

THE SUBTYPES OF *CYATHOSTOMUM SPP.* IN TIMIS AND ARAD COUNTIES, IDENTIFIED FROM LARVAL CULTURES

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Summary

The cyathostomins (small strongyles) are considered to be the most pathogenic parasites of horses and they represent a challenge for the parasitologists and the animal owners due to the high number of parasite species and their ability to develop anthelmintic resistance.

The study was performed on 29 horse faeces samples from Timis and Arad Counties. The subtypes of cyathostomins were identified from larval cultures resulted from the faeces samples.

The subtypes of *Cyathostomum spp.* found with the identification key proposed both by Soulsby and Madeira de Carvalho were: type A (58.62%), B (3.44%), C (20.68%), D (44.82%), F (3.44%). Also the parasites *Gyalocephalus capitatus*, *Oesophagodontus robustus*/ *Poteriostomum spp.*/ *Craterostomum acuticaudatum*/ *Triodontophorus serratus*/ *Strongylus equinus*/ *Strongylus edentatus* were identified.

Key words: cyathostomins, horses, larval cultures

DETECTION OF VERY VIRULENT STRAINS OF THE INFECTIOUS BURSAL DISEASE VIRUS

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Summary

IBD was suspected in a broiler farm from western country, in a flock of 10,500 chickens, based on symptoms and anatomopathological lesions.

Viral RNA was revealed by the Polymerase Chain Reaction with Reverse Transcriptase, Real-Time Amplification Method (RT-Real Time Polymerase Chain Reaction, RT - rPCR).

Through Polymerase Chain Reaction with Reverse Transcriptase - Real-Time amplification technique (quantitative), were detected the strains belonging of the virus IBD, assigned, based on genetic features in the very virulent pathotype. These strains were detected in bursal tissue taken from chicken carcasses with lesions of bursitis catarrhal or catarrhal hemorrhagic during the period when the outbreak of disease was monitored

Key words: IBD virus, very virulent, RT-PCR

STUDY REGARDING CANINE DIROFILARIASIS CASES WITHIN THE FACULTY OF VETERINARY MEDICINE, IASI

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Summary

Since 2007, canine dirofilariasis has been reported in Northern-East Romania. This paper presents a study including 27 dogs diagnosed in the Faculty of Veterinary Medicine Iasi with subcutaneous and cardiovascular dirofilariasis between January 2013 and March 2014. 18 (66.6%) cases of *Dirofilaria repens* and 9 (33.3%) cases of *D. immitis* were identified. The microfilarias of *D. repens* and *D.immitis* were especially studied using morphometry and morphology exams using Knott's technique. Confirmation of positive cases of *D. immitis* was achieved through PetCheck Canine Heartworm Antigen test (Westbrook, Maine USA).

Several data were obtained for each animal taken into the study: breed, age, sex, outdoors/indoors, prophylaxis, clinical, and paraclinical observations. Large breeds were preponderant, such as German Shepard, Bucovina Shepard, Carpathian Shepard, Saint Bernard and Brac. The mean age was 8 years old. 16 males and 11 females were identified without antifilarial prophylaxis. We included in the study dogs which had been kept in open spaces (guard dogs, hunting dogs) which increased their exposure to the vectors (ticks, mosquitoes), the source areas being near the forest.

Some cases identified as positive for *Dirofilaria immitis* (33.3%) have shown characteristic symptoms of the diseases: asthmatic cough, heavy breathing, intolerance to effort, lethargy, ascitis, fever. Echography showed adult worms in the right heart. The biochemical examinations identified different degrees of renal and/or liver failure. The rest of the dogs (55.5%) were asymptomatic. 72.2% of the diagnosed cases with *Dirofilaria repens* showed clinical signs that mimiced babesiosis and 27.7% were a surprise at the haematological exam. Only two positively dogs presented prominent nodules on the abdomen, inner part of the lower extremities and the area of the head.

Present climate changes tend to expand the specific spreading area of this parasitic zoonosis, threatening both the animals and public health. Thus, the dirofilariosis cases are increasing and the study of the disease is more than necessary for the protection of animals and the public alike.

