

ON THE LAND

WHY SOILS PRODUCE POOR CROPS.

Among the causes which may render land incapable of yielding satisfactory crops the following may be mentioned: Want of lime may induce sourness. Its absence also affects the growth of many crops for which it is an essential plant food, particularly leguminous crops, lucerne, clovers, etc. Its presence or absence modifies the texture of the soil; clayey soils in which lime is deficient being generally much harder to work when wet and less friable on drying than those which are sufficiently supplied with it. Soils which are deficient in lime are less favorable media for the development of micro-organisms, particularly of the nitrifying organisms. Deficiency of humus is a common cause of infertility. A soil deficient or wanting in humus is less able to withstand a droughty condition, lacks cohesion, and is easily blown or washed away, and is unfavorable to the growth of micro-organisms. The remedy is to apply vegetable matter, which by its decay will provide the necessary humus. This can be done by green manuring, by ploughing under stubble, by addition of farmyard manure, etc. Absence of bacteria, particularly of the nitrifying organisms, is prejudicial to the satisfactory production of crops. The cause is generally one or other of those discussed above—either want of aeration, lack of lime or vegetable matter, sourness, bad tillage, insufficient drainage, etc., and when such soils are restored to good condition the development of the nitrifying organisms will proceed normally. "Want of plant food" is, of course, a common cause of infertility, especially in the case of land which has been exhausted by repeated croppings without manuring or rotation. Proper manuring, having due consideration to the requirements both of the soil and of the crop, is the remedy, provided that the land is in good condition. But the important fact must not be lost sight of that the mere addition of plant food is not sufficient unless the soil is in such mechanical condition that it can make good use of the manure applied. Manuring alone is not likely to be of much benefit on land that is badly drained, sour, or in bad tilth.

TEN-YEAR-OLD SILAGE.

"I am thoroughly satisfied that the experiment is a highly payable one, and the freedom from anxiety which it ensures cannot be over-estimated." That was the opinion expressed by Captain F. G. Waley, in 1907, after his first year's experience of conserving fodder in silos for his stud cattle at Mowbray Park, Picton, states the *Sydney Daily Telegraph*. He had erected a nest of four tub silos, of a total capacity of 540 tons, and filled them with chaffed maize. Despite some delays, which tended to depreciate the quality of the silage, it proved a great stand-by in the dry season, which happened along in his first year.

Those four silos were filled again in April, 1909—nearly ten years ago—and the last of the reserve then put by is now being drawn upon. A sample of the silage—made from green maize cut in the milky stage of the cob—now being used shows the fermentation to have been perfect, and the rich aroma is like that of brewer's malted grains. Another point is that portion of the contents of the silo now being emptied was used in the drought of three years ago, leaving 60 or 70

tons in the bottom. This at the time was topped off again with wet straw and properly weighted. The quality of this left-over portion has in no way deteriorated; in fact, like wine, it appears to have improved with age. The keeping quality has certainly improved, for it will keep for a couple of days after removal from the silo without heating.

Now that the district is very dry and there is little natural feed, Captain Waley is drawing upon this ten-year-old reserve of succulent fodder. His milking cows are receiving a daily ration of 40lb of silage, with a little lucerne chaff and a handful of bran. On this the cows, he says, are milking even better than if on good grass. The silage is carted out and distributed in the paddock to the young stock, which simply rush it and lick up every particle. An experience of this sort is a telling object-lesson, especially to dairy farmers. As Captain Waley puts it, "it shows what one can do by taking advantage of the good years to store up a reserve of fodder, which, while it costs nothing to keep, even improves year after year, and is invaluable when a drought time comes along, like the present."

RURAL EDUCATION FOR WOMEN.

It is difficult to understand the inactivity of the majority of our educational officials in regard to the smaller rural districts (says the *New Zealand Farmer*). There seems to be a widespread lack of effort and of ability to grasp the educational needs of the community. One would expect that the trained officials would lead the public in matters of which they should be and are assumed to be specialists. Yet in general we find that our educational officials—at least those concerned with technical instruction—are led by the public, instead of vice versa. They respond to rather than create educational demands. An obvious instance of this is the neglect of rural education for women. If one were to judge by the courses of work provided by the average technical school, the conclusion would be that the great need of the Dominion at the present time is an army of typists, bookkeepers, and shop hands generally. This may be a prominent function of a city technical school, but it certainly is not of much importance in the majority of our centres of technical instruction, if the general welfare of the community and of the individual is considered. It is highly desirable that the directors of our various technical institutions should foster rural education for women. This may be done, firstly, by providing facilities in the way of lectures and equipment, and then by bringing to the notice of the public the possibilities which rural occupations offer in the way of profitable and attractive employment for women. By doing this our educational officials would be doing something to check the unfortunate drift citywards of our rural population. As things at present are, the townward trend is most marked in the case of our girls. This may easily be verified by a chat with a country schoolmaster. In the great majority of cases it will be found that the most intelligent and energetic girls, on finishing their primary education, drift, sooner or later into indoor occupations. This state of affairs calls for reform, which will be wrought only by proper educational developments. When suitable facilities are provided we shall find a greater proportion of our womenfolk embarking on the more healthful and wholesome rural occupations.

BATTERSBY & CO.

Land Salesmen, Real Estate and Financial Agents.

'PHONE 2141.

A.M.P. BUILDINGS, DOWLING STREET, DUNEDIN.

'PHONE 2141.

If you wish to SELL your FARM PROPERTY OR BUSINESS, we will be pleased to receive FULL PARTICULARS of same, when we will do our utmost to do business for you in a satisfactory manner. We have a SPLENDID LIST OF PROPERTIES FOR EXCHANGE on our Registers, and will be pleased to hear if you will consider exchanging your Farm or Business for House Property or something else in the way of a Larger or Smaller Farm.

—WATCH FOR PARTICULARS IN FUTURE ISSUES OF THIS PAPER.—