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Opinion

Survey of *Mycoplasma* Situation in Saudi Arabia

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- *Mycoplasma gallispticum* and *synoviae* confirmed challenges at different breeder flocks from 10 years and still detected till now in Egypt and Saudi, although breeder farms in same company geographically away from each other, they send eggs to same hatchery, and same logistic main site sharing for all of them.
- Suspect cross contamination between farms as *Mycoplasma* survive for longer times outside and inside host, also rodent share in their transmission, also wild birds can transmit *Mycoplasma* among poultry houses, also air transmission make control very difficult.
- *Mycoplasma* characterized by high susceptibility to different types of disinfectants, but it can be transmitted through air, feed, and water so breeder farms should be away from main road and also away from any poultry production sites.
- My survey illustrates that (multiage breeder farms at same site), suspect rolling infection at same area.
- Blood sampling from breeder chick's placement at zero day usually no *Mycoplasma* titers recorded.
- Also, FTA card collected from breeder chicks at zero day usually revealed no *Mycoplasma*, consequently our chicks from grand-parents confirmed free from *Mycoplasma* vertical transmission.
- Every month blood samples collecting but honestly about 30 blood samples from house that stocked 9000 birds, so it is not representative sample.
- FTA card collecting every month till week 9 all flocks were free from *Mycoplasma* infection.
- Live vaccine mgts11 strain application at 9 weeks, low Elisa titers result after seroconversion between 1000 : 3000 at bio check kits.
- Around week 20, Titers promptly increased in some individual birds, also respiratory signs and sometimes lameness problem recorded.
- FTA card collected at week 20 usually revealed *Mycoplasma gallispticum, synoviae* or both.
- *Mycoplasma* live vaccine (mgts11) cannot displace field strain, as ts11 strain displacement is moderate not high, high *Mycoplasma* load at site.
- killed vaccine from mg and ms applied twice at 13, 17 weeks respectively.
- Onset of egg production period (24 : 28 week) usually not achieve target production parameters, may be hormonal stress, sub-optimum rearing, or *Mycoplasma* cofactor with one or both of them.
- Mortality % rises up at onset of egg production period, p.m. lesions mainly egg peritonitis and tracheitis.
- Monthly anti-*Mycoplasma* protocol applied (drug of choice Tilmicosin) 30 mg/kg live body weight for 5 successive days.

- Mortality% fall after drug course, but egg peritonitis cases still recorded even at low level, may be pathogenic *E. coli* become active.
- Egg production, Fertility and hatchability exceed target ross standard, only slight embryonic mortality recorded at hatchery.
- Tilmicosin cost per bird at production period equal 1.6 USD.
- Tilmicosin cost = 46% from total medication cost in breeder farm from placement till depletion.
- One dose Mgts11 vaccine plus 2 dose killed vaccine mg and ms total vaccine cost per bird equal 0.6 USD.
- *Mycoplasma* vaccines cost = 25% from total vaccines cost.
- In brief, Farm designing away from production sites, strict biosecurity measures, keep wild birds away as much as possible and rodent control program all should be preplanned in endemic areas before any medication or vaccination approaches.
- Our flocks usually achieve 160 hatching chicks per hen housed, but if mixed infections recorded, we only achieve between (130 : 150) chicks per hen housed.
- Eventually, *Mycoplasma* even still challenging flocks, can be controlled with good medication and vaccination program, biosecurity is obligatory approaches.

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