Key words: Dog, Heartworm canine, *Dirofilaria repens*, *Dirofilaria immitis*

FREQUENCY OF *SALMONELLA* SPP. RELEVANT SEROVARS ISOLATED DURING 2009-2012 FROM LAYING HENS FLOCKS

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Summary

In Romania, a National Control Programme has been implemented in laying hens farms against salmonellosis caused by mobile *Salmonella* having a high zoonotic risk and involving economic damage through mortality and decrease in egg laying rate. This programme aims at identifying relevant serovars for laying hens flocks, represented by *Salmonella enteritidis* and *Salmonella typhimurium*.

Faeces samples were taken at a frequency established by the EU legislation while the programme aims at obtaining a prevalence of 2% or less of the laying hens flocks with 95% confidence limit. Implementation of a strategy of reducing the mobile *Salmonella* infections in laying hens farms is considered a major goal that will contribute to a decrease in material damage and in the number of cases of foodborne diseases produced by consumption of eggs contaminated with mobile *Salmonella*.

A total of 733 strains were isolated classified under species *Salmonella enterica* subsp. *enterica*. Following serotyping, the strains were categorised into 32 serovars, including both serovar *S. enteritidis* and serovar *S. typhimurium*. A number of 213 strains representing 29% were isolated under serovar *S. enteritidis*, which had the highest frequency, and 10 strains representing 1.3% were isolated under serovar *S. typhimurium*. Other serovars had a varying frequency.

Key words: *laying hens, Salmonella, serovars.*

FREQUENCY OF *SALMONELLA SPP.* RELEVANT SEROVARS ISOLATED DURING 2009-2012 FROM BROILER FLOCKS

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Summary

In Romania, a National Control Programme has been implemented in broiler farms against salmonellosis caused by mobile *Salmonella* having a high zoonotic risk and producing economic damage through mortality. This programme aims at identifying relevant serovars for broilers, represented by *S. enteritidis* si *S. typhimurium*.

Faeces samples were taken at a frequency established by the EU legislation while the programme aims at obtaining a prevalence of 1% or less of the broiler flocks with 95% confidence limit. Implementation of a strategy of reducing the mobile *Salmonella* infections in broiler farms is considered a major goal that will contribute to a decrease in material damage and in the number of cases of foodborne diseases produced by consumption of meat contaminated with mobile *Salmonella*.

A total of 2275 strains were isolated classified under species *Salmonella* Enterica subsp. Enterica. Following serotyping, the strains were categorised into 35 serovars, including both serovar *S. Enteritidis* and serovar *S. typhimurium*. 106 strains were isolated under serovar *S. enteritidis*, representing 4.6% and 5 strains were isolated under serovar *S. typhimurium*, representing 0.2%. Other serovars had a varying frequency

Key words: broiler, *Salmonella*, serovars.

REPORTING OF PARASITISM WITH *METASTRONGYLUS PUDENDOTECTUS* IN WILD BOARS (*SUS SCROFA*) IN TIMIS COUNTY

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Summary

In the period October 2013 - February 2014, 11 wild boar (*Sus scrofa*) from three hunting territories of Timis County were necropsied. Out of these, seven were males, four females and they were aged between six months to four years. To determine the respiratory system parasites, lungs were collected. Macroscopic and microscopic examination. In five wild boars (45%) *Metastrongylus pudendotectus* parasitism.

Key words: *Metastrongylus pudendotectus*, *Sus scrofa*, necropsy, respiratory system

RESEARCH ON SEROLOGICAL TYPING OF *E. COLI* STRAINS ISOLATED FROM BROILERS

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Summary

The *E. coli* strains falling within pathotype, due to its invasive extraintestinal infections produce broilers with respiratory mucosa as a triggering. The APEC strains, most commonly isolated are classified in serogroups O1, O2, O35, O 78.

The researches had as objective serological typing for 57 the APEC strains isolated from broilers.

The strains typed were classified into 4 serogroups were as follows: O78 K80, O157, O18 a O18c:K77, O55 K59.

Were typed a number of 11 strains belonging to serogroup O157, which includes strains verotoxigene increased zoonotic risk.

