

81 INVESTIGATION OF THE INCREASING NUMBERS OF HELMINTH EGGS DURING GOAT PREGNANCIES

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The increase of helminth eggs during pregnancy and after birth is relevant to the studies of epizootiology on primary infections of young goats; therefore, this phenomenon is the most meaningful to this study. The Experimental Station of Itiuba of EPABA, has breeding records for their goat herd. Fifty-one pregnant females were selected that would give birth in March, April, May and June. This experiment was made during the dry season. The evaluation was made with fecal samples collected thirty days before the birth and fourteen weeks after it. The baby goats feces were examinated with the same matrix process found by coproculture, were identified by the morphology of the infective larvae (L3). Mixed infections were found with predominance of the Haemonchus genus, presenting the following variations: 0% to 100%, 18% to 64% and from 76% to 87% for the births in March, April and May. The presence of the Trichostrongylus, Oesophagostomum and Strongyloides were also detected.

KEY WORDS: Haemonchus, Helminths, after birth.

82 DETECTION OF CLASS SPECIFIC GOAT ANTIBODIES TO HAEMONCHUS CONTORTUS BY DIG ELISA

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Haemonchus contortus is a major cause of unthriftiness and death in goats in the Northeast of Brazil. The primary goal of this study was to develop a serological assay that could be used to record the temporal development of class specific goat antibodies to a crude antigen of Haemonchus contortus. A Diffusion in Gel-Enzyme Linked Immunosorbent Assay (DIG-ELISA) using the "double sandwich" technique was employed to evaluate Immunoglobulins G and M in the serum of animals infected with the H. contortus. The DIG-ELISA is based on the ability of antibodies to diffuse through wells of an agar gel and adhere to an antigen coated plastic surface. The class specific antibodies were detected using rabbit anti-isotypic antibodies to goat antibodies and enzyme-linked sheep antibodies to rabbit antibodies. The reactions were visualized by the addition of a substrate containing gel. Semi-quantification was performed by the measurement of the diameter of reaction zones corresponding to the primary antigen antibody reactions. Test results

demonstrated the specificity of the test by the ability of our crude antigen to absorb activity from the whole serum employed. Animals experimentally infected with H. contortus and those by evaluation of feces determined to be infected as well as those with heavy infections at necropsy had sera exhibiting reaction zone diameters in the DIG-ELISA for IgG of  $14.3 \pm 0.63$  whereas negative sera had reaction zone diameters of  $9.7 \pm 0.75$ . The corresponding values for IgM were  $8.6 \pm 0.3$  and  $6.4 \pm 0.2$  respectively. The DIG-ELISA appears to be well suited to detect class specific antibodies to H. contortus.

KEY WORDS: class specific antibodies, goat, Haemonchus contortus, DIG-ELISA

*anticoipa especifica, caprina, Haemonchus*

### 83 POPULATION DYNAMICS OF CAPRINE PARASITIC HELMINTHS IN THE SERTAO OF INHAMUS, CEARA, BRAZIL

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This study was conducted in the county of Taua, Ceara, during the period of January 1982 to December 1984. Monthly, two to three resident goats, born on the study farm, which did not receive antihelminthic treatment were necropsied at the age of 12 months. Tracer animals, introduced on the study farm, which were nematode free, were necropsied after a 30 day grazing period. Pruvial precipitations were recorded daily. Helminths identified were: Haemonchus contortus, Trichostrongylus columbriformis, Strongyloides papillosus, Oesophagostomum columbianum, Trichostrongylus axei, Trichuris sp., Trichuris globulosa, Moniezia sp., Moniezia expansa, Taenia hydatigena, Taenia sp., Cooperia punctata, and Cooperia pectinata. The results obtained from the resident animals demonstrated that gastrointestinal nematodes were present during the entire year, although at a higher intensity during the rainy period. Based on data from the tracer goats, the period of transmission was restricted to the rainy season and the beginning of the dry period.

KEY WORDS: Gastrointestinal nematodes, epidemiology, goats

*Nematodes gastrointestinal, epidemiologic, caprin*

### 84 DISEASES OF GOATS DIAGNOSED IN SOBRAL, CEARA, BRAZIL

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Necropsies were performed on 726 goats of different ages, sexes, breeds and types (Anglo-Nubian, Bhuj, Caninde, Marota, Moxoto, Repartida, Parda Alema and Non-descript types). Macro and microscopic studies revealed that most common diseases were: gastrointestinal parasitism (24.93%) and bronchopneumonia (22.87%). In 19.15% of the animals, malnutrition was observed.