

PREVALENCE OF ANTIBODIES TO BVDV AND BHV1 IN DAIRY HERDS IN SOUTHEASTERN REGION OF ROMANIA

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Summary

Bovine viral diarrhoea virus (BVDV) and infectious bovine rhinotracheitis virus (IBRV) are important viral diseases around the world. The objective of this study was to estimate the prevalence of seroconversion to BVDV and IBRV. Serum samples from 152 bovines were collected from two counties (Tulcea and Brăila) in the southeastern region of Romania. The samples were tested for presence of antibodies to BVDV and BHV-1 using two commercial indirect ELISA kits. The results showed that seroprevalence of infectious bovine rhinotracheitis (IBR) was 29,6% and that of bovine viral diarrhoea (BVD) was 41.44% in tested cows. Antibodies to both viruses were found in only 24 tested cattle, representing a prevalence of 22.36%. The presence of BHV1 antibodies was associated with a higher prevalence of bovine viral diarrhoea virus (BVDV) antibodies.

The relatively high incidence of seroconversion for BVDV suggests that detailed knowledge of the epidemiology of bovine virus diarrhoea is essential for identification and elimination of PI animals. The scenario of IBRV is favorable to implement a program directed to culling seropositive cows and not keeping infected heifer calves.

Key words: Infectious bovine rhinotracheitis, bovine viral diarrhoea, seroprevalence

**PRELIMINARY RESULTS REGARDING THE PREVALENCE OF
TOXOPLASMA GONDII IN DIAPHRAGM TISSUE FROM
BACKYARD PIGS IN CENTRAL ROMANIA**

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Summary

The aim of this study was to evaluate the prevalence of *Toxoplasma gondii* DNA in diaphragm tissue from backyard pigs, by conventional PCR. Sixty diaphragm tissues were collected from pigs, reared in backyard system, from four counties (15 samples per county) located in central Romania (Alba, Cluj, Hunedoara and Mureș). *T. gondii* DNA in the samples was evaluated by PCR technique, using specific primers located on the B1 gene, designed to specifically amplify a portion of the ITS-1 region. The overall prevalence of *T. gondii* DNA in diaphragm tissue was 8.33% (5/60). The highest prevalence was obtained in Mureș county (20%; 3/15) followed by Alba and Cluj counties (6.7%; 1/15), while in Hunedoara county none of the samples presented *T. gondii* DNA. The prevalence obtained in our study showed that pigs reared for familial consumption in backyard system, can be a source of human infection with *T. gondii*.

Key words: *Toxoplasma gondii*, PCR, diaphragm, domestic pigs.

DETECTION OF BOVINE PAPILLOMAVIRUS TYPE 2 IN CUTANEOUS FIBROPAPILLOMAS IN CATTLE

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Summary

Bovine papillomavirus type 2 (BPV-2) is associated with the development of hyper-proliferative lesions of the epithelial and dermal cells and urinary bladder tumors in cows. In cattle, one the consequence of the infection with this virus is the occurrence of cutaneous warts, which can be responsible for significant economic damages due to the retarded growth of the animals, loss of weight and decrease in milk production. The aim of this study was to detect by PCR the presence of BPV-2 DNA in cutaneous fibropapillomas and normal skin in cattle. Four skin samples from healthy cows and ten bovine cutaneous fibropapillomas were tested by PCR using two sets of primers for the amplification of BPV-2 E2 and E5 genes. BPV-2 E5 DNA was amplified in all tested fibropapilloma samples (100%) and in three out of four normal skin samples, while the DNA of BPV-2 E2 was amplified in five out of 10 fibropapilloma samples (50%) and in two out of four normal skin samples (50%). Consecutively, the sequencing of the amplicons confirmed the presence of BPV-2 DNA in the tested samples. These results confirm the efficacy of PCR targeting BPV-2 E5 gene and reveals the importance of BPV epidemiological studies in apparently healthy and papillomatosis-affected cattle to understand the spreading of this virus even in apparently healthy cattle.

Key words: Bovine fibropapilloma; BPV-2; PCR

**INVESTIGATIONS REGARDING THE VALUE OF SOME DIRECT
AND INDIRECT DIAGNOSE TESTS FOR CATTLE SUBCLINICAL
MASTITIS**

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Summary

For this study were carried out several tests of cow mastitis investigation – the most well known – which may lead to a presumptive diagnosis of clinical or subclinical mastitis, comparative evaluations, and with an emphasis on the value of cytological tests.