Key words: *E. coli*, APEC, serotypes, broiler

COMPARATIVE TESTING THE EFFECTIVENESS OF TWO METHODS USED IN DIAGNOSTIC OF BABESIOSIS: DIFF – QUICK STAINING VS. PCR - RFLP

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Summary

The aim of this study was to assess the efficacy of two diagnosis methods in canine babesiosis. The study was conducted during the period August 2010 - May 2013 on a total of 66 dogs from two western counties and three north-western counties of Romania. From each animal in the study blood samples were collected through the brachial vein puncture into sterile EDTA vacutainers. On the day of samples collection individual blood smears were performed, subsequently were stained Diff - Quick ® (Medion Diagnostics GmbH, Düdingen, Switzerland) and examined under light microscopy to highlight possible piroplasms presence in red cells. The remaining blood samples were stored at - 20⁰ C and molecular analysed by 18S SSU-rRNA gene amplification, amplicons analysis, digestion of the amplification products using enzymes Taq1 and Hinf1 digest and analyse results. In the case of diagnosis of large *Babesia* spp. (*B. canis*) there was a 100% concordance between the direct smear Diff - Quick® stained and polymerase chain reaction techniques followed by analysis of restriction fragment length (PCR - RFLP). Therefore, in this case, for a quick and reliable diagnosis we encourage the use of direct stained smear method. In the case of diagnosis of small *Babesia* spp. (*B. gibsoni*) there is a match of 0.71% between direct stained Diff - Quick ® smear method and polymerase chain reaction techniques followed by analysis of restriction fragment length. PCR - RFLP revealed small *Babesia* spp. in four negative samples at direct stained smear. Therefore, a reliable diagnosis for highlighting small *Babesia* spp. is PCR-RFLP.

Key words: effectiveness, diagnostic, methods, Diff-Quick, PCR-RFLP, babesiosis

EPIDEMIOLOGICAL ASPECTS OF SHEEP BABESIOSIS IN GORJ COUNTY – PRELIMINARY STUDY

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Summary

The prevalence of *Babesia* spp. infection was studied in sheep from Gorj County, Romania from April 2013 to August 2013. A total of 412 sheep originating from one private animals holding were clinically examined and investigated for the presence of *Babesia* spp. by blood smears Diff – Quick stained. The study revealed that the infection rate for *Babesia* spp. were 47 (11.4%). Differences in infection rates were statistically non-significant between male and female sheep and between different age groups. Seasonally, the prevalence of *Babesia* spp. infection started to increase in April and reached highest values in June. During evolution of disease seven sheep died and 40 showed fever, anemia, haemoglobinuria and other signs of general health status change. The disease developed in two episodes, clinical signs were reduced after administration of Berenil.

Key words: epidemiology, sheep, babesiosis

EFFECTS OF PARASITE *ARGULUS SPP.* ON THE NILE TILAPIA *OREOCHROMIS NILOTICUS*

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Summary

To research and understand the causes of the mortalities observed in fish farming near the lagoons of Côte d'Ivoire, infestation experiments were carried out with the parasites found on the Nile tilapia *Oreochromis niloticus* to determine if the obtained effects were as those observed on the dead fishes. For that, mature males of Nile tilapia, *O. niloticus*, weighting 100 ± 3 g were put in two groups (control and test). Test groups were artificially infested by the parasites *Argulus spp.* according to the cohabitation method in a completely randomized design groups during six months. The negative effects of these parasites were researched on the behavior, the surviving, the growth and the intensity of infestation with bucal localisation of fishes from test group.

As results, the Nile tilapia *O. niloticus*, artificially infested by parasites *Argulus spp.* had shown high clinic signs in comparison with fishes from control groups. Significant differences were observed from the second to the sixth month of infestation. We registered variations of fishes survival from 86.9 to 40.50 %, 32.90 to 88.10 %, 23.10 to 83.30 %, 24.40 to 90.50 %, 26.80 to 88.10 % and 1.22 to 100 %. Infested fishes presented loss of body weigh, erratic swim, removed scales, haemorrhagic spots and high secretion of mucus in different percentages and increasing from the second to the six month of infestation. The intensity of the infestation varied from 9.90 to 31.8 in test group and from 0.035 to 0.26 in control group. Differences in growth rate have appeared after the first month of infestation, fishes from control group having an increase in weight of two times higher than those from infected group.

