Serological evaluation of an avian encephalomyelitis vaccine using different diagnostic kits and application routes.

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Avian Encephalomyelitis (AE) is an infectious viral disease caused by a picornavirus with tropism for the CNS and other parenchymal organs. The disease affects chicks in the first four weeks of age and is characterized by clinical neurological signs. In unimmunized adult birds the infection can cause a temporary drop in egg production (between 5 and 10%). Currently, most companies use two doses of vaccines, the first between 10 and 12 weeks of age and the second up to 4 weeks before production begins. However, because of failures in vaccination processes, problems associated with the disease in chicks or drops in egg production in commercial flocks have been observed. The aim of the study was to evaluate the serological response with different ELISA kits, in breeder flocks vaccinated against AE by different routes of administration. Fifty broiler breeders of the Cobb lines were used, 25 birds belonging to the control group (vaccinated via drinking water - nipple) and 25 birds to the test group (vaccinated via gavage). The birds were managed following all the technical guidelines of the line. All birds received the Provac®AE vaccine, live attenuated vaccine against AE, strain Calnek 1010 (egg-adapted neurotropic strain). Vaccination of the first dose was performed at 12 weeks of age. Collections of 25 blood samples were performed at the time of vaccine application and 5 weeks later. The volume of water used for vaccination in the control group was calculated considering the age of the birds, in the birds vaccinated via gavage, 1 ml of vaccine solution was used. In the analyses, as expected, all birds at 12 weeks of age, regardless of the application route or kit used, presented negative results for AE titers. At 17 weeks of age, the results obtained were as follows: mean titers via gavage (BioChek) - 4214; via nipple (BioChek) - 5113; via gavage (Idexx) – 1391; and via nipple (Idexx) – 1641. There was no significant difference between the results obtained either in vaccination via drinking water or via gavage, which reinforces the fact that when well performed, both methods are effective in immunizing birds.