

In the total number of birds on six such farms, the following percentages of infection were found :—

	Total Birds.	Percentage Infection.
Pullets .. .. .	2,686	18·6
Hens .. .. .	2,134	30·1
Cockerels .. .. .	663	2·3
Cocks .. .. .	92	6·5

These figures suggest that infection gains considerable ground as birds acquire age.

Mr. M. B. Buddle, the Veterinary Officer who carried out much of the field testing with the District Poultry Instructors, writes as follows concerning his observations during field testing :—

“ On practically every farm where losses from pullorum disease were experienced last year accessory causes were operative which apparently had either initiated or influenced the propagation or course of the disease. In many cases faulty brooding was incriminated as the responsible agent in rendering the chicks susceptible, and this, when rectified, substantially reduced the losses. Other accessory causes found to be responsible were failure in the electric power during incubation, prevalence of unhygienic conditions, overcrowding of both chicks and adult breeding-stock, and fatiguing transport of day-old chicks.

“ An attempt is being made to control the disease on the few farms where losses were experienced last season amongst chicks by the detection and removal of pullorum carriers, the whole flock being submitted to the rapid whole-blood agglutination test every three months for a period of a year.

“ The whole-blood rapid agglutination test has the advantage that it can be performed on the poultry-farm and the reactors immediately ringed and isolated, thus obviating the obvious practical disadvantages of the slow-serum method.

“ Laboratory tests, embracing bacteriological, pathological, and serological examination, have indicated a close agreement between the two methods, thus confirming the practical applicability, reliability, and economy of the whole-blood rapid agglutination testing for pullorum carriers.”

Dr. Fischel, a Veterinary Officer engaged in diagnostic and investigational work in connection with diseases of poultry, undertook the bacteriological examination of material obtained from one of the affected farms. He reports that :—

“ Experimental work was carried out in connection with fifty-five fowls giving positive reactions to the rapid whole-blood agglutination test for pullorum disease. The tube-agglutination test gave a high degree of coincidence with the whole-blood method, as it proved positive in all cases at a dilution of 1 : 25, in 87·3 per cent. at a dilution of 1 : 50, and in 70·9 per cent. at a dilution of 1 : 100. Post-mortem examination of these birds revealed lesions of the ovary in 70 per cent. of cases. Bacteriological examination of the organs of affected birds resulted in the isolation of *S. pullorum* from all those with affected ovaries and from birds with apparently normal ovaries, four times from the fæces, three times from the liver and one each from the bile and spleen.

“ A bacteriological examination of 286 eggs from twenty laying-hens giving positive agglutination reactions proved negative in respect of *Salmonella pullorum*.”

Some twelve poultry-farms are being systematically tested for a period of a year before a decision is arrived at relative to the possibility of putting an eradication plan into operation.

The position of mammoth incubators in spread of infection is also being observed.

Apparently there has been an accumulation of *Salmonella pullorum* in recent years in adult birds which has suddenly reached a saturation point in many flocks. Increase in numbers of birds on the plant and the incoming of mammoth incubators leading to custom hatching from customers' eggs, have been conducive to spread of disease.

#### SUPPLIES OF VACCINES.

Supplies of vaccines and biological preparations generally for official and farm use have been made as follows :—

Blackleg vaccine .. .. .	43,300 doses.
Tetanus anti-toxin (Commonwealth Serum Laboratories) ..	106,000 units.
Black disease vaccine (Commonwealth Serum Laboratories) ..	33,500 doses.
Enterotoxæmia vaccine (Commonwealth Serum Laboratories) ..	Approximately 90,000 ewe doses ; approximately 8,000 lamb doses.
Canine anti-distemper serum (Commonwealth Serum Laboratories)	463 doses.
Distemper virus-serum treatment (Burroughs Wellcome and Company) .. .. .	422 doses.
Contagious ecthyma vaccine .. .. .	Sufficient to vaccinate 10,000 sheep, approximately.
Tuberculin (Pasteur) .. .. .	2,065 c.c. bovine.
Johnin (Dunkin's) .. .. .	853 c.c.