The main goal of the research subject was to establish, precisely, the value of the advantages and disadvantages of cytological test (milk cytogram) in compare with other diagnostic tests, such as: R-Mastitest, electrical conductivity, somatic cell count and bacteriological exam. Also, in order to achieve our main goal, we will be able to establish the minimum number of indirect and direct examinations, which may indicate, with certainty, the installation of an infectious process in the mammary gland.

Key words: mastitis, diagnosis, milk cytogram, investigations

RESEARCH ON PRESENCE OF VIRUSES IN BROILERS

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Summary

In intensive poultry broilers infectious and contagious disease progresses more viral etiology. In the epidemiological situation of farms, the disease may evolve clinical or subclinical, is usually complicated by secondary bacterial infections. Also, the viruses that cause these diseases induced in broilers body, immunosuppressive conditions that adversely affect the immune response after vaccination against other diseases.

Given those issues, research aimed presence of viruses in 10 broiler farms, samples were taken from cadavers aged between 15 and 35 days.

The viruses were detected by polymerase chain reaction for DNA viruses by polymerase chain reaction with reverse transcriptase for RNA viruses.

These two tests of molecular biology, viruses were detected following: avian reovirus (in 10 farms), infectious bronchitis virus (in 6 farms), infectious bursal disease virus (in 2 farms), chicken parvovirus (in 4 farms), nephritis virus infectious (in 2 farms), astrovirusul chicken (on a farm). Not identified viruses: rotavirus avian infectious, anemia virus to chickens and chickens proventricular necrosis virus.

Key words: poultry, viral diseases, PCR, RT PCR

THE SEROPREVALENCE OF REOVIRUS INFECTIONS IN BROILER FLOCKS

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Summary

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

The investigations were made in order to determine seroprevalence of these infections in six 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 22 and 245 OD. At the age of 37 days, the geometric means of specific antibody titers were higher limits ranging between 648 and 773 OD.

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

Key words: reovirus infection, broiler, seroconversion phenomenon.

**EPIDEMIOLOGICAL SURVEY REGARDING ENZOOTIC BOVINE
LEUKOSIS EVOLUTION IN TIMIS COUNTY
BETWEEN 2000 AND 2009**

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Summary

This study represents an assessment of the evolution, spread and prevalence of enzootic bovine leukosis (EBL) in cattle from Timis County, during 2000-2009, to determine the effectiveness of control methods applied for eradication of the disease. The data about positive cattle were taken from the DSVSA Timis archive and were processed and interpreted. The dynamics of enzootic bovine leukosis in Timis County had a downward trend during 2000-2009, which can be attributed to the effectiveness of the control program, but also to the decrease of the cattle number. Regarding the total number of positive farms from EBL outbreaks, there was a decrease in the first five years, followed by a slight increase until 2009, when it was registered almost the same situation as in 2003. The total number of positive animals peaked in 2002 (456 cattle), in the remainder period being below the average.

Key words: enzootic bovine leukosis, Timis County, prevalence

THE EFFICACY OF AN ALBENDAZOLE BASED PRODUCT IN LAMBS GASTROINTESTINAL NEMATODE PARASITISM

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Summary

For the efficacy testing of the product Dufalben 10% (albendazole) two groups of 10 lambs each, aged 5-7 months were randomly selected. The first group was treated with albendazole orally at a dose of 7.5 mg/kg, while the second group was the untreated control group. From both groups faeces were collected on days 0, 2, 4, 7 and 12. From each sample qualitative coproscopic exams (Willis) and quantitative exams (McMaster) as well as coprocultures were performed. In the coproscopic and larvoscopic exams parasitism with *Teladorsagia circumcincta*, *Trichostrongylus colubriformis* and *Oesophagostomum venulosum* was identified. Efficacy of the albendazole treatment was 100%, which proves the absence of chemoresistance to this molecule.

Key words: gastrointestinal nematode, lambs, albendazol, efficacy

EPIDEMIOLOGICAL STUDY ON HONEY BEE NOSEMOSIS IN ARAD COUNTY

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Summary

Epidemiological studies of honey bees in Arad County were performed on a total number of 16 apiaries processing 292 samples. Each sample consisted of about 60 honey bees. *Nosema* diagnosis was achieved through a qualitative method. In a total of 52% of the samples *Nosema* spp. spores were identified. Out of *Nosema* spp. positive samples, 54% were from asymptomatic colonies, 30% from bee colonies dying in the latter part of winter, 9% from depopulated colonies, 3% from disappeared colonies and 4% were colonies with diarrhea, respectively. Diversity and severity of clinical signs can guide us to the diagnosis of Type C *Nosema*, with acute evolution and death before clinical expression.

