Introduction

Investigations into the fertility of dairy herds usually concentrate much more on the sterility factors affecting the cows rather than the bulls (9). McBurney has recently shown that over a period of ten years the average number of services per conception at the Government Stock Farm, St. Joseph, has been 1.86 services, that is for cows that eventually calve. For the herd as a whole taking non-calving cows into consideration the figure would be much higher, probably near 4.2 services per conception.(37)

It is the practice at the Government Farm to serve cows only once in a heat period. Therefore if the bull does not ejaculate motile sperm in sufficient quantities at that time the cow cannot get in calf. To try to estimate this sperm factor in the sterility of the herd is the main object of this work. A survey of the first ejaculates of seven of the bulls was carried out as far as possible at weekly intervals during the wet and dry seasons 1942-43. A weekly count on a bull's spermatozoa and an examination for motility give a good picture of the health of the animal and also of his fertilising ability (10).

If at any period of the year the fertility of the bull appeared to be very low and this coincided with the low conception period of the cows, then the bull could be counted as a factor in the infertility of the herd.

The improvement of dairy cattle in the West Indies might be helped a great deal by the importation by air of really first class semen from the United States. And improvement throughout the islands of the West Indies can similarly be conducted by using Artificial Insemination.to get calves from high quality bulls kept in Trinidad or Jamaica or Barbados. All bulls do not produce semen of high concentration and motility which is desirable when each service may have to be diluted to serve a large number of cows. Before any such scheme could be used here it is necessary to evaluate the fertility of each bull throughout the year and this work may be taken as a preliminary investigation.

Easily prepared dilutors are necessary for Artificial Insemination work on a large scale, and several were tried out on sperm from various bulls.

The work of Richards (1) has been carried on and 25 cows have been inseminated mainly with counted samples of semen.