State of Libya

Ministry of Higher Education and Scientific Research

University of Tripoli

دولة ليبيا

وزارة التعليم العالي والبحث العلمي

جامعة طرابلس

ملخصات المنشورات العلمية

Abstracts of Scientific Publications

(Scientific Journal – Conferences) (دوريات محكمة – مؤتمرات علمية)

2014

كلية الطب البيطري

Faculty of Veterinary Medicine

مركز البحوث والاستشارات والتدريب – جامعة طرابلس

Research, Consulting & Training Center – University of Tripoli

Prevalence of Urinary Tract Infections among Diabetic Pregnant Women at Al-jala Hospital, Tripoli, Libya

H. M. EL-Rayes[1]and M. M. Draid[2]
[1]Department of Microbiology and Parasitology, Faculty of Veterinary Medicine, University of Tripoli, Tripoli, Libya. [2]Department of Pharmacology, Toxicology and Forensic Medicine, Faculty of Veterinary Medicine, University of Tripoli, Libya

Six hundred urine samples were examined, 100 non-diabetic pregnant women with asymptomatic bacteriuria (ABU) and 100 non-diabetic pregnant women with symptomatic bacteriuria (SBU) plus 200 diabetic pregnant women with ABU and 200 diabetic pregnant women with SBU at different age groups. A high percentage of non-diabetic patients were found within the age brackets of 31-35 years old, followed by age groups 26-30 years old and age groups 36-40 years old; whereas age groups 15-20 years old and 41-45 years old had the lowest percentage of bacteriuria. In diabetic patients a high percentage were found within the age brackets of 21-25 years old following by age groups 31-35 years old and 41-45 years old and 15-20 years old. However, age groups 26-30 years old had the lowest percentage. The overall prevalence rate of the isolated bacterial positive culture obtained from 146 non-diabetic patients with ABU and SBU was (73%) and (38.8%) were obtained from 155 diabetic patients with ABU and SBU. Thus the lower overall prevalence rate of UTIs reported in diabetic when comparing to non-diabetic women may be attributed to the extensive health care talk given regularly in each visit to hospital , public awareness programs, advice and support help from doctors and nurse to reduce the risks of UTIs. Isolated of *Escherichia coli*(30%), *Staphylococcus aureus* (22%), *Klebsiellaaerogenes* (21%), *Pseudomonas aeruginosa* (15%), *Proteusspp* (7%) and mixed culture*Klebsiella and Staphylococcus spp*(5%) were obtained from 100 non-diabetic pregnant women with SBU.There were isolated of*Escherichia coli*(34.7 %), *Enterococcus spp* (6.3%), *Pseudomonas spp* (36.8%) and*Klebsiellapneumonia* (22.2%) obtained from 95 diabetic pregnant women with (SBU).The types of organisms isolated from positive culture of 46 non-diabetic pregnant women with ABU as follows:*Escherichia coli* (26.1%), *Staphylococcus aureus* (21.7%), *Enterococcus spp* (17.4%),