Key words: *Nosema* spp., epidemiology, Arad County

PERFORMANCE AND INFECTION DYNAMICS WITH *EIMERIA* SPP. IN BROILERS MEDICATED WITH *ARTEMISIA ANNUA* IN COMPARISON WITH LASALOCID AND KEPT IN FIELD CONDITIONS

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Summary

During this study we followed performance and dynamic of infection with *Eimeria* spp. in chicken-broilers reared in field condition and medicated with *Artemisia annua* as natural coccidiostatic in comparison with lasalocid. For this purpose in a flock from a farm were designed three groups of 100 randomly selected broilers of mixed sex each. The chicks were treated for all their life-span with *A. annua* dried leaves in-feed (1.5%), essential oil of *A. annua* via drinking water (0.15 ml/l water) and with Tween 70 (0.75 ml/10 l of water). The remaining chicks from the flock were in-feed medicated with lasalocid (125g/tonne of feed). Number of oocysts per gram faeces was monitored every 2 days from 16 to 38 days of age. When chickens were 25 days species of *Eimeria* were determined by PCR. Furthermore, clinical appearance, mortality, lesion score, body weight gain and feed conversion were registered. Three species of *Eimeria* were identified in the flock and groups: *E. acervulina*, *E. tenella* and *E. maxima*. Chickens in-feed medicated with lasalocid or *A. annua* sheded significantly less oocysts ($p < 0.001$) than untreated chickens (Tween group), but chickens in-feed medicated with lasalocid sheded significantly less oocysts ($p < 0.03$) than chickens treated with *A. annua*. Between *A. annua* groups there wasn't difference statistic significantly (dried leaves = 8,300; essential oil = 9,742). Clinical signs and bloody diarrhoea were registered only in untreated chickens (Tween group). The lesion score at 15 days age of treated chickens was below 0.5, while in Tween group was 1.26; the highest lesion score was noticed in caecum. The mortality percentage was between 2 and 4. Body weight gain and feed conversion ratio were higher in chickens medicated with lasalocid, followed by chicks medicated with essential oil of *A. annua*.

Key words: *Artemisia*, artemisinin, *Eimeria*, poultry, field

**SEROEPIDEMIOLOGY OF *NEOSPORA CANINUM* AND
TOXOPLASMA GONDII INFECTIONS IN DOGS FROM
SOUTHERN ROMANIA**

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Summary

Neospora caninum and *Toxoplasma gondii* are very closely related protozoans with many common hosts, including dogs. The aim of this study was to evaluate the seroepidemiology of *Neospora* and *Toxoplasma* infections in dogs from southern Romania (Ilfov, Giurgiu, Ialomița, Călărași and Teleorman counties). For this, serum samples from 92 dogs (33 farm dogs and 59 stray dogs) were tested by commercially available indirect immunoenzymatic assays for detecting *Neospora* and *Toxoplasma* specific IgG antibodies. Of the 92 dog tested sera, eight were positive for *Neospora* (8.7%) and 46 were positive for *Toxoplasma* (50.0%). A number of six samples were positive for both *Neospora* and *Toxoplasma* (6.5%). One positive sample for each *Neospora* and *Toxoplasma* were classified as doubtful (1.1%). Prevalence of *Neospora* antibodies was significantly higher in farm dogs (27.3%), compared with stray dogs (5.1%), but difference was not significant when analyzing *Toxoplasma* antibodies, with similar prevalence values in farm and stray dogs (49.2% and 51.5%, respectively). Significant differences were observed between *Neospora* and *Toxoplasma* infections in both farm and stray dogs. The seropositivity for both *Neospora* and *Toxoplasma* increased with age suggesting post-natal exposure, but only for *Toxoplasma* the differences were statistically significant. Prevalence values for *Neospora* and *Toxoplasma* in age categories were as follows: 0% and 16.7% in dogs under 1 year, 12.5% and 54.2% in dogs of 1 to 5 years, 20% and 60% in dogs of 6 to 9 years, and 40% and 100% in dogs of 10 years and over, respectively. No significant differences were observed for the presence of *Neospora* and *Toxoplasma* antibodies between male and female dogs. In conclusion, dogs from southern Romania have been in contact with both protozoans, but *Toxoplasma* antibodies were detected in much higher rates. Farm dogs were more exposed to *Neospora* infection than stray dogs, while both farm and stray dogs were exposed to *Toxoplasma* infection. Altogether, these findings are emphasizing high risks for both, public health and cattle farming industry.

