

OATS AND PEAS FOR ENSILAGE OR HAY.

An area of approximately 4 acres of Garton's oats and Grey Partridge peas was grown for the purpose of providing sufficient green material to build an ensilage stack. The crop was put in on 18th October, 1922, at the rate of $1\frac{1}{2}$ bushels oats and $1\frac{1}{2}$ bushels peas, mixed, and sown with a Massey-Harris seed-drill. A mixture of oats and peas can be sown quite conveniently in this manner.

Associated with this crop was a manurial trial. The field was divided into five sections, four of which received different manures, one being retained as a control plot. The crop was harvested on 1st February, and the following green-weight yields were recorded: Plot 1, unmanured, 15 tons 6 cwt.; plot 2, 2 cwt. superphosphate, 15 tons 12 cwt.; plot 3, 1 cwt. superphosphate and 1 cwt. Nauru phosphate, 14 tons 18 cwt.; plot 4, 1 cwt. basic slag and 1 cwt. superphosphate, 13 tons 10 cwt.; plot 5, 2 cwt. basic superphosphate, 13 tons 6 cwt.

From these results it can at once be seen that no reliable information in regard to the relative value of different manures can be obtained from experiments laid down in this manner. No allowance for soil-variation was made, and as a result the unmanured plot, which was obviously on the best ground, gave the second-highest yield. All attempts to ascertain the effect of different manures are quite ineffective when carried out on these lines, and it is only by having a multiplicity of plots of each kind of manure that a fairly accurate estimate of the value of such manures can be obtained. The experiment therefore is of value inasmuch as it shows how impossible it is to arrive at satisfactory results by such means, and this should be noted by farmers who carry out private experimental work of this nature.

The crop was converted into ensilage, for which purpose oats and peas are admirably adapted. The value of this combination as a hay crop is also recognized, and it is to be recommended as specially suitable for this purpose in Otago and Southland, where a larger acreage should be grown. Its value as a summer forage is not sufficiently recognized. Sown during the first week of November this crop should be in good condition for feeding green to dairy cattle during the usually dry months of January and February.

OATS AND GOLDEN TARES.

A small block of $1\frac{1}{2}$ acres of oats and Golden tares was also sown for ensilage purposes, in the same manner as the oats and peas. There does not appear to be any great advantage in sowing tares in preference to peas, and the price of tares is much higher than that of peas. This block was divided into two sections, one of which received 2 cwt. per acre of Nauru phosphate, the remaining block being unmanured. The manured area gave a green-weight yield of 11 tons 1 cwt. per acre, and the unmanured block yielded 10 tons 8 cwt. per acre. As in the case of the oat and pea crop, no inference is to be drawn from the apparent beneficial effect of the manure used, as the difference in the yield could just as easily be accounted for by variations in the soil.

Apart from the value of this crop for ensilage and hay purposes, it is especially suited for autumn sowing, to provide early spring feed.