Klebsiellaaerogenes (21.7%) and *Proteusspp* (13.1%).Isolated of *Escherichia coli* (56.7%),*Staphylococcus aureus* (13.3%), *Klebsiella pneumonia*(13.3%), and *Pseudomonas aeruginosa* (16.7%)were obtained from positive culture from 60 diabetic pregnant women with ABU. Thus,it is evident that there was higher percentage isolated of *E. coli*, from non-diabetic pregnant women at the rate of (26.1%) and diabetic pregnant women at the rate of (56.7%) with (ABU) as well as higher percentage isolated at the rate of (30%) from non-diabetic and at the rate of (34.7%) from diabetic pregnant women with symptomatic bacteriuria. This means that *E. coli* was the most important cause of UTIs in non-diabetic and diabetic pregnant women. However, results in diabetic pregnant women with symptomatic bacteriuria indicated that *Pseudomonas spp*was little higher at the rate of (36.8%), followed by *E. coli* at the rate of (34.7%). Antibiotic sensitivity pattern tested against the bacteria isolated from positive cultures obtained from 146 non-diabetic pregnant women with SBU and ABU as follows: (28.8%) *Escherichia coli* isolated were tested against Augmantin and Amikacilin which were found very highly effective (+++ or ++++); whereas Cephalothin was with medium effectiveness (+ or ++); *Staphylococcus aureus* (22%) isolated was tested to Augmantin and Amoxicillin which were very highly effective (+++ or ++++); whereas antibiotic Cefamandole, mostly, was resistant.*Klebsiellaaerogenes* (21.2%) isolated were tested against antibiotic Augmantinhad highly sensitive (+++ or ++++); whereas was mostly resistant to Vancomycin and Nitrofuratin. *Pseudomonas aeruginosa* (10.3%) isolated were tested against Augmantin and Ciprofixacinwhich were very highly effective (+++ or ++++); whereas Cotrimoxazole was none effective. *Proteus spp*(8.9%)isolated were tested against Augmantin and Cephalothin which were highly effective (+++), whereas Cefatrixonewas no effective.*Enterococcus spp* (5.5 %) isolated were tested against Augmantinwhich was with effectiveness ranges between medium to high effective (++ or ++++); but Pipreacillinand Vancomycin were with low effectiveness and Mixed culture of (*Klebsiella and Staphylococcus spp*) (3.4 %) isolated were tested against Augmantin and Amoxicillin which were highly effective (+++); but Ciprofixacinwereno effective. In case of diabetic pregnant women, the antibiotic sensitivity pattern were tested against the bacteria isolated from positive cultures obtained from 155 patients with

(SBU) and (ABU) were as follows: (43.2 %) *Escherichia coli*isolated were tested against Augmantin and Amikacilin which were found very highly effective (+++ or ++++); whereas Cephalothin was with effectiveness ranges between low effective to none effective. *Staphylococcus aureus* (5.2%) isolated were tested against Augmantin and Amoxielin which were highly effective (+++ or ++++); whereas Cefamandole was mostly the isolated resistant. *Pseudomonas aeruginosa* (6.5%) isolated were tested against Augmantinwhich was highly effective (+++ or ++++); whereas Vancomycin and Nitrofuratinwere no effective, *Pseudomonas spp* (22.6 %) isolated were tested against Augmantin and Ciprofixacinwhich were highly effective (+++ or ++++); whereas, Cotrimoxazolewas not effective. *Enterococcus spp*(3.9%) isolated were tested against Augmantinwhich was very highly effective (+++ or ++++); whereas; Cephalothin and Cefatrixone were no effective and *Klebsiella pneumonia* (18.7%) isolated were tested against Augmantinwhich was highly sensitivity effective (+++ or ++++), whereas, antibiotic Pipreacillinand Vancomycin were noneffective. Thus it is clear that the majority of the isolated bacterial positive urine cultures were sensitive to Augmantin, Amikacin, Amoxicillin (drug of choice) and Ciprofixacin for the treatment of UTIs in both non-diabetic and diabetic pregnant women.

Sweet itch preferential landing and engorging sites of *culicoides* Species on a bait horse

A. M. Rashed
Department of Microbiology and Parasitology, Faculty of Veterinary Medicine, University of Tripoli, Tripoli – Libya

As a part of project examine the etiology of sweet itch, a study on landing engorging sites was made. A total of 7696 midges were collected throughout the study. Ten species landed of which eight engorged. Although landing and engorging occurred in the three regions studied, the dorsal region was the most attractive. Species belong to the obsolete group were the most numerous species representing 85.68 % of those landing and 81.46 % of midges engorging. *Culicoides pulicaris* represents 9.82 % of the midge's attained to the bait and 13.35 % of those engorged. It was found that 49.6 % of midges engorged.