Key words: dogs, ELISA, *Neospora caninum*, Romania, *Toxoplasma gondii*.

DIAGNOSIS AN OUTBREAK OF PRRS BY PCR ON A FARM IN BRAILA COUNTY

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Summary

Porcine Reproductive and Respiratory Syndrome (PRRS) is an infection contagious disease of viral nature, found in pigs.

Actually, the cause of the disease produces economic damage through the breeding and respiratory disorders, as well as by the prevention and control spending.

This study is built on the research on PCR (polymerase chain reaction) in pigs from a professional breeding unit.

Following the investigations carried out for detection of viral RNA, the most positive reactions were obtained at piglets' category; they are the most susceptible to this disease.

Key words: swine, PRRS, RT-PCR.

**EPIDEMIOLOGICAL ASPECTS OF GROWTH IN BROILER
CHICKENS AT THE FIRST 20 DAYS OF LIFE**

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Summary

This paper presents results obtained after three series of broilers growth to the ground in the same shelter were monitoring.

Infections with *E.coli* were diagnosis in studied broilers at first 10 days of age and over, at 11-20 days of age.

Cumulative mortality increased form one series to another in the first 20 days due not respecting principle "all in – all out" and growing more consecutive series of broilers in the same shelter.

Key words: *E.coli*, broilers, epidemiology

PREVALENCE OF *TOXOPLASMA GONDII* AND INTESTINAL PARASITES IN STRAY AND HOUSEHOLD CATS IN WESTERN ROMANIA

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Summary

To establish parasitic infestations in cats in Western Romania 605 samples were examined.

Seroprevalence of *Toxoplasma gondii* infection was determined using the ID-VET multispecies ELISA kit. Of all examined cats 361 (42.5%) had specific anti-*Toxoplasma* IgG antibodies, as follows: stray cats - 239 of 318 (75.15%), household cats - 122 of 287 (42.5%). The overall seroprevalence was higher in senior cats (> 7 years old, 84.29% of 126), than in adult cats (1.2 – 6.5 years old, 67.09% of 313) or in young group (< 1 year old, 26.5% of 166), and higher in male (67.2% of 311) than in female cats (51.7% of 294).

The prevalence of intestinal parasites was determined by the saturated NaCl solution coprological method. Of the 605 faecal samples in 191 (31.57%) were identified different species of parasites. In stray cats the prevalence was 33.01% (105 of 318) and in household cats the presence of intestinal parasites was identified in 29.96% (86 of 287). Parasitic species identified were: *Toxocara* spp. (11.4%), *Cystoisospora* spp. (6.61%), *Ancylostoma/Uncinaria* spp. (6.44%), *Taenia* spp. (5.62%), *Trichocephalus* spp. (1.32%) and *Toxoplasma* like (0.16%).

Key words: *Toxoplasma gondii*, intestinal parasites, cats, Western Romania

VARIATION IN CRUDE PROTEIN CONTENT OF SOME FEED MATERIALS

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Summary

To ensure protein proper needs, animal body must be provided with a balanced diet in crude protein. Quality of feed materials used in feeder industry may vary, depending on various factors.

In this study we evaluated variation in crude protein content of some feed materials, during 2003-2007. Of the 125 samples of soybean meal crude protein content ranged between 33.13% to 48.98%, with an average of 42.2393%. In samples of sunflower meal (made from partially shelled seeds) (n = 100), crude protein showed fluctuations between 28.26% and 37.7%, with an average of 34.3882%. Fish meal samples (n = 100) had a crude protein content between 52.95% and 74.09%, the average being 63.3338%.

Compared to reference values cited in the literature (Reference tables ©INRA-AFZ) studied samples showed higher mean values in sunflower meal (34.3882% vs. 33.4%) and lower averages in soybean meal (42.2393% vs. 45.32%) and in fish meal (63.3336% vs. 65.36%).

These fluctuations may influence the relationship between efficiency of feed rations and animal productions performance.