In conclusion, we noted that the parasites *Argulus spp.* can be responsible of the high mortality of the *O. niloticus* bred in the lagoons of Côte d'Ivoire because they showed the same clinic signs than those observed in the dead fishes, and can cause great economical losses.

Key words: *Argulus spp.*, clinic signs, infestation, *Oreochromis niloticus*, parasites

STRAY DOGS - ZONOTIC RISK FACTOR FOR THE INHABITANTS OF TIMISOARA

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Summary

The aim of this study is to investigate the intestinal parasitic infestation of stray dogs by examining their faeces and to identify the endoparasites which could endanger human health. The stray dogs were brought to Veterinary Clinics - Faculty of Veterinary Medicine in Timisoara to be sterilized. The samples were examined using qualitative, quantitative and Lugol coloring methods of the direct smear. Following the examination of 119 stray dogs captured in Timisoara, it was found that 97 (81.51 %) had been infested with parasites. The ovoscopic qualitative examinations and Lugol coloring of the direct smear showed cysts of *Giardia spp.* – 4.12%, oocysts of *Eimeria / Isospora* – 19.58 %, *Taenia spp.* – 6.18 %, eggs of *Toxocara canis* – 85.56%, eggs of *Toxascaris leonina* – 03.09 %, eggs of *Ancylostoma-Uncinaria* – 62.88 %, eggs of *Tricocephalus vulpis* – 48.45%. Eggs per gram faeces (EPG) values were: *Eimeria / Isospora* 500-800, *Taenia spp.* 50-150, *Toxocara canis* 400-2400, *Toxascaris leonina* 50-100, *Ancylostoma-Uncinaria* 500-2300, *Tricocephalus vulpis* 300-500. After the ovoscopic examination, it was found that the stray dogs infested with *Giardia spp.*, *Toxocara canis*, *Ancylostoma-Uncinaria* represent a reservoir of parasites which could endanger human health. The risk of zoonotic infestation can be decreased significantly by checking stray dogs and by educating people since this is a matter of public health.

Key words: stray dogs, endoparasites, zoonotic infestation, Timisoara

**THE DYNAMICS OF BLOWFLIES OF *CALLIPHORA*, *LUCILIA*
AND *PROTOPHORMIA* GENERA DURING 2006 IN NORTHERN
TIMIȘOARA**

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Summary

The paper describes the dynamics of *Calliphoridae* family blowflies. During 2006 the blowflies of *Lucilia*, *Calliphora* and *Protophormia* genera were monitored between April 20 and October 30. For *Calliphora* genus 6 population peaks were recorded. First capture was achieved on April 22nd, the first peak was noticed on April 28th, at an air average temperature of 16.8°C, a soil average temperature of 18.1°C, and 65% relative humidity, and the last one on October 04th, at an air average temperature of 20.6°C, a soil average temperature of 22.6°C, and 61% relative humidity, respectively. For *Lucilia* genus 6 population peaks were also recorded, with the same April 22nd the first capture date, and October 04th the last capture date. For *Protophormia* genus were only 5 population peaks recorded. First capture was performed also on April 22nd, but the first peak was noticed on May 24th, at an air average temperature of 22.4°C, a soil average temperature of 29.5°C, and 62% relative humidity, and the last one also on October 04th, at an air average temperature of 20.6°C, a soil average temperature of 22.6°C, and 61% relative humidity, respectively.

Key words: dynamics, blowflies, 2006, northern Timișoara.

SHORT SURVEY OF QUESTING TICKS DISPERSAL (*IXODIDAE*) IN THE NORTH-EASTERN ROMANIA

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Summary

Ticks (*Ixodidae*), are important vectors for a great variety of pathogens, knowing their ecological boundaries we will improve our knowledge about epidemiological risk of tick-borne diseases. The main objective of our study was to create a distribution map of questing ticks in North-East of Romania.

During April 2012 and March 2014 a main tick collection campaign and several occasionally sample collections were made gathering a total number of 1017 ticks belonging to three genera: *Ixodes ricinus* (879; 86.26%), *Haemaphysalis punctata* (85, 8.34%), *Dermacentor reticulatus* (27, 2.65%), *Dermacentor marginatus* (22, 2.16%), *Haemaphysalis inermis* (2, 0.19%), *Ixodes redikorzevi* (1, 0.10%), *Haemaphysalis concinna* (1, 0.10%).

