

VI. MANURIAL EXPERIMENTS.

Plots to which super, super and sulphate of ammonia, Leunophos, Nitrophoska, and lime respectively have been applied, have been subjected to regular monthly mowing treatments, and the mowings carefully weighed. All the manures were applied at the rate of 1 cwt. per acre, with the exception of lime, which was used at the rate of 5 cwt. per acre.

Conclusions from the present figures indicated that the time of application of super does not appear to have affected very much either the total increase over control or the seasonal increase during the year.

October applications of manures gave unexpectedly poor results in January and March, where the anticipated response should have been marked.

January applications showed a good response in late autumn and winter to all treatments, while April applications gave easily the best winter growth; especially where super and sulphate of ammonia were used the result continued over a fairly long period.

The use of nitrogenous manure for quick response was supported by the figures, while lime produced an excellent growth during late summer and autumn.

VII. ENGINEERING.

Irrigation.—Experimental areas designed to show the influence of irrigation, are in operation in a number of localities throughout Canterbury, while special attention has been devoted to the Seafield trial area under the control of the Lands and Survey Department.

Work has proceeded at Canterbury College in regard to a simpler method of expressing the mechanical analysis of soils.

VIII. WOOL RESEARCH.

The weighing of fleeces has continued, designed to reveal what influence breeding can exert upon the yield of wool.

Consideration is being given to methods of determination of which fleece should be taken for comparison, indicative of any change following upon the results of breeding and selection methods adopted.

Owing to the adverse season, quite a fair percentage of all the wool in the experimental flock showed some signs of tenderness. In the well-fed flock nearly 10 per cent. were cotted, and about 50 per cent. were tender.

Further work has proceeded with branding-fluids, tests being carried out with new fluids prepared by the Wool Industries Research Association, Leeds. A locally prepared fluid, containing casein, ammonia, lamp-black, and oil gave almost as satisfactory results, but the scouring tests were not on a sufficiently complete scale to justify any conclusive opinion being reached.

IX. FARM ADVISORY SERVICE.

For the year ending 31st March, 1934, the work of the Farm Advisory Service has been continued along the lines adopted in previous years. The service provides for (1) the complete control, (2) the partial control, (3) special advice, and (4) occasional reports on farm-management of farms located within the Canterbury district. The object of the Service is to extend to farmers new knowledge which has been gained as the result of investigation and research, and to apply this new knowledge in a way which will enable the whole farm to be run as an economic unit. It therefore involves the building-in of new knowledge into farm management and practice. The Service is arranged in such a way as to enable research work on farm-management to be undertaken, and in this respect has proved a valuable source of information in regard to farm costings and actual returns.

During the year twelve farms have been under complete control, sixteen under partial control, and thirty-eight farms have received special advice on particular problems. In addition, complete management and financial reports have been prepared for eight farms. In the farms under complete control there is a variety of types covering almost all classes of farming and types of soil in Canterbury. In all, these farms cover over 5,000 acres.

Detailed management and financial returns in each farm have been prepared, and in every case where there has been a full measure of co-operation with the advisory officer, the financial returns have been improved, so that on most of the farms it has been possible to resume interest payments which, in many cases, had ceased for a number of years past. It is therefore evident that a combination of improved farm-management, together with the utilization of all recently acquired knowledge in regard to pastures, stock-feeding, &c., will go a long way towards improving the financial return from farms, and even during the present economic depression, enable partial, if not complete, interest payments to be made.

The demand for the Advisory Service is increasing year by year, and the information gained by past experience is being assembled and will be utilized for providing guidance in all instances where difficulties are being experienced in the conduct of farming.