Key words: crude protein, soybean, sunflower, fish meal

OBSERVATIONS ON THE EVOLUTION OF AN OUTBREAK OF AVIAN INFECTIOUS BURSAL DISEASE

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Summary

Avian infectious bursitis (BIA), also known as Gumboro disease, is an infectious disease, common in chickens and characterized by inflammation of the bursa of Fabricius.

Specific prophylaxis provides active immunization of livestock for this purpose are used inactivated vaccines in breeding hens and live vaccines in broilers administered in several ways, including "in ovo".

Research aspect were performed in a broiler farm in southwest of Romania, on a flock of 10,500 chickens of Cobb hybrid, raised from the ground, vaccinated with a vaccine containing strain 20512 Winterfield administered "in ovo" in incubation, to embryos of 18 days at a dose of 0.05 ml / embryo.

The disease was diagnosed by the anatomopathologic examination performed twice weekly and confirmed by RT-PCR reaction and by ELISA.

Anatomopathological examination provided data on the presence of certain specific lesions BIA and cumulative mortality ranged between 0.34% and 1.46%.

RT-PCR was detected very virulent virus BIA prototype, but has not been detected vaccine strain.

By ELISA was detected antibody BIA with minimum titers to 19 days and significant titers at 33 days of age.

The results obtained show that the BIA has evolved broiler flock monitored because the vaccine used administered "in ovo" provided a partial immunity.

Key words: Avian infectious bursitis, chickens, vaccine.

RESEARCH ON THE COLICINS PRESENCE IN THE APEC STRAINS

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Summary

E. coli strains classified in APEC pathotype cause extraintestinal infections in poultry which have the situs of penetration in the organism, respiratory mucosa.

This includes pathotype strains most commonly employed in serogroups O1, O2 and O78, which have many virulence factors: fimbriae, siderophores, outer membrane proteins, complement resistance, endotoxins, exotoxins, and colicins.

Plasmids encoding synthesis colicins are Col IV, V and Col BM so far been identified about 20 colicins.

Were studied 146 strains based on phenotypic and genotypic characteristics, were within the APEC pathotype.

Colicins synthesis was studied by the standard method using ROW strain (strain-sensitive colicin).

At APEC strains that produced colicins around colonies appeared crisp inhibition zones due to diffusion in agar, which inhibits the growth ROW strain.

Research has shown that synthesis colicins is common in APEC strains.

Thus, a total of 111 strains (76.02%) produced colicins and 35 APEC strains did not produce colicins.

SEROSURVEY OF BABESIA INFECTION IN STRAY DOGS FROM TIMIS COUNTY

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Summary

Stray dogs are considered sentinels in the epidemiology of many infections including babesiosis as their lifestyle involves direct contact with ticks. Sampling was carried out between January 2011 and January 2013 in dog shelters from Timiș County. Serum samples from 213 dogs were assayed by indirect fluorescent antibody test Megascreen FluoBabesia canis and Megascreen FluoBabesia gibsoni, a commercially available antigen kit (MegaCor Diagnostic GmbH, Hörbranz, Austria) for the presence of anti-*Babesia canis* and anti-*Babesia gibsoni* antibodies. Overall the prevalence was 20.6 % (44/213) for *Babesia canis* and 2.3% (5/213) for *Babesia gibsoni*, respectively. No statistically significant association were found between the seropositivity of the infection and the age and gender of the dogs. The results of this study highlighted that the dogs without owner from Timiș County can be considered an important reservoirs in the epidemiology of *Babesia* infection.

Key words: Stray dogs, *Babesia*, IFAT

**PREVALENCE OF RESPIRATORY VIRUSES AND BACTERIA IN
ROUTINELY MEDICATED, NON-VACCINATED FATTENING
STEERS**

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Summary

Viruses and bacteria causing respiratory disorders observed in two beef cattle farms in Central Serbia were investigated. Samples of discharge from the nasal mucosa were taken for the isolation of the cause of viral and bacterial origin, from clinically diseased fattening steers, Simmental race, six months old. Using the method of Real Time PCR (RT-PCR), we try to detect genome of Bovine Herpes Virus type-1 and Bovine Viral Diarrhea Virus, which predisposing bacterial infection. Isolation of bacterial organisms from nasal discharge on artificial culture media was determined by aerobic cultivation. In our examination, we don't determine the genome sequences of BHV-1 and BVD virus. The most common bacterial findings were *Pasteurella multocida*, *Staphylococcus albus*, *Streptococcus viridans*, *Str. pneumoniae*, *Bacillus sp.*, *E. coli*, *Naisseria catarhalis*, *Klebsiella pneumoniae* and *Micrococcus sp.* Susceptibility was investigated by the disk-diffusion method and revealed that the most efficient antibiotics against bacteria were Florfenicol (Floron), Ampicillin, Amoxicillin and Amoksiklav.

