very good-looking but slightly heavy one by Messrs. Duncan, and one made on the same lines as a double-furrow by Messrs. Reid and Gray for ploughing extra deep. The latter would be very useful in plantations or orchards. A hill-side or turn-wrist plough, made by Messrs. Duncan, should be a very useful one for its purpose, as it is simple in construction and very much handier than most others; the mould-board is double-ended, and the beam turns on a pivot immediately above a small wheel that runs in the furrow whichever way the plough is going, and is held in place by a catch, which is worked by a lever; the act of turning the horses carries the beam round, the lever is let down, and the plough is ready to go back the way it came. The whole proceeding can be done just as fast as the horses can be turned round.

Disc-harrows.—Disc-harrows are now generally recognized as one of the most valuable implements a farmer can have for the efficient preparation of land, especially if it be caked at all by dry weather, or of a stiff nature; but on most classes of land one stroke of the disc is worth many of the ordinary tine-harrow. The most useful disc-harrow in the exhibition was one of Messrs. Duncan's, with discs of 18in. diameter and front wheels to carry the weight, instead of the old pattern with a pole to yoke the horses to; the two wings carrying the discs may be set at any required angle by means of a cog working in a toothed segment on the main beam, and an extra disc runs between the two wings, thus insuring that all the ground is worked, and avoiding that unsightly ridge which used to be left by the old machines. Wheels which can be quickly put in position, are provided for use on roads, and the wings, with the discs attached, can be lifted up on the beam and secured by a chain. The same makers show a combination seed-sower and disc-harrow, rather a heavy implement, which will materially militate against its coming into general use, as sowing is an operation that, under most circumstances, requires to be done as quickly as possible. To a man cultivating a small area of land it would no doubt be a useful implement, as either part can be used separately, double gearing being provided for this purpose. When used in combination, the sower is driven by means of a chain connected with the axle of the discs; but, if the discs are detached and the sower used alone, the wheels which are used on the road must be fixed to the sides of the frame, and the sower is then driven from one of them. The only other