Bio-equivalence of doxycycline in two preparations in broiler chickens

A. Elmajdoub
Department of Pharmacology and Toxicology, Faculty of Veterinary Medicine, University of Tripoli, 13662 Tripoli, Libya. E-mail: abdelrazzag@yahoo.co.uk

The present study was designed to investigate the bio-equivalence of doxycycline in Dolistin® and Colidox® at a dose rate of 10 mg doxycycline/kg of body weight in 48 clinically normal broiler chickens. After oral administration, plasma levels of doxycyline peaked after 2 hours post-dosing without significant differences between the two products and it could be detected therapeutically and exceeded the minimum inhibitory concentration (MIC) for most micro-organisms sensitive to doxycycline for 12 hours. The disposition kinetics of doxycycline in the two products following oral administration revealed that the maximum plasma concentrations (Cmax.) were 22.65 and 21.80 µg/ml and attained at (T2.10 and 2.20 hours, respectively. Doxycycline in both of the products was eliminated with half- lives (t0.5a) equal to 7.70 and 6.93 hours, respectively. The mean systemic bioavailabilities of doxycycline in both of the products after oral administration in chickens were 80.60 and 79.70%, respectively. It was concluded that doxycycline in the form of Dolistin® and Colidox® needs a dose equivalent to 20 mg doxycycline/kg of body weight a day is better to keep the plasma concentration higher than the MIC.

Influence of some plant extracts on the oviposition behavior of *Aedesfluviatilis* and *Culexquinquifasciatus* in the laboratory

A. A. EL.Maghrbi[1] and M. M. Hosni[2]

[1] Department of Microbiology and Parasitology, Faculty of Veterinary Medicine. University of Tripoli – Libya P. O. Box 13662. [2] Department of Preventive Medicine, Faculty of Veterinary Medicine. University of Tripoli – Libya P. O. Box 13662. Email: dochakim2000@yahoo.com

Ethanol and acetone extracts of nine species of plants (*Allium tuberosum, Apiumleptophylum, Carica papaya, Cymbopogoncitratus, Euphorbia cotinofolia, Melia azedarach, Ocimumcanum, Ricinus common and Tageteserecta*) were tested in respect of their influence on the oviposition behavior of *Aedesfluviatilis* and *Culexquinquifasciatus* in concentration 100, 10 and 1mg/L. Three days after females of *Ae. fluviatilis* and *Cx. quinquefasciatus* had sucking blood on anaesthetized mice (*Mus musculus*) and pigeon respectively, experimental and control dishes were placed into cages for 24 hours, number of eggs laid in each dish was counted. Ethanol and acetone extract of *C.papaya, C.citratus* and *T.erecta* at 100 mg/L, ethanol extract of *E. cotinofolia* and *O. canum*at 100 and 10 mg/L were repulsive for oviposition of *Ae. fluviatilis*; acetone extract of *A. tuberosum* and *M. azederach* at 100 and 10 mg/L. Also, *A. leptophyllum, O.canum, E. cotinofolia* and *R. communis* at 100 mg/L produced same effect on oviposition behaviour of *Ae. fluviatilis*. Ethanol extracts *E. cotinofolia, R. communis* (100mg/L) and *M. azedarach* (100 and 10 mg/L) were attractive to *Cx. Quinquifasciatus*. Five acetone extracts (*A. tuberosum, A. leptophylum, C. papaya, and C. Citrates* and *M. azedarach*) were repulsive for oviposition at 100mg/L. Acetone extract of *A. tuberosum* and *M. azedarach* at 10 and 1% and acetone extracts of *C. citratus* at 10 mg/L maintained the same properties. Our results indicate that each extract of the plant have potential to control oviposition behavior of mosquito. Different responses obtained could be as indecent of variety, stimulation for deeper research to isolate the active principle for its potential use to mosquito control program.

Keywords: *Ae. fluviatilis*; *Cx. quinquifasciatus*; plant extract; oviposition behavior.

http://www.sciencedirect.com/science/article/pii/S2314459914000118

The Effect of Physical Treatments Degradability of Leaves plus Sheaths of Wheat Straw

Abdelfettah Shirif
Faculty of Veterinary Medicine. University of Tripoli – Libya P. O. Box 13662.