Key words: bronchopneumonia, viruses, bacteria, aerobic cultivation, RT-PCR, susceptibility

**THE DYNAMICS OF BLOWFLIES OF *CALLIPHORA*, *LUCILIA*
AND *PROTOPHORMIA* GENERA DURING 2005 IN NORTHERN
TIMIȘOARA**

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Summary

Blowflies are commonly shiny flies with metallic colouring, often with blue, green, or black thoraces and abdomens, and which laid their eggs on fresh meat or wounds, causing myiasis in livestock. During 2005 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 27th, at a 13.1°C mean air temperature, 13.8°C mean soil temperature and 73% relative humidity, and the last one on October 25th, at a 11.0°C mean air temperature, 11.4°C mean soil temperature and 78% relative humidity, respectively. For *Lucilia* genus 6 population peaks were recorded, with May 03rd the first capture date, and October 11 the last capture date. For *Protophormia* genus were only 4 population peaks recorded. First capture was performed on May 18th at a mean air temperature of 21.0°C, a mean soil temperature of 20.3°C and 64% relative humidity, and the last one on September 11, at a mean air temperature of 21.1°C, a mean soil temperature of 27.0°C and 75% relative humidity.

Key words: dynamics, blowflies, 2005, northern Timisoara.

EPIDEMIOLOGICAL AND SEROLOGICAL RESEARCHES IN AN AVIAN INFECTIOUS BRONCHITIS OUTBREAK

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Summary

Our researches were conducted in a poultry farm, from Timis County, specialized in consumption eggs production, in which BIA (avian infectious bronchitis) has evolved after approximately two months after laying onset. During the researches, the epidemiological, clinical, necropsy and laboratory exams were conducted, in order to elucidate the disease developing mode and to establish an appropriately diagnosis. The epidemiological survey, carried out on the farm, confirmed that the BIA outbreak occurred as a result BIA virus penetration into the farm through secondary sources. The qualitative eggs changes were: eggs with soft shell, deformed eggs, depigmented eggs, small eggs, sometimes the egg yolk were missing and other times was mixed with the egg whites. Egg production quantitative changes were represented by a decreased egg production, averaging 32% in each hall. The serological exam has confirmed the BIA's presence in the farm; the geometric means and titer groups, highlighting through post-infectious immune response, in dynamic, respectively the seroconversion phenomenon. The serological exam results have proved a correlation between the antibody titers, expressed in D.O. and the laying curve evolution.

Key words: avian infectious bronchitis, epidemiologic exam, serological exam

SEROPREVALENCE OF *TOXOPLASMA GONDII* INFECTION IN PIGS FROM ROMANIA EVALUATED BY IFAT, MAT AND ELISA

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Summary

The aims of this study were: (1) to evaluate serological tests used for *T. gondii* antibodies detection in pigs and (2) to determine the seroprevalence of *T. gondii* antibodies in domestic pigs, reared in intensive system from Romania. Two “*in house*” methods, indirect immunofluorescent antibody test (IFAT), the modified agglutination test (MAT) and two commercially available ELISA kits (ID Screen *Toxoplasmosis* Indirect Multi-Species, ID.vet, France and *Toxoplasma* Microwell Immunoassay Kit, Safe-Path Laboratories, Carlsbad, CA) were compared for their sensitivity and specificity in detection of anti-*T. gondii* antibodies in naturally infected pigs using as standard cumulative seropositivity. Also, their agreement was evaluated by kappa statistic. A good correspondence of test results was observed. The best agreement was seen between IFAT and ELISA ID.vet ($k=0.89$). The IFAT has the higher sensitivity (97.4%) and ELISA ID.vet has the higher specificity (100%) and Jouden index ($J = 0.95$). The highest seroprevalence was obtained by ELISA ID.vet (43.6%), followed by IFAT (40.4%), ELISA Safe-Path (33%) and MAT (27.7%).

Key words: *Toxoplasma gondii*, IFAT, MAT, ELISA, domestic pigs.