Ixodes ricinus is the most widespread tick species, in this study, being present in all 32 locations (100%), occurring exclusively in 16 of these

Our survey is in concordance with recent studies regarding the abundance and tick community in north-east of Romania. In this paper we notice the ubiquity of *Ixodes ricinus*, the constant presence of *Dermacentor reticulatus* in Iasi county and a new record of *Haemaphysalis inermis* in Romania.

Key words: Tick dispersal, Questing ticks, Ixodidae, Moldavia region, Romania

FIRST REPORT OF *SPIROCERCA LUPI* IN DOGS IN SERBIA

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Summary

Spirocerca lupi is a cosmopolitan nematode of dogs and wild carnivores, but is found more commonly in the warmer tropical and subtropical regions of the world. They has an indirect life cycle with dogs and other carnivores as final hosts, coprophagous beetles (e.g. *Geotrupes* spp, *Skarabeus* spp) as intermediate hosts, and numerous vertebrates (chicken and other birds, frogs, lizards and other reptiles, rodents, pigs, etc.) as transport hosts. Adult *Spirocerca lupi* are bright red worms, 40 mm (male) to 70 mm (female) long, generally located within nodules in the esophageal, gastric or aortic walls.

In Serbia, spirocercosis rarely occurs, only at foxes (at less than 1.5%) while in dogs has not been recorded case of infection.

During 2014 we observed Collie who was brought to the clinic with symptoms of difficulty swallowing and vomiting repeatedly after trying to eat. Dog salivate profusely and had impairs breathing. During endoscopy on the wall of the esophagus were observed nodule from which they saw bright red posterior end of parasites. As we have had cases of esophageal spirocercosis in foxes with identical nodules and parasites that are found within them, we set up the diagnosis of this disease in dogs.

This case is the first report of spirocercosis in dogs in Serbia.

Key words: *Spirocerca lupi*, dogs, Serbia

TICK FAUNA OF SHEEP AND CATTLE AT KUMANOVO AREA (MACEDONIA)

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Summary

Ticks are a nuisance and vectors of several diseases agents. Their distribution appears to be ever changing and spreading to previously unaffected areas. Tick and tick-borne disease control is one of the major components of animal health programs for protecting livestock in the developing countries, and a significant factor in production losses in resource-poor farming communities. The aim of this study was to determine the tick species persisting in tested sheep flocks, cattle herds, and dogs in 2012, and examine their seasonal occurrences in the region of Kumanovo (Macedonia). The result showed presences of *Ixodes ricinus*, *Rhipicephalus bursa*, *R. sanguineus* *Haemaphysalis punctata*, *Boophilus annulatus* *Dermacentor marginatus* and *D.recticulartus*. *I.ricinus* was the most abundant species in both populations of cattle and sheep, affecting 41.91% of tested sheep and 34.42 % of tested cattle. In dogs, the most abundant species were *Ixodes*, followed by *Dermacentor* and *Ripicephalus*.

Key words: tick, sheep, cattle, dogs, Kumanovo, Macedonia

SEROLOGICAL SCREENING FOR AVIAN REOVIRUSIS

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Summary

Reovirus infection are infectious diseases and intensive poultry farming affects, mainly, broilers, evolving or as malabsorbtion syndrome or syndrome as arthritis, tenosynovitis.

The investigations were made in order to determine seroprevalence of these infections in seven broiler farms west. Blood samples were taken from chickens aged 21 days (R1) and 37 days (R2). Specific antibodies were detected by ELISA (Enzyme Linked Immunosorbent Assay) kit using FlockChek ® Avian reovirus Antibody Test Kit, supplied by IDDEX Laboratories, Inc.

At the age of 21 days geometric mean titres have different values, limits ranging between 245 and 607 O.D. At the age of 37 days, the geometric mean of specific antibody titers were higher limits ranging between 89 and 773 O.D.

The results obtained demonstrating the existence of seroconversion proces is the result of evolution reovirus infection in broiler farms investigated.

Key words: broiler, reovirus infection, seroconversion proces.

