

since, while the over-all results in Waikato with the same material were much better than in Manawatu, both groups showed a marked fall in efficiency with material used on the second day. Thus on the first day a conception rate of 62 per cent. was obtained in the Waikato, against 44 per cent. in the Manawatu; on the second day the rate in Waikato fell to 41 per cent. and in Manawatu to 24 per cent. No definite cause has been found for this marked drop, but work is in progress to solve the problem.

Pedigree Group.—It is very pleasing to record the increased support given to the experiment by pedigree breeders. No special effort was made to organize a larger group, breeders merely being informed that up to 400 cows could be handled. Sixty-six breeders made available 582 cows for one or more inseminations. Conception rate was rather poor, the average figure being 45 per cent. This low figure is believed to be due partly to a tendency for breeders to offer shy-breeding cows for this work, partly to the tendency to start mating such animals early in the season before sufficient time has elapsed to permit normal resolution of the uterus after calving, partly to the general fall in quality of the semen used during the season, and partly to selection allowed in choice of bull.

Organization.—The spring work makes possible a comparison of the amount of work that can be carried out by highly trained and experienced technicians under two different types of organization—a concentrated group of grade cattle and a scattered group of pedigree cows. The data in the following table apply to the first three to six weeks of the season :—

	Concentrated Group (Grades).	Scattered Group (Pedigrees).
Inseminations	735	460
Time (days)	21	40
Mean daily inseminations	35	11.5
Daily range	18-59	2-24
Daily mileage	65	142
Miles per single insemination	1.8	12.37

In the grade group the inseminator covered 1,372 inseminations in nine weeks; in the pedigree group 736 inseminations in twelve weeks. Both operators are well above average in capacity; it is estimated that in groups comparable with the grade, the size should not exceed 500 to 600 cows for average operators. In a pedigree group 300 to 400 cows would be ample from the viewpoint of the average operator.

In spite of disappointing conception rates, 623 cows, including 139 pedigree cows, are in calf to one bull, who has a final survey of 402 lb. fat based on the production of 39 daughters, with a daughter-dam comparison for 13 pairs: dams 386 lb., daughters 410 lb., of fat.

Bull Sterility.—The bull sterility service for dairy-farmers was continued during the year, with the modification that examinations were made only on samples supplied by Stock Inspectors and field veterinarians. One hundred and eleven bulls were examined, with the following results :—

	Fertility Level.
Good	.. 23
Moderate	.. 30
Poor	.. 13
Unsatisfactory	.. 21
Bad	.. 15
Sterile	.. 9