

Spring Mating Group.—The relative failure of the work in the long-distance transport group in the Manawatu in 1947–48 emphasized the need for checking all matters of technique and in particular of examining more closely the long-distance transport of semen. To overcome the difficulties of different herds and different technicians in transport comparisons when groups are located in different districts, and to see whether transport alone exerts any effect upon conception rate, samples of semen were transported 300 miles overnight by train and thereafter used in the Ruakura group in the same herds at the same time by the same technician in comparison with samples of the same material held at Ruakura.

Six comparisons, each involving 200 inseminations, were made. Results were as follows :—

Group.	Treatment.	Dose Rate (Million Sperm).	Conception Rate (Per Cent.).	
			All Cows.	Fertile Cows.
1	Local, bulk-stored, ampouled laboratory ..	25	55	60
2	Local, bulk-stored, ampouled field ..	25	48	54
3	Transported in bulk, ampouled field ..	25	50	54
4	Transported in ampoule ..	25	55	57
5	Local, bulk-stored, ampouled laboratory (0.5 per cent. sulphanilamide)	25	62	64
6	Local, bulk-stored, ampouled laboratory (0.5 per cent. sulphanilamide)	10	52	57

Services per conception based on cows holding three months after last service.

It would appear that transport does not cause any loss of fertility, that ampouling in the laboratory is slightly superior to ampouling in the field, and that the addition of sulphanilamide is an advantage, as has been suggested by American work. The results obtained with 10,000,000 sperms when sulphanilamide was added to the diluting medium are very satisfactory. At this dosage rate the semen collected from a fully-fertile bull in one day would be sufficient to inseminate approximately 1,000 cows. All semen was used before it was forty-eight hours old, but American results suggest that the use of sulphanilamide would allow storage over considerably longer periods.

The Pedigree Group : Work was continued with pedigree cows for the third successive year and pedigree breeders are collaborating readily. An over-all conception rate of 53 per cent. was obtained, and this is considered satisfactory in view of the peculiar difficulties involved in inseminating pedigree herds. The following table shows the pedigree cows which have conceived to merit sires as the result of artificial insemination :—

PEDIGREE COWS IN CALF TO MERIT BULLS

Bull.	1946.	1947.	1948.	Total.
Jersey Glen Handsome Boy ..	134	139	64	337
Landsdowne Double Sam ..	..	83	110	193
Erinview Teddy ..	53	52	66	171
Fairymeadows Beau Geste ..	..	..	101	101
Muritai Oxford Lad ..	21	47	..	68
Total ..	208	321	341	870

The first crop of yearling bulls bred in this experiment came on to the market this year and sold readily at very good prices. Most of them have gone to testing herds and their performances under sire survey will be carefully followed. The first crop of two-year-old heifers will calve next season and their performances will also be tested.