Reproductive toxicology studies in Japanese quail: reference data

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The avian reprotoxicity study is the only routinely performed regulatory study which is a specific test for reproductive performance of non-mammalian terrestrial vertebrates. The study is a standard part of testing of agrochemical products and can also be a testing requirement for biocides, REACH chemicals and pharmaceuticals. The study forms part of the testing package for endocrine disrupters. In this presentation we have compiled reference data from avian reproductive toxicity studies performed in our facility. The study design involves exposure of birds, usually Japanese Quail (Coturnix coturnix japonica) in the diet or via drinking water. Birds are housed in cages of one male and one or two females. After an acclimatization period, birds are usually subject to a short day-length for approximately 8 weeks during which time females become mature but egg laying is not fully initiated; day-length is increased and for approximately 9 weeks, birds are in full egg production. Eggs are counted and collected daily and incubated to hatching. Measurements made include effects on the parental birds, egg production, egg shell thickness, hatch-viability and chick growth to day 14. We present here reference data for all of these parameters in our facility for the last 4 studies, representing over 2500 control eggs. These data can be valuable for the interpretation of study results. They compare well with published data and also demonstrate the general health and good reproductive performance of Japanese quail in our facility.