BABESIA GIBSONI: AN EMERGING PATHOGEN IN ROMANIA

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Summary

Canine babesiosis is a tick-borne protozoal disease, characterized by hemolytic anemia and thrombocytopenia. Until recently, only *Babesia canis* was identified as the etiologic agent of canine babesiosis in Romania.

In March 2013 five canine blood samples were sent to our laboratory, from three separate geographic locations in Romania. All samples came from American Pit Bull Terriers (APBT) with various clinical symptoms as anorexia, fever, depression, exercise intolerance, pale mucous membranes and hematuria. Three of five blood samples showed severe regenerative anemia with small pleomorphic inclusions in red blood cells and moderate to severe thrombocytopenia. *Babesia gibsoni* DNA was detected by polymerase chain reaction (PCR) assay in these three blood samples.

Veterinary clinicians need to be aware that both species of *Babesia*, *B. canis* and *B. gibsoni* exist in Romania. They should suspect *B. gibsoni* infection in dogs with symptoms of severe anemia and thrombocytopenia, especially in APBT, or other breeds that were bitten by, or came in contact with APBT. Molecular diagnostics are necessary to confirm *B. gibsoni* infections, if confirmed, adequate therapy should be considered for an effective treatment.

Key words: *Babesia gibsoni*, canine, Polymerase Chain Reaction

THE HOMOLOGOUS AND INTERSPECIES TRANSMISSION OF DIFFERENT SPECIES OF *GIARDIA*

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Summary

Giardia duodenalis (syn. *Giardia lamblia* and *Giardia intestinalis*) is one of the most important intestinal parasites in humans and mammals worldwide. Six species of *Giardia* was accepted by most researchers on the basis of the morphology of trophozoites and cysts forms. To date, seven main assemblages of *G. duodenalis* have been described using PCR procedures, but only A and B genetic groups are known to infect humans. The zoonotic potential of *Giardia* was recognized by the World Health Organization (WHO) in 1979 and afterwards it was introduced in the "Neglected Disease Initiative" in September 2004. In humans *Giardia* was estimated in 200 million individuals from Asia, Africa and Latin America and the majority of cases are asymptomatic every year. *Giardia* presents four cycles of transmission in mammalian hosts involving transmission between humans, livestock, dogs/cats and wildlife. However, groups A and B can persist in the environment through direct transmission between animals, groups B by transmission between cattle and other farm animals (dairy cows in the external environment), group C / D between dogs (kennel dogs), and the new wildlife genotypes between different species of wildlife.

Key words: *Giardia*, zoonotic potential, assemblage, cycles of transmission

**A STUDY ON DYNAMICS AND PREVALENCE IN MAY-JUNE 2013
OF *CULICOIDES* SPP., IN TIMIȘ COUNTY**

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Summary

Culicoides (Diptera: Ceratopogonidae) biting midges are important vectors for a diversity of pathogens. Bites may also cause discomfort and can generate important economic losses. Therefore, it is essential to identify the distribution, dynamics and prevalence of *Culicoides*.

Based on these considerations a study was conducted during May-June 2013 in couple different localities in Timiș County, which aimed capturing, identifying and tracking of *Culicoides* dynamics and prevalence in this area.

We have used CDC Ondestepoort mobile U.V. light traps that were placed in these different areas of the Timiș County. In total ten samples were taken, in 30 days of study. In addition, abiotic parameters monitoring was performed (minimum temperature, maximum temperature, relative humidity and wind speed/velocity) and observing their influence on *Culicoides* population dynamics and prevalence.

Following this research a total of 2534 adult diptera was captured, which identified three species having the role of potential vectors for bluetongue, namely *Culicoides obsoletus* 409 (16.14%), *Culicoides pulicaris* 239 (9.43%) and *Culicoides nubeculosus* 183 (7.22%) and 1703 individuals from other species of diptera (67.20%).

Based on partial data obtained it is considered that of all the abiotic factors monitored the average temperature, relative humidity and wind speed have a major role in the variability of the total number of insects.

Key words: culicoides, diptera, bluetongue, prevalence

**PRELIMINARY RESEARCH ON THE PARASITIC COMPLEX OF
EIMERIA, *GIARDIA* AND *CRYPTOSPORIDIUM* IN YOUNG
CATTLE FROM NORTHERN MOLDAVIA**

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Summary

The research has been done through specific methods of identification for *Eimeria spp.*, *Giardia spp.* and *Cryptosporidium spp.* in young cattle from Northern Moldavia.

