



Protection against IBV challenge during the production period

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INTRODUCTION

IBV is considered as one of the highly contagious respiratory diseases of chickens, leads to economic losses in poultry worldwide. Despite of vaccination, it is still a major cause of poor egg production in breeders and layers. In the Middle East area, as part of the world, the production drop reached up to 15%, in addition to egg quality, higher percentage when it is combined with other respiratory diseases. Thus, it was deemed worthwhile to investigate the causative agents behind this problem.

MATERIALS AND METHODS

Samples were tested by PCR, ELISA and HI. A farm of 60, 000 birds was chosen. The flock monitored was given @ day 1 IBV Mass, @ day 14 CHB and @ 13 weeks IBV 793, Then it was given@ 16 weeks boosting inactivated killed vaccine of IB3 (Mass, 274 and 1466), then monitored monthly from 17 weeks until 42 weeks of age, the antibodies titer of IBV: 274/Mass and 1466 were measured monthly using the HI test of specific antigen for each subserotype. Additionally, the production curve monitored

RESULTS AND CONCLUSION

The HI results showed high titer of different IBV strains, which indicates IBV challenge, PCR results confirmed the presence of different IBV serotypes (274/Var O2/ Q1/ QX and 793). while ELISA showed a challenge in MS starting at week 22 weeks of age, keep in mind that no vaccine is available in the market against MS. However, when production drop monitored it was noticed that drop in production is less (2%) compared to one before administration of IB3 vaccine (15%), In addition to improvement in egg quality as well, while MS still positive. In conclusion, it was noticed that induction of the IB3 vaccine:

- Increased the protection against several IBV strains even in the presence of MS challenge, which helps in reduction of MS damage compared to previous flock, before starting the treatment. Also, it provides high level of protection against egg drop.
- Boosting with inactivated IBV vaccines helps getting higher antibody titers, which is related with higher protection.
- Presence of more strains in inactivated vaccine is helpful to induce more antibodies against more strains.