

**BOVINE VACCINIA VIRUS IN MARANHÃO: CLINICAL, LABORATORY VARIABLES  
AND SPATIAL DISTRIBUTION, 2009 TO 2011**

*(VARÍOLA BOVINA NO MARANHÃO: SINAIS CLÍNICOS E DISTRIBUIÇÃO ESPACIAL, 2009-  
2011)*

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Cowpox is an infectious disease of viral etiology, characterized by cutaneous lesions. We conducted a retrospective study of cases of cowpox in Maranhão, from 2009 to 2011. We used clinical and laboratory data and spatial cases investigated by the Agência Estadual de Defesa Agropecuária do Estado do Maranhão (AGED-MA) by means of monthly reports, Initial Forms for Disease Research (FORM-IN) and Complementary Forms for Disease Research (FORM-COM). Through the AGED-MA, 52 properties were investigated, 24 of these (46.15%) had animals with clinical signs (22 machos/266 females) of the disease. Samples of sera and injured epithelium were collected from suspected animals and subjected to the neutralization test and PCR, respectively, in official laboratory (Biological Institute/SP). Properties were georeferenced using the model GPS5 Garmin®. Each address was located as a point in space and the maps were produced by the program ArcGIS 9.2. Descriptive analyses of occurrence of clinical signs and cattle age was performed using SPSS 20.0. Of the samples, 26 (9.02%) were confirmed by PCR as positive for the Vaccinia virus. The others were considered suspected cases by clinical and epidemiological links. The main clinical signs were lesions (59.03%) and crusts (36.11%) on teats and udders, teats ulcerations (28.82%), local tenderness (19.79%), hyperthermia (12.50%), mastitis (12.15%), vesicles and pustules (9.72%) and decreasing milk production (9.03%). The properties with suspect cases were in Açailândia, Bacabal, Balsas, Imperatriz and Pedreiras, located in central, southwest and south of the state, where the largest dairy and beef cattle herds are concentrated. These properties have mixed (8.33%) and dairy (91.67%) cattle herds. There were no deaths among the affected animals. It is concluded that cowpox is a disease present in MA, primarily in dairy herds, and its incidence and risk factors should be further studied.

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