

Department of Scientific and Industrial Research

A KORERO Report

“WHAT IS NEW ZEALAND doing about science? Are we to be content merely to import our science, paying toll to the country in which the original development was made?” There is a difficulty here, because in most countries scientific research is instituted by the great secondary industries with increased profits to make from new discoveries. We, having no immensely wealthy industries, cannot do this, so many of our best scientists seek wider fields overseas.

Science can help our production, whether primary or secondary, whether for peace or war, and realizing this, the Government has instituted a Department of Scientific and Industrial Research. This Department has functioned only since 1927, but has already done noteworthy work in many fields. Unfortunately, scientists are seldom good propagandists and, even if they were, much of their work is intelligible only to the experts. Occasionally a paragraph slips into the bottom of a newspaper column and we learn that the D.S.I.R. has discovered the cause and cure of a blight or of an insect pest.

What kind of work does the D.S.I.R. tackle? New Zealand's greatest source of wealth is still her primary industries and the bulk of research work is directed to solving the problems of the farmer. We still find the occasional Farmer Hayseed who talks like this: “I've worked this land for forty years, and no so-and-so professor can tell me anything about it!”

The scientists might reply that if Farmer Hayseed had accepted a little advice on soil chemistry and on the control of stock diseases he might have retired by now, instead of still working his land. However, the average farmer to-day realizes that farming is a com-

plicated business and is duly grateful for any help which a specialized study of his problems may bring.

What Taints Butter?

The Dairy Research Institute is one of the most important sections of the Department, and deals not only with the farmer's problems but with those of the butter and cheese factory and eventually of the overseas market. Why does cheese become discoloured, and how can we prevent it? The answer of the D.S.I.R. is that this is partly due to fermentation and partly to bacterial action: it can be controlled by improved methods in the factory and greater cleanliness of milk, and by lower temperatures for the storing of cheese.

White-pine is in short supply; will *Pinus insignis* do for butter boxes? *Pinus insignis* taints the butter, as does matai. Rimu, however, is suitable, providing a method can be found for avoiding splitting the wood while nailing up the boxes.

Why does land-cress taint butter and cream, and what can be done to prevent tainting? Benzyl isothiocyanate was found to be present in land-cress, but this was later proved not to be the sole cause, because some herds seemed able to eat unlimited land-cress without tainting their milk. This problem is only one of many still occupying the Dairy Research Institute. Others of current interest are the prevention of “openness” in cheese, the production of dry butterfat, and research work on “starters” for cheese manufacture. The results will affect firstly the farmer by showing him a way in which he can obtain better prices for his products and a larger yield from his herd, and secondly, by improving the quality of our goods on the overseas market, the economic position of the country as a whole.