SEASON DISTRIBUTION OF GASTROINTESTINAL HELMINTHS OF GOATS IN SOUTH-EAST SERBIA

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Summary

The study about gastrointestinal helminthes of goats at south-east parts of Serbia was performed in period March 2010 to January 2011. Coprological and post-mortem examination revealed the following gastrointestinal helminthes prevalence: We revealed same parasite species: *Teladorsagia (Ostertagia) circumcincta* (95.23%), *Ostertagia trifurcata* (91.53%), *O.ostertagi* (23.33%), *Ostertagia occidentalis* (21.37%), *Trichostrongylus axei* (100%), *T.colubriformis* (89.57%), *Nematodirus spathiger* (100%), *N. filicolis* (43.31%), *Haemonchus contortus* (88.95%), *Marshallagia marshalli* (23.77%), *Skrjabinema caprae* (13.28%), *Bunostomum trigonocephalum* (13.28%), *Chabertia ovina* (64.14%), *Oesophagostomum venulosum* (28.39%), *Cooperia curticei* (60.52%) and *C.punctata* (5.26%). The dynamics of the first occurrence of established species of gastro-intestinal strongilida was as follows: In March: *Teladorsagia (Ostertagia) circumcincta*, *Ostertagia ostertagi*, *Trichostrongylus colubriformis*, *Nematodirus filicolis* and *Nematodirus spathiger*; In April: *Ostertagia trifurcata*; In May: *Ostertagia occidentalis*, *Trichostrongylus axei*, *Cooperia punctata*, *Bunostomum trigonocephalum* i *Chabertia ovina*; In June: *Skrjabinema capra*; In July: *Haemonchus contortus*, *Cooperia curticei* and *Oesophagostomum venulosum*; In November: *Marshallagia marshalli*. Species in the genus *Ostertagia*, *Trichostrongylus* and *Nematodirus* were present after the first appearance of those present during the entire study period. *Haemonchus contortus* is ordered in animals during the warmer and *Marshallagia marshalli* during the colder period of the year. Species in the genus *Cooperia* and *Oesophagostomum*, *Bunostomum* were often present in lambs sacrificed during all the monitoring period. Species in the genus *Cooperia* and *Oesophagostomum*, *Bunostomum* were often present in kids sacrificed during the monitoring period.

Key words: goats, helminths, season distribution

IMMUNOENZIMATIC ASSAY TO DETECTED *GIARDIA* SPP. IN CALVES FROM WESTERN AND SOUTH-WESTERN ROMANIA

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Summary

This study was conducted to determine the prevalence of *Giardia* spp. infection in calves of different age from western and south-western of Romania (Arad, Timiș, Caraș-Severin, Mehedinți County), and to analyze the potential risk factors that support this infection. Faecal specimens were collected from 621 calves from birth to age of nine months. The examination of the samples was performed using Giardiasis Ag Cypress Diagnostics ELISA kit. The prevalence of the *Giardia* spp. in calves was 38.48% (239/621). Of the four counties studied *Giardia* spp. was most prevalent in Mehedinți 45.74%. Overall, pre-weaned calves (eight weeks of age) exhibited the highest prevalence (39.63%), followed by post-weaned calves (two-six months of age) (36.84%) and heifers (six-nine months of age) (18.18%). The most receptive breed to infestation with *Giardia* spp. was found to be Charolaise breed 70% (7/10) followed by Limousin breed with prevalence 42.50% (34/80).

Key words: Calves, *Giardia* spp., prevalence.

**IDENTIFICATION OF AN PROLIFERATIVE ENTEROPATHY
OUTBREAK AT SLAUGHTER AGE OF PIGS**

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Summary

Macroscopic examination of the gastrointestinal masses coming from slaughter pigs, revealed the present of intestinal adenomatosis in 86 cases of the 97 probes studied. Histopathology revealed the epithelial hyperplasia accompanied by moderate loss of goblet cells, proliferation of immature enterocytes due to increased mitotic index and the presence of histio-neutrophilic infiltrate in the intestinal mucosa. Using immunohistochemistry (IHC), the causative agent of this enteritis was revealed in enterocytes and macrophages of the small intestine with or without gross lesions.

Keywords: diarrhea, porcine intestinal adenomatosis, intracellular pathogens.

