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English Abstract

In the present work, 8000 laying hens in four different flocks of local breeds were examined serologically using pullorum test and 120 hens were found to be pullorum test positive with a percentage of 1.5% of the total number of examined samples. On the other hand, out of the 120 pullorum test positive sera, 105 serum samples were found positive using tube agglutination test with antibody titres ranged from 1/40 to 1/640. In this work, 400 serum samples collected randomly from the four flocks under study and the results indicated that 254 serum samples (63.5%) were found positive using rapid plate agglutination test and MG colored antigen. A total of 91 samples of yolk collected from 100 randomly selected eggs of the four flocks under study were extracted and examined for IgY antibodies against *M.gallisepticum* using ELISA technique. Experimental infection with a reference strain of *M.gallisepticum* was studied on local and foreign breed of chickens by different routes with or with out inoculation of MG. oil adjuvant vaccine and IgY-positive yolks to detect the effect of active and passive immunity against challenge with *M.gallisepticum*. Group of local breed chickens inoculated S/C with *M.gallisepticum* recorded 10.0% mortality at days 12 and 17 post infection with 5 positive serum samples to *M.gallisepticum* using slide agglutination test out of the examined 18 sera.

Key words:	Serology, Bacteria, Chicken.
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LIST OF ABBREVIATIONS

MG	Mycoplasma gallisepticum
MS	Mycoplasma synoviae
DIA	Dotimmunobinding assay
SAT	Standard tube agglutination test
AGP	Agar gel precipitation test
RSA	Rapid slide agglutination test
DID	Double immunodiffusion
HI	Haemagglutination inhibition
RPA	Rapid plate agglutination
SPF	Specific pathogen free
SPA	Serum plate agglutination test
PCR	Polymerase chain reaction