Factorial experiments, in duplicate were conducted to test the effect of three soaking levels; soaking 12 (one liter of water and one kg straw and soaking 3 (two liters of water and one kg of straw two soaking temperatures (20°C and (60°C) and two soaking times (2 and 16 hours) on *in-vitro* degradability of the leaves and sheaths wheat straws. About 0.5 g of dried and ground wheat straw samples were transferred into 50 ml plastic tubes. The straw samples were incubated in buffered rumen fluid (RF) in water baths at 39ºC for 46 and 96 hours. The RF was obtained from three fistulated sheep of Walsh Llyen breed at average weight of 82 kg each consuming daily 820 g grass hay plus 410 g a concentrate. The RF was filtered, through a cheese cloth, pooled and mixed with a buffer prepared as described by according to the formula for synthetic saliva at a ratio of 1:4. After each incubation time, the un-degraded residues were collected, washed and dried to calculate the DMD of each straw for each treatment combination. The data were statistically analyzed by using Minitab program to study the main effects of soaking level and temperature and time of soaking and their interactions at each of the 2 incubation times. The effects were declared significant if $P<0.05$. The higher soaking temperature (60°C) significantly ($P<0.05$) educed DMD of leaves plus sheaths after 46 hours of incubation. Soaking time had a significant positive effect on DMD of leaves plus sheaths at 46 and 92 hours ($P<0.001$). Soaking ratios of 1:1 and 2:1 resulted in a considerable modification of cell wall composition and increased degradability at the two incubation times. However, significant improvements in DMD were obtained at 92 hours compared with 46 hours for leaves plus sheaths.

Benzene-Induced Genotoxicity and Histotoxicity in Albino Rats

M. Abousalem[1], A. Elgerwi[2] and A. El-Mashad[2]

[1]Department of Pharmacology, Toxicology and Forensic Medicine, Faculty of Veterinary Medicine, Tripoli University, 13662 Tripoli, Libya. [2]Departments of Forensic Medicine & Toxicology; and Pathology Faculty of Veterinary Medicine, Benha University, 13736 Moshtohor, Egypt.

The aim of the present study was to explore the hazardous effects of occupational exposure to air pollutants arising from benzene stations. A total of 48 albino rats were used. They were divided into three groups each of 16 animals. Groups-I and II were kept at a benzene station for 60 and 120 days, respectively; while group-III was kept as a control under normal laboratory conditions. At the end of the experimental course, animals were sacrificed and bone marrow samples were taken to investigate the effect of air pollutants at a benzene station on chromosomal aberrations and micronuclei formation. Tissue samples were also picked out to evaluate histotoxicity. Genetic examination revealed higher frequency of chromosomal aberrations and elevated mitotic index after exposure to air pollutants. Micronuclei formation also increased either in polychromatic or normochromatic erythrocyte due to air pollutants. Histopathological examination revealed congestion of the pulmonary blood vessels with pulmonary edema. Bronchial hyperplasia and metaplasia were also seen in late stage of exposure. The liver showed degenerative changes or even necrosis of hepatocytes, while the kidneys showed congestion of the renal blood vessels and glomerular tufts. Hyalinization of the glomeruli was also detected. The heart showed various mononuclear infiltration and the testes showed degenerative changes of seminiferous tubules. Spleen showed hemossiderosis while testes showed degenerative changes of seminiferous tubules. It could be concluded that benzene chronic exposure may lead to toxic effects including, genotoxicities and histotoxicities. In order to minimize the predicted toxic effect of occupational exposure to benzene the strict protective measures should be put in consideration.

http://www.scopemed.org/?mno=48275

Prevalence of nasal bot fly *Cephalopeniatitillator* in Camels in Tripoli-Libya

A.S. EL Naas[1], k. S. Ganghish[1], O. Elwaer[1], A.O. Booker[2]

[1]Department of Parasitology, Faculty of Veterinary Medicine, University of Tripoli, P. O. Box: 13662, Tripoli-Libya. [2]Department of Anatomy, Faculty of Veterinary Medicine, University of Tripoli, P. O. Box: 13662, Tripoli-Libya.

10 out of 40 camels examined at Tripoli slaughter places were infected with the camel nasal bot fly *Cephalopeniatitillator*. The larvae occurred mainly in the nasopharynx and occasionally the larvae were found embedded between turbinated bones. The nasal cavity was congested and filled with mucus in which some larvae were entangled. This work undertaken to determine the Prevalence of *Cephalopeniatitillator* of camel slaughtered in Tripoli-Libya.

Keywords: *Cephalopeniatitillator*, camels, Libya.

A modified surgical procedure for repair of third-degree perineal lacerations in a mare

Lutfi M. Ben Ali
Department of Surgery and Theriogenology, Faculty of Veterinary Medicine, University of Tripoli, P. O. Box: 13662, Tripoli-Libya.

