

THE SOIL WE LIVE ON

IN a country like New Zealand soil conservation is everybody's business—the business even of those who have never cultivated a square inch of soil and never will; and those who haven't heard the conversations on this topic in 4YA's *Country Calendar*, because they thought them specialist stuff "for farmers only" should still find much to interest them if they listen to the last two programmes of the series. These will be heard on Wednesday, October 13, and Wednesday, October 20, at 7.20 p.m.

The conversations are between F. L. Miller, Chief Soil Conservator to the Otago Catchment Board, and Garth Sim, who conducts *Country Calendar*. Earlier programmes have included the suggestion that methods of soil cultivation in New Zealand aren't always as efficient as they might be, and this leads on naturally to the practical suggestions on improved farming practice to be heard in the broadcast of October 13.

Many of our troubles start, Mr. Miller says, in that period between ploughing an old pasture and sowing a new one when we take some sort of crop off the paddock. Our concern *should* be to keep the organic matter in the soil as near the surface as we can. What we do with the mouldboard plough is bury every trace of the former plant cover, break down the soil into small particles and drill our seed—often up and down the slope—into a "hard, hot, dry, inhospitable soil which bakes out like a pie crust or blows away like dust."

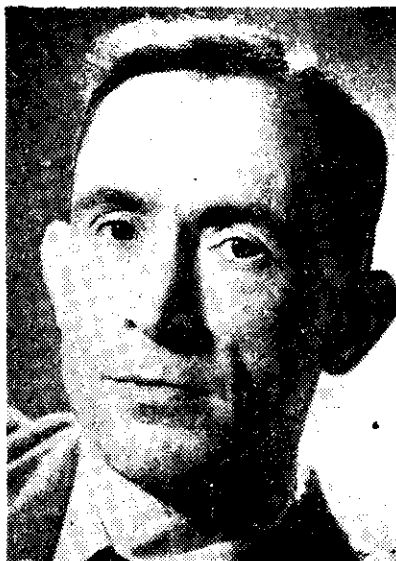
Mr. Miller tells the story of his discovery, the other day, of a small patch of clover in a paddock otherwise almost bare of it. The usual possible reasons—high fertility, applied fertiliser or animal droppings—didn't seem to explain it, "so I got down on my knees," says Mr. Miller, "and had a closer look at the ground." The clover was growing in a rough depression that had missed being cultivated and "well prepared." It was filled with partly-buried trash and

growing dense clover sprung from seed which had fallen from the drills as they passed over.

From this story Mr. Miller goes on to say when the mouldboard plough should and should not be used, and to discuss the use of such implements as the subsoiler, the discs and the bull-tongued plough, crop rotations, contouring, terracing and strip cropping. And he explains the way in which the "land capability survey" gives the farmer a true assessment of the value of his land and helps him to make the best possible use of it by proven conservation measures.

In the last conversation Mr. Miller says much about the high country—including the rabbit, deer and opossum menace, the feeding habits of sheep and cattle on tussock, the argument about tussock burning, and the need for more research of a fundamental kind. Listeners should find in this programme plenty to stimulate as well as inform.

Born in England, Mr. Miller studied Natural Science at the University of Leeds before the Second World War. His special interests were botany and chemistry. During the war he was a staff officer in the Chemical Warfare Branch, and served in the Middle East, America and South Africa. After further study in botany, agricultural chemistry, forestry, surveying and engineering, he came to New Zealand in 1948 and worked for the New Zealand Forest



RIGHT: F. L. Miller, Chief Soil Conservator to the Otago Catchment Board; and, BELOW, patterns made by contour ploughing on hill-side farmland



N.Z. LISTENER, OCTOBER 8, 1954.

Service and the Soil Research Bureau. Since he went to his present position in 1952 he has been engaged in the development of a soil conservation policy for Otago. He has led field survey parties to the catchments of the Shot-over River and its tributaries, and to the Nevis and Arrow Rivers. Mr. Miller believes strongly in greater participation of university staff and other scientists in this work, and members of the staff of the University of Otago and the Soil Bureau took part in these surveys. He is specially interested in the capability classification of land and in the development of an overall and more closely integrated national policy by all bodies concerned with land and water use in New Zealand.

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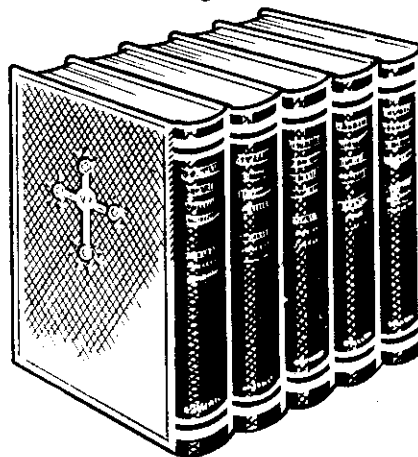
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