PREVALENCE STUDY OF EXTERNAL AND INTERNAL PARASITES IN THE MUNICIPALITY OF RABBITS IN LIBRES, PUEBLA, MEXICO

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ABSTRACT

There are many parasites affecting rabbits, which also affect the income of rabbit producers, however, no information is available in local rabbit farms, therefore the objective of this research was to sample all of scats rabbit farms located in the Municipality of Libres, Puebla, Mexico, to identify the parasites; 250 samples were obtained and analyzed in the laboratory method used was saturated saline flotation, results obtained were analysed by ANOVA. Some of the parasites that wered identified were: Coccidia (Eimeria magna), Toxocara canis and Fasciola hepatica.

Keywords: Parasites, rabbits, flotation technique.

INTRODUCTION

A parasite is any organism that lives on or in another living organism, of which obtains part or all of their nutrients, without further compensation to the host. In many cases, parasites or disease-causing damage to the host organism.

Two components involved in host-parasite system; they are organisms that tend to maintain an equilibrium, with continuous exchange between the two so that the basic relationships having a host-parasite interface which is called the surface through which the physiological and immunological exchange of importance takes place, Having passage of substances, the host parasite antigens in the form of secretions, excretions. Otherwise the absorption of nutrients, osmotic, ion-exchange and production of antibodies in the host (Quiroz, 2009).

Metabolic Parasites are opportunists, if a molecule is available can be used, if available oxygen is used for respiration or other metabolic function as amino acid oxidation (Quiroz, 2009). The Socio-economic parasites importance lies in the fact that a country has to suffer parasitic diseases with important indexes frequently, not only signal underdevelopment, but also those parasitosis you are producing great economic people losses that supports

Parasites are classified into two groups: the parasites that live inside their host and parasites that live outside. Parasites that live inside their host are called endoparasites. Endoparasites are divided into two groups: protozoa (unicellular microscopic animals) and worms (roundworm, tapeworm, tapeworms and acanthocephalans). Parasites that live outside their host are called ectoparasites. Ectoparasites are divided into several groups: mites, ticks, mosquitoes and flies.

In Oryctolagus cuniculus domesticus parasites that exist are: Nematodes: Trichostrongylus retortaeformis (Zeder, 1800), Passalurus ambiguus (Rudolphi, 1819). Platyhelminthes: Cysticercus pisiformis, Taenia pisiformis larvae (Bloch, 1780) Multiceps serialis, larva of Taenia serialis (Gervais, 1847) Fasciola hepatica Linnaeus, 175 Arthropods: Haemodipsus sp. Penny, 1842 Sarcoptes scabiei var. cuniculi (Linnaeus, 1758 Notoedres var cuniculi cati (Hering, 1858 Psoroptes equi var cuniculi (Delafond, 1859) Cheyletiella parasitivorax (Megnin, 1848) Listrophorus sp Pagenstecher, 1861 Linguatula serrata (larvae and nymphs) (Froelich, 1779

Protozoa: Trypanosoma cruzi Chagas, 1909Toxoplasma gondii Nicolle and Manceaux, only Eimeria stiedae 1908 (Lindemann, 1865) Eimeria perforans (Leuckart, 1879) Eimeria magna Perard, 1925 Encephalitozoon cuniculi Levaditi, Nicolau and Schoen, 1923 (HECTOR ALCAINO and TEXIA Gorma) antibody

Among the different protozoa that affect Rabbit, the most prominent are the various forms of Coccidiosis in rabbits very often cause problems of varying severity. Coccidiosis are protozoa which generally live in the intestine and have a life cycle that includes an asexual reproduction and sexual reproduction. There are many species of coccidiosis. Everyone has a preference for a particular host species and within host for this particular cell type (usually parts of the digestive tract).

In economic terms will lose $ 55.41 in 100 rabbits, regardless mortality losses that greatly increases costs by not using de-wormers which is a low investment to eliminate this condition and a cost of 6.6 in 100 animals was determined dollars

Background

UAP in the dimension that is covered with this project - the study area, no similar research to making the Faculty of Veterinary Medicine and Animal Husbandry are recorded.

Justification

For animal welfare in the rabbit you need to have a schedule of deworming by season and by region, with the need to identify the parasites found on rabbits and deworm with specific medication, avoiding unnecessary costs to combat these agents etiologic in household production.

General objective

Sample 100% of rabbit farms in Libres, Puebla Mexico, to identify parasites using sedimentation and flotation tests.

Specific objectives:

Identify parasites in rabbits on farms in each locality of RF Municiío Puebla, to map based on the results obtained.

Hypothesis

Parasites present in rabbit farms in Libres, Puebla, are protozoa of the genera *Eimeria* and *Isospora.*

MATERIAL AND METHODS:

The project was conducted in the Municipality of Libres, Puebla, Mexico.

Georeferencing Google INEGI, 2010.

Its name originates from the 'East Station', meaning the 'eastern' given to it in the eastern state of Puebla. Its native name is Xalaco, meaning 'in the sand' because East was built on an arid area, which is why so named.