A modified one stage surgical approach was successfully performed using three sutures lines and Polymerized caprolactum (Vetafil) non absorbable sutures material, for repair of third-degree perineal laceration in a mare. Perineal lacerations were classified according to locations and degree of tissue disruptions into first, second and third degree lacerations; scientists added that, perineal lacerations are usually associated with birth injuries due to uncontrolled violence of the expulsive efforts during parturition and malposture of the foetus. Third-degree perineal lacerations are considered as difficult surgical affections which lead to pneumovagina, vaginitis, cervicitis, endometritis, infertility and subsequently severe economical losses. Different surgical attempts for treatment of the third degree perineal lacerations in mares were performed by research groups. The aim of the present case is to evaluate a modified surgical approach using three suturing lines and vetafil as an applicable method for repair of 3rd degree perineal lacerations in mares.

https://www.waset.org/conference/2014/12/penang/ICAAE/program?forceTentative=1

The Prevalence of Verocytotoxin-Producing *Escherichia coli* O157 (VTEC) in Dairy Cattle in Tripoli area, Libya

Imad Buishi[1], Almabrouk Fares[1] and Hallowma Helmi[1]
[1]Department of Preventive Medicine, Faculty of Veterinary Medicine, University of Tripoli, Libya.

Infection with verocytotoxin-producing*Escherichia coli* O157 in humans can lead to mild or bloody diarrhea with the hemolytic uremic syndrome (HUS) as a possible complication. Cattle appear to be important reservoirs for VTEC O157. Epidemiologic studies on the prevalence of VTEC O157 in dairy cattle in Libya have never been conducted. To investigate the prevalence and the risk factors associated with VTEC O157 on dairy farms in Tripoli region, fecal samples from 200 apparently healthy cows were collected once from 15 randomly selected dairy farms in the period July 2010 through September 2010. All fecal samples were examined for the prevalence of VTECO157 by conventional plating using Sorbitol-MacConkey agar (SMAC). Isolated of *E. coli* were subjected to slide agglutination test using *E. coli* O157 antiserum. The results pointed out that the prevalence within-herd and among herds were 9% and 60% respectively. The prevalence of VTEC O157 in fecal samples of dairy cattle was significantly associated with husbandry practices on farm-level such as signs of diarrhoea (p=0.02, OR=3.2) and sharing water trough (p=0.03, OR=3.0). It was concluded that dairy cattle in Tripoli area are important reservoirs of VTEC O157 strains that are potentially pathogenic for humans. When aiming at reducing risks for human by intervention at farm-level, it is of importance to reduce the number of positive animals and farms. For this, more research is needed to devise mitigation strategies that will reduce the on-farm contamination of VTECO157.

***Keywords**:* VTEC O157, Prevalence, Dairy cattle, Tripoli

https://waset.org/abstracts/19092

Ectoparasites infestation of free-ranging hedgehog (*Etelerixalgirus*) in north western Libya

M.M. Hosni[1] and A.A. El Maghrbi[2]

[1]Department of Preventive Medicine, Faculty of Veterinary Medicine, University of Tripoli, P. O. Box 13662, Tripoli, Libya. [2]Department of Microbiology and Parasitology, Faculty of Veterinary Medicine, University of Tripoli, P. O. Box 13662, Tripoli, Libya

The aim of this study was to assess the prevalence of ectoparasites in hedgehogs (*Etelerixalgirus*) in north western region of Libya. Seventy hedgehogs were sampled, and 39 (55.7%) were infested with external parasites. A total of 44 ticks, 491 fleas were collected from the infested hedgehogs and four species of ectoparasites were identified, one mite (*Sarcoptesscabiei*), one tick (*Rhipicephalusappendiculatus*) and two fleas (*Xenopsyllacheopis*and *Ctenocephalidescanis*). For ectoparasites, 10/39 (25.6%) were infested by *S. scabiei*, 8/39 (20.5%) by *Rh. appendiculatus*and 11/39 (28.2%) by fleas. The prevalence of mixed infestation with *S. scabiei*and *C. canis*was 3(7.7%), *Rh. appendiculatus*and C. *canis*was 2 (5.1%) and infestation by two species of fleas was 5 (12.8%). The overall mixed infestation was 10 (25.6%). We concluded that the hedgehogs may play an important role in spreading external parasites and transmission of diseases from one region to another and from wildlife animals to domestic animals and human.