The purpose of this work was to show if the zoonotic risk of parasitic infections in dairy farm is present. For counting *Eimeria spp.*, the McMaster and flotation method with hyper saline solution was used. *Giardia spp.* and *Cryptosporidium spp.* has been identified and counted using a modified Immunofluorescence method with the commercial kit from Merifluor®.

During July 2013 and March 2014, 102 samples from 12 different farms has been collected and analyzed. The farms included in the study are from three departments: Botosani, Iasi and Suceava. On these farms, calves are maintained differently in terms of hygiene, accommodation and feeding. Herds studied are both beef cattle breeds, replacement calves for dairy farms and hybrids between dairy and beef breeds.

The housing systems are either single calve pen either in collective pens. Also the feeding is made with milk, milk substitutes and concentrates. In some farms the tea of alfalfa and hay is also used for hydrating the calves.

The data obtained show the presence of parasitic loads vary depending on the system of maintenance and feeding, hygiene as well as depending the season. From data analyze result that in colder seasons the prevalence is higher.

In this paper we present the first data about constant identification of *Giardia spp.* and *Cryptosporidium spp.* with their zoonotic potential in the farms from Northern-East region of Romania.

Key words: calves, protozoa, zoonotic, Moldavia County, Romania

**STUDIES CONCERNING THE NON-INVASIVE SAMPLING FOR
CANINE LEPTOSPIROSIS DNA SEARCH: ROUTINE
DIAGNOSTIC AND SURVEILLANCE SCREENING**

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Summary

Conventional sampling methods for routine diagnostic and surveillance screening in canine leptospirosis involve animal contention, blood collection by venipuncture or urine collection by catheterization, handling and preservation of clinical specimen, but these methods are stressful and distressing for dogs, time-consuming, expensive, and logistically challenging. For free-ranging urban dogs relocated in large sanctuaries a non-invasive sampling for canine leptospirosis DNA analysis, may be a useful alternative. We designed an innovative procedure of non-invasive urine sampling from captured free-ranging urban dogs that are hosted in individual or small group paddocks. The scientific available data describe sensitive and specific methods of *Leptospira* sp. detection by Polymerase Chain Reaction (PCR) in dog's urine, and we decided to evaluate the sensitivity of this method on urine samples collected with different adsorbent materials. Our goals were (1) optimization of PCR technique for *Leptospira* sp. detection in urine of dogs; (2) determination of the best DNA collection support (cotton rope, cotton wipes and cotton pads), and (3) evaluation of the potential of non-invasive urine sampling for DNA analysis to detect the urinary shedding of leptospires in routine diagnostic and surveillance screening in free-ranging urban dogs relocated in local dog sanctuaries. Our results prove that PCR can be used in detection of *Leptospira* in urinary samples; the quality of collection support could influence the PCR result - we recommend previously testing of cotton adsorbent materials - and non-invasive urine sampling for DNA analysis is a useful tool in detection of the urinary *Leptospira* shedding dogs in sanctuaries.

Key words: PCR, *Leptospira* sp. urinary shedding, free-ranging urban dogs testing

SEROPREVALENCE OF SWINE INFLUENZA VIRUS H1N1 IN COMMERCIALLY PIG FARMS LOCATED IN WESTERN ROMANIA

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Summary

In the 21st century, viral diseases of humans and animals pose one of the most major threats to worldwide health. Currently, the capacity of swine influenza virus (SIV) to adapt and mutate rapidly by antigenic shift and drift exceeds the medical community's ability to respond with new and advanced strategies for control. Although, the pig industry in Romania and worldwide have achieved high levels of technology and efficiency, swine influenza virus is a major threat, having a significant impact upon herd health; both as a cofactor in respiratory disease illnesses and as a deterrent to reproductive success. This study was conducted to determine the seroprevalence of H1N1 influenza virus strain in pigs from Western Romania.

