REVITALISATION OF ANTICOCCIDIAL SENSITIVITY IN POULTRY FLOCKS BY THE USE OF A LIVE ATTENUATED VACCINE

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SUMMARY

Coccidiosis is a highly damaging disease of poultry which has traditionally been controlled by the addition of in-feed anticoccidial drugs. However, there is increasing concern about rising levels of drug resistance. The degree and impact of this resistance varies between poultry units, but is having a major impact on operations worldwide.

In the UK, in-feed medication is still the major method of coccidiosis control, although there is a licenced live-attenuated vaccine available (Paracox-5) which is successfully being used in organic and free range broiler birds.

A major animal health company in the UK (Schering-Plough Animal Health) have been conducting commercial trials at 2 poultry farms to investigate if anticoccidial efficacy can be revitalised by introducing Paracox-5 vaccination into poultry rearing operations. On both farms, house 1 received in-feed anticoccidials nicarbazin/narasin followed by monensin, and house 2 was vaccinated at day-old with Paracox-5.

VLA was sent faeces samples from the individual houses on each of these farms and Anticoccidial Sensitivity Tests (AST) were performed on extracted coccidial oocysts in order to investigate the degree of resistance to anticoccidial drugs.

The AST involved groups of poultry medicated with anticoccidial drugs, challenged with oocysts from the individual houses and measuring weight gain and coccidial lesions. An infected unmedicated control group of chickens was also monitored. By comparing both parameters from medicated and unmedicated groups it is possible to measure the degree of anticoccidial resistance within the poultry house.

Results from both farms showed that there was a clear difference in weight gain responses and lesion scores between groups of birds infected with oocysts from medicated (house 1) and vaccinated houses (house 2).

Vaccinating birds with a live coccidiosis vaccine resulted in coccidiostat-resistant *Eimeria* being replaced by coccidiostat-sensitive ones – “Revitalisation”.