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# 072 – Egg Drop Syndrome '76 - II





## Clinical signs

Typically, clinical signs occur after seven to nine days but on occasions their manifestation can take two and a half weeks. The first sign is the loss of colour in coloured eggs, quickly followed by the production of thin-shelled, soft-shelled or shell-less eggs. The soft shelled eggs can be paddled into the litter or fall into the manure pit and so can be missed. The thin-shelled eggs often have a rough surface. In breeders these eggs can have depressed hatchability and, at flock level, this can be removed by discarding abnormal eggs.

A fall in egg production occurs which can be very rapid and sudden or extended over quite a few weeks. The egg drop lasts from four to 10 weeks and overall egg production can be reduced by 40%, but as this occurs in early lay it can be compensated for in late lay. Occasionally small eggs are seen and there has been a suspicion of 'watery whites' in a few cases. Otherwise affected birds look healthy.

## Lesions

In outbreaks of EDS'76 inactive ovaries and atrophied oviducts are often the only changes seen but these are not always present.

## Immunity

Antibodies can be detected seven days post infection and peak after four to five weeks. Birds can still excrete EDS'76 virus in the presence of antibodies. Maternal antibody has a half-life of three to four days and active antibody production can not be stimulated in birds with maternal antibody until four or five weeks of age, by which time maternal antibody is virtually undetectable. If the flock as a whole develops immunity pre-point of lay, effects on egg production will not be seen.

## Diagnosis

Diagnosis is based on clinical and post mortem findings coupled to virus isolation. Post episode positive blood test results are also useful. Obviously if clinical signs are absent it can be difficult to select birds for the provision of samples for laboratory tests.

It should be noted that flocks infected in ovo do not develop antibodies in the growing period. The differential diagnosis of EDS'76 is that of a drop in egg production.

## Control

Minimising spread via contaminated egg trays and/or needles is important. In larger organisations there are merits in segregating eggs from EDS'76 positive breeder flocks from those from negative flocks.

EDS'76 infection has been attributed to waterfowl contaminating water supplies so due consideration should also be given to drinking water management. Vaccination is typically done using a killed oil adjuvanted vaccine between 14-16 weeks of age.