In order to accomplish this goal, blood samples were collected from pigs in three counties (Timis, Arad and Caras-Severin) and tested by enzyme-linked immunosorbent assay against H1N1 subtype. Serological examination conducted by ELISA revealed the presence of antibodies against SIV subtype H1N1 in one of four investigated farms. In the infected farm the highest seroprevalence of H1N1 subtype found in this study was 25% in pigs between 91 and 140 days.

Key words: swine influenza, H1N1, seroprevalence

THE SEROPREVALENCE OF H1N1 SWINE INFLUENZA VIRUS AND *SALMONELLA* IN PIGS OF DIFFERENT AGES FROM WESTERN ROMANIA

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Summary

Influenza virus infections in swine are very common. Subtypes of swine influenza virus (SIV) most frequently identified in pigs include classical and avian H1N1, reassortant (r) H3N2 and rH1N2. In the United States of America and Europe, three main influenza A subtypes (H1N1, H1N2, H3N2) circulate in swine populations. Other subtypes were occasionally detected in swine within and outside Europe, but have so far not become endemic. Moreover, respiratory diseases associated with SIV infection of pigs have been recognized as an important cause of economic loss to pig farmers. Intercurrent secondary bacterial infections extend the course of an infection with SIV and complicate the severity of disease.

Therefore, the specific aims of our study were: first, to determine the seroprevalence of H1N1 influenza virus strain in pigs of different ages from Western Romania; second, to assess the prevalence of *Salmonella* in the same population; third, to compare the prevalences of these diseases.

In order to accomplish this goal, blood samples were collected from pigs in three counties (Timiș, Arad and Caraș-Severin). Commercial ELISA kits (HerdChek Swine Influenza H1N1 Antibody Test Kit and HerdChek *Salmonella* Antibody Test Kit, INDEX LABORATORIES, Inc; Maine, USA) were used to detect antibodies against swine influenza virus (SIV) subtype H1N1 and *Salmonella* in pigs of different ages belonging to commercially pig farms located in Western Romania.

Key words: swine influenza, *Salmonella*, seroprevalence, co-infection

INVESTIGATIONS ON THE MORTALITY CAUSES IN TURKEY BROILERS, IN THE FIRST 20 DAYS OF LIFE

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Summary

The results of monitoring infectious diseases that appear at the first 20 days of age in turkey broilers from a farm are presented in this paper. A farm in which were being turkey broilers was observed. The broilers were clinical exanimate daily looking for appearance of symptoms which could denote changes and disease.

Samples were from corpses with bacterial diseases' specific lesions and were harvested on usual media (broth and nutritive agar) and incubated 24 hours at 37°C. Bacterial strains were identified by cultural, morphological, tinctorial affinity, and biochemical characteristics.

Obtained results show that in studied broilers the mortality cause was predominantly *E. coli* infections in the first 20 days of age.

Cumulative mortality in turkey broilers was increased in time form one series of broilers at other, caused by non-respect "all in – all out" principle and because these two series were growth together in the same shelter.

Key words: turkey broilers, *E. coli*, mortality

**SEROPREVALENCE OF SWINE INFLUENZA VIRUS TYPE A IN
RELATION OF DIFFERENT PARITIES IN SOWS FROM WESTERN
ROMANIA**

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Summary

In the paper are presented the results obtained after antibodies against swine influenza virus type A, by ELISA monitoring in sows at different parities. There were sampled six sows groups at different parities (1 to 6), each group has been represented by 10 sows. It could be observed that were obtained positive results, indifferent of sows` parity.

In sows at 2nd, 3rd and 4th parities were the most positive samples. The higher level of antibodies titer was obtained in sows at 3rd parity.

Key words: swine influenza virus type A, sow, antibodies

**INVESTIGATIONS CONCERNING THE PREVALENCE OF
SALMONELLA INFECTION IN SWINE, USING THE
BACTERIOLOGICAL EXAM OF FECES**

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Summary

Examination of 320 faecal samples, collected from pigs coming from different farms with history of enteric diseases through growing-fattening pigs, revealed a low percentage of positive samples for *Salmonella* infection at the age of slaughter. From all studied samples it was isolated a number of 22 *Salmonella* strains, which were framed into species based on biochemical properties highlighting by API 20E system.

Key words: enterocolitis of pigs, *Salmonella*, salmonellosis