DETECTION OF PH INDICATOR PAPER OF BOVINE MASTITIS IN COMPARISON WITH CALIFORNIA MASTITIS

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Summary

In the present study bovine mastitis was investigated using California mastitis Test (CMT) and pH indicator paper bromothymol blue in Khartoum State, Sudan. Ten dairy farms were selected randomly, from each farm 10 cows were selected among the total of hundred cows. Six farms suited in Khartoum North, two farms in each Khartoum and Omdurman locations. A simple bromothymol blue indicator was evaluated for farms diagnosis of bowline mastitis. The test required highly absorbent bolting paper impregnated with four sports of bromothymol blue indicator color scores 1 to 4 for quarter foremilk's increased with somatic cell count and pH, although variability within each color score was large. Sensitivity of the bromothymol blue test ranged from 51 to 56% and specificity from 89 to 90% for most reference criteria used to classify normal and abnormal milk. In this study the results revealed that pH indicator bromothymol blue was more accurate to detect subclinical mastitis than California mastitis Test. Results of previous study showed that 73% the general infected farms which considered very huge in dairies farms that due of lack of biosecurity and prevention to control the disease. Examine of bacteriology was performed to samples. The sensitiveness of bacteria to antibiotics was found that most common bacteria *Staphylococcus*, *Streptococcus* and *E. coli* were sensitive to erythromycin, and penicillin cephoxitin.

Key words: BMT, CMT, Zoonotic disease, Bromothymol blue

THE USE OF THE DECISION TREE FOR ACARI CONTROL IN CHICKEN EGG LAYER FARMS

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Summary

On a 60 000 chicken egg layer farm, bred in vertical battery, acari occurred, and, in order to find the optimal substance and concentration for acari control, the decision tree method was used. Four *Emerite* products were used: 24 % imidacloprid and 3.2% deltamethrin, Pertex (0.3 % permethrin 93% and 0.3 % piperonyl butoxide 80%), Bombex (1.8 % abamectin) and formic acid. For each product work solutions of 0.5, 1, 1.5 and 2% were prepared, which were put in contact with the acari in combination with feed. As working methods direct contact, pulverizing and sprinkling were used. After determining the optimal concentration for each product, they were pulverized in the shelter. After each application acari samples were taken from the feed in order to establish the product's effect. After finding out the optimal concentration, the use of the decision tree allowed, the calculation of the best price, based on the product usage.

Key words: pest control, economic efficiency.

**EFFECTS OF SHORT TERM ADDITION OF CLINOPTILOLITE TO
COLOSTRUM ON SOME BIOCHEMICAL PARAMETERS IN
NEWBORN CALVES**

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Summary

The objective of this research was to determine if the short term supplementation of clinoptilolite in colostrum influence some blood biochemical parameters, indicators of kidney and liver function, in newborn calves. Our research included 20 newborn calves that were divided into two groups: control group (C, received colostrum without clinoptilolite) and experimental group (E, received colostrum with 0.5% clinoptilolite added in the first three colostrum meals). Blood samples were collected from jugular vein in vacutainer tubes from all calves prior to colostrum intake and after that, at 24 and 48 after calving. Samples were analyzed for α -amylase, total bilirubin, creatinine, uric acid, urea, glucose, cholesterol and triglycerides. The dynamics of biochemical parameters measured in the first 48h after birth showed that morphofunctional changes of the newborn organism for adapting to extrauterine environment were normal, without any influence of clinoptilolite.

Key words: calf, clinoptilolite, biochemical parameters

**A SURVEY (OR PRESENCES, DINAMICS, PREVALENCES) OF
CULICOIDES (DIPTERA: CERATOPOGONIDAE) IN GORJ
COUNTY, ROMANIA, PRELIMINARY RESULT OF
ENTOMOLOGICAL SURVEILLANCE FOR BLUETONGUE**

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Summary

Entomological investigation of the presence of *Culicoides* species in Gorj County, Romania, was conducted in 2012. The aim of the research was to establish the presence of the main vector of bluetongue virus in a goat farm. We proceed for weekly capture of vectors (one/week) with a stabile trap, for one year, in a target location and systematic vector capture with mobile trap.

During the investigation, a total of 54 samples, 6788 insects (30 samples with other insects and 8 with *Culicoides*) were collected and two species was identified, *Culicoides obsoletus* and *Culicoides pulicaris*. The presences of *Culicoides* biting midges in study area represent a risk factor for the development of Blue tongue in susceptible animals to disease.

Key words: *Culicoides*, survey, goats