

(9) FARM ECONOMICS.

The work comprises in the main—

(1) A survey of the cost of wool-production on the tussock country of the South Island. This survey comprised an area of almost one million acres, and covered returns from over a quarter of a million sheep. It had the support of the Sheepowners' Union, and the results in the present form were published by that union. It is intended at a later date to publish the results in a more popular form by including a summary of average or normal results of capital requirements, and receipts and expenses, and most profitable methods of management on the various classes of land dealt with. The survey was assisted by students W. S. Allan and R. A. Sherwin.

(2) Farm costing: Farm-costing work has been continued in so far as time has been available. R. A. Sherwin has completed a cost account for a farm comprising mainly heavy cropping and grazing land, the returns giving valuable information as to the relative profitableness of crops and sheep on this type of country, and also showing the cost and the profitable nature of a small area of mangels. In a similar manner, another student, L. A. Hayman, costed out the cost of potato-production. The cost for the use of a new type of combination digging and bagging machine, which digs, grades, and bags in the one operation, was compared with the ordinary method of harvesting potatoes. The costs for the use of the header harvester have been further followed up.

(3) Budgeting: As an outcome of the necessity for budgeting, shown by the results of the survey made of wool costs of production, and the necessity for a drastic readjustment of expenditure, a bulletin on budgeting has been issued in conjunction with the Canterbury Chamber of Commerce, and a sample budget form made available to farmers.

(4) Farm accounts: On account of the many inquiries received with regard to farm accounts, a farm account-book has been compiled and issued at cost price. This account-book aims at an encouragement of farm accounting by those farmers who do not now keep accounts on simple and uniform lines, and lines which will enable a farmer with the least writing to discover where the money handled for the year has come from and gone to, and how much he has improved his position, or otherwise, in that period. It is proposed to follow this up at a later date by a book on the method of using farm accounts to assist management, land-purchase, land valuation, and settlement.

DOMINION LABORATORY.

ANNUAL REPORT.

Dr. J. S. Maclaurin, having reached retiring-age, resigned the Directorship during the year, and was succeeded as Dominion Analyst by Mr. W. Donovan. Appreciative reference to Dr. Maclaurin's work has been made on p. 3.

The work during the year consisted almost entirely of chemical analyses and investigations carried out on behalf of Government Departments. The number of samples received from the various Departments was as follows: Customs, 384; Justice (Police), 47; Geological Survey, 129; Main Highways Board, 541; Mines (including prospectors' samples), 267; Post and Telegraph, 72; Health, 3,495; Public Works, 46; public bodies, 32; Railways, 92; Stores Control Board, 35; other Departments, 195; miscellaneous, 206; total, 5,541. Health includes—Milks, Wellington City supply, 1,689; milks from country districts, 797; human milks (Plunket Society), 285; waters, 94; samples for goitre research, 294; foodstuffs, &c., 336.

COMMENT ON THE WORK.

Justice Department (Police).—Several cases of supposed poisoning were investigated. The finding of strychnine in a body by the Government Analyst, Auckland, led to a trial for murder, in which a conviction was obtained. Analyses were made in Wellington and Christchurch to support charges of counterfeiting.

Geological Survey.—Very careful chemical work carried out in connection with a survey for soil deficiency established the presence of distinct volcanic showers of varying fertility in the areas concerned, and indicated a possible correlation with other areas. A number of superior rock analyses were also carried out.

Health Department.—Judging from the low percentages of adulterated milk in the samples taken, the milk-supplies of the four main centres are, on the whole, satisfactory. More supervision in country districts would appear warranted. There was little serious adulteration in other classes of food-stuffs examined.

Main Highways Board.—There was a considerable increase in the number of samples of roading-material examined for the Main Highways Board.

Other Departments.—In most cases the work carried out, though useful to the Department concerned, calls for little comment.

GAS-INSPECTION.

Gas was regularly examined for heating-value and for purity in the four main centres, and in most of the larger towns of the Dominion.