Its coordinates are North Latitude 19 ° 24 '06 "west longitude and 97 ° 24' 12" The surface of the town of Oriental is 298.52 km ². Therefore, the city ranks 30 among 217 districts Puebla for its size. To the north and Tepeyahualco Free; east to San Nicolas Buenos Aires; San Salvador to the southeast Seco, and west San José Chiapa and the state of Tlaxcala. Its average altitude is 2360 m. It has a semi-temperate climate with summer rains. It is reached by the federal highway 129 and is located 80 km from the city of Puebla.

Collection and storage of samples.

In the first stage a total of 250 samples were collected in understanding the March to June period this year 2014 A total of 24 rabbit farmers in six communities. Barrio San Carlos, Tétela neighborhood, Colonia la Libertad, Barrio Coatzolco, Fort Union, Tepeyahualco Puebla (Center)

Tepeyahualco Puebla (San Roque). The sampled rabbit breeds were: California, New Zealand, Rex, Chinchilla, Mariposa, Azteca, Belier. English, Creole.

Material:

Plastic bags (polypropylene material for anal sample), latex gloves, bata or filipino masks, plastic bags (polypropylene material for protection of shoe), biotrol (liquid for disinfection), ice (transportation to the laboratory samples), logs record, tapes (sample identification), goggles.

Sampling method:

The technique used to analyze the samples was flotation method with saturated salt solution is used to qualitatively detect oocysts, eggs of nematodes, tapeworms, and occasionally acantocephalos nematode larvae. The principle of this method is to float elements in feces. Saturated sodium chloride solution is used (360 grams of salt in one liter of distilled water), which is then homogenized.

They visited each of the farms, with the support of producers, a sample directly from the anus rabbit was obtained, then one ml was added. physiological saline, each sample number, owner name, email, city and municipality, address, phone, date, rabbit breed, age, sex, then the samples were placed in the cooler for transport to the laboratory identified..

To be analyzed in the Laboratory of Parasitology of the Multidisciplinary Laboratory, the Posta Zootecnica, Colony El Salado, once admitted to the laboratory were added to each sample, one ml. TAF (Fixer conservative sample).

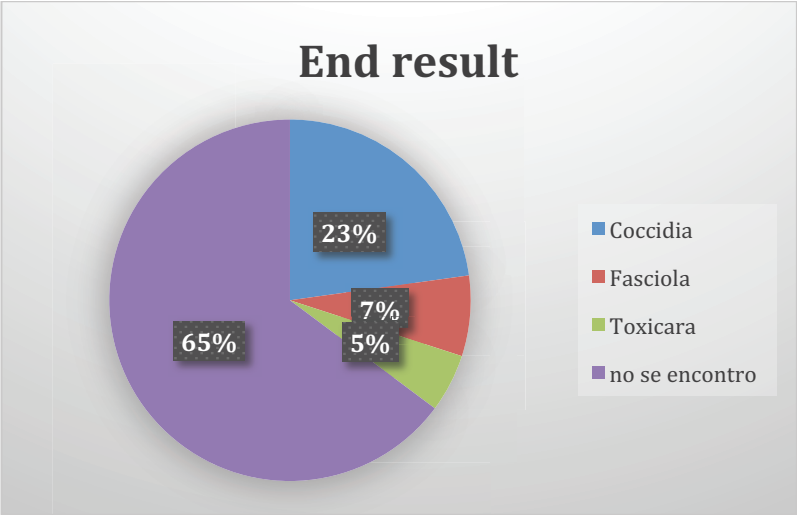
The material that was used in the art, mortar with pestle, 15 ml falcon tubes, rack, funnel Strainer, plastic spoons, saturated saline solution, and slide covers, Centrifuge Tubes, Falcon, Na Cl solution, iodine (staining) , bunsen burner, metal handles,

Microscope.

250 samples were collected on 5 samples on the following dates: 18/03/2014 46 samples; 01/04/2014- 47 samples; 04/29/2014- 53 samples; 05/21/2014,-47 samples; 06/26/2014- 57 samples. All samples were analyzed with the flotation method with saturated saline. 3 grams of feces were collected, macerated in mortar and was added 15 ml of saturated saline. Subsequently slipped and the liquid was poured into a tube, labeled and placed in a rack; were centrifuged for 3 minutes at a speed of 2000 RPMI (revolutions per minute) for feces residues were skirt to the bottom of the tube; a drop was placed on the slide more than a drop of Lugol's solution and were observed under a microscope with 10X objective.

Results

The results obtained are 57 samples were positive for Coccidea; 18 samples positive for Fasciola hepatica: 13 Toxacara canis and 162 had no parasites were identified. In graph 1 the results do not occur.



Graphic 1. Of the 250 samples collected 23% were positive for *Coccidea, Fasciona* and 7% to 3% to *Toxocara canis*.

CONCLUSION:

In the land of Libres, Puebla, Mexico, 28 producers of rabbit 250 samples were collected, and according to the flotation method with saturated saline 65% of rabbits showed no evidence to indicate the presence of parasites which indicates that the sanitary conditions in which they have rabbits in this region are optimal, and consequently the channels have optimal conditions for consumption.

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