New records include *Septoria pisi*, causing leaf spot in peas, and *Kabatiella caulivera* causing stem scorch of red clover.

Soil Microbiology.—The soil-type distribution of *Actinomyces* and *Azotobacter* species is under investigation, the latter having been found abundantly in about half of the soil samples examined, but no correlations have been noted between soil reaction and occurrence of these bacteria.

Seed Disinfection of Peas.—In field sowings of Massey peas over an eight months' period at two-weekly intervals, no significant improvement in emergence resulted from any dust treatment during the sowings September–March. August sowings showed the benefit of dusting, notably by Spergon. Used crank-case oil, in comparison with standard dusts, during all sowings resulted in a field emergence equal to the dusting treatments. Field soil conditions for the September–March growing period apparently differed to a considerable extent from those occuring in the glasshouse studies reported in 1946, where a significant improvement in germination resulted from the dust treatments at the moisture levels of 50, 70, and 90 per cent. saturation.

Potato Blight.—Spray costing field trials, using a four-row boom attachment, have continued for a second growing season, again under conditions of practically nil blight infection. Costing data indicate that the treatments incurred an expense of approximately £2 per acre and in effect reduced the total tuber yield by about 1 ton per acre. The trial will be continued to include a season of epidemic severity.

Rye-grass Blind Seed.—Seed examination of farmers' samples for pre-harvest infection has continued, and during the past season the disease has been as severe as in any previous year. In the seed-treatment trial it was found that hot water for thirty minutes at 50° C. prevented apothecia formation and the treatment did not impair field germination compared with control. Agrosan and Ceresan dusts failed to check apothecia formation, and after a period of storage, seed so treated germinated lower than the control. A trial area of 1 acre has been established and surface-sown with diseased seed. On this area an investigational programme is being developed.

Wool Metrology Laboratory

Mr. A. E. Henderson

Survey Investigations.—Wool survey was carried out on a number of properties in both Islands. All wool-survey data accumulated since 1940 are being analysed.

Early Shearing.—Further visits have been made to properties in both North and South Islands where pregnant ewes have been shorn prior to lambing. The controlled trial laid down in North Canterbury has given the following results :—

Wool.—Early-shorn fleeces (ten months' growth) averaged 8·9 lb. and realized 24¾d., while late-shorn fleeces from the control mob weighed 10·6 lb. and realized 22d. in the same sale. The early-shorn fleeces were all sound, while the late-shorn mob showed a marked break with a tendency to cotting.

Fat Lambs.—In the first draft, 147 lambs were picked from 150 early-shorn ewes, whereas only 91 were ready from a similar mob of ewes shorn in November. Grades and weights for the lambs and other relevant information on the behaviour of the two mobs are not yet to hand. The trial is being continued.

Progeny Tests.—The Laboratory co-operated in the past season with six sheep-breeders in sire progeny tests, and reports have been made to these breeders.

Intensive Investigations.—Samples have been collected from sheep on varying planes of nutrition. A study is being made in an attempt to determine (*a*) the period at which the break occurs, and (*b*) the extent of the break under the various conditions.

Preliminary work has been done on moisture relationships in slipe wools. Attempts are being made to find a satisfactory means of bringing about a normal regain. Results so far indicate that the problem is of considerable economic importance.

An analysis of greasy-wool production for 1944–45 has been made and a report is being prepared.

Problems on the standardization of greasy-wool counts are being studied.