Keywords: Ectoparasites, *Etelerixalgirus*, Hedgehogs, Libya.

http://www.ncbi.nlm.nih.gov/pmc/articles/PMC4629589/

Sero-epidemiological survey on Caprine Brucellosis in Tobruk, Libya

Hassan Yousef[1], ImadBuishi[1], and Almabrouk Fares[1]
[1]Department of Veterinary preventive medicine, Faculty of Veterinary Medicine Tripoli University, Tripoli, Libya

Brucellosis is one of the major zoonosis diseases. It is still prevalent throughout the world. Although many developed countries have eradicated the disease from goats it continues to pose a major public and animal health problem. Even though *Brucellae* have definite host preferences, caprine brucellosis caused mainly by *B. melitensis* is still the most highly contagious widespread form and also has harmful effects on free animal movement and export. In this work aims to determine the prevalence of burcellosis in local goats and tries to identify potential risk factors which influence the spread of caprine brucellosis among the animal population in Tobruk area, Libya. The study was carried out during the period between November 2009 to December 2010 investigate the epidemiology of caprine brucellosis in Northeastern Libya at Tobruk area. Serum samples from 548 goats corresponding to 66 flocks were collected and analyzed using Rose bengal plate test (R.BT), Serum Agglutination Test (S.A.T) and Enzym Immuno Sorbent Assay (ELIZA). A structured questionnaire was used to collect information on goat's health and management. Risk factors for *Brucella* seropositivity were investigated using a multivariable logistic regression model. The prevalence of *Brucella*-seropositive goats was 24 (4.3%) examined by R. B. T, 5(0.91%) examined by S.A.T and 12(2.18) examined by ELIZA. The prevalence of brucellosis in goats was significantly higher ($P < 0.05$) in Lashhab area than that in the other localities. The multivariable logistic regression model identified source of water (OR =0.01; 95% CI: 0.00, 0.75) use of disinfectants (OR =0.03; 95% CI: 0.02, 0.453) and grazing at communal pasture (OR= 22.60; 95 % Cl: 1.25, 445.81) as risk factors. The prevalence was relatively higher in females than that in males in, goats while the cold seasons (January and February) had the highest prevalence of 28.57%. Due to the zoonotic implications of the disease. It is concluded that caprine brucellosis was highly prevalent in Tobruk area, Libya. This fact justifies immediate adoption of an effective control policy for this zoonotic disease.

http://www.tci-thaijo.org/index.php/tjvm/article/viewFile/9826/8875

Effect of Feed Additive on Cryopreservation of Barki Ram Semen

Abdurzag. Kerban[1], Mostfa M. Abou-Ahmed[2], Abdelrof. M. Ghallab[2] and Mona.H. Shaker[2]

[1]Department of Animal Physiology, Biochemistry and Nutrition, Faculty of Veterinary Medicine, Tripoli University. P.O. Box 13662 Tripoli, Libya. [2]Department of Theriogenology, Faculty of Veterinary Medicine, Cairo University. E mail: kerbana@gmail.com

Preservation of semen had a major impact on sheep genetic breeding. The aim of this study was to evaluate the effect of protected fat, probiotic and zinc-enriched diets on semen freezability. Twenty two Barki rams were randomly assigned into four groups; Group I (n=5) was fed the basal diet enriched with 3.7% of dry fat/kg concentration/day, Group II (n=5) was fed a basal diet-enriched with 10gm of probiotic /head/day, Group III (n=6) was fed on the basal diet enriched with 100 ppm of 10% zinc chelated with methionine/ kg dry matter/ day and Group IV (n=6) was served as control. A pool of three to four ejaculates were pooled fromrams within a period of ten weeks. Semen was diluted in egg yolk-Tris diluent and processed in 0.25 ml straw. Motility was evaluated after dilution, before freezing and post-thawing at 0, 1, 2 and 3 hour incubation. Viability index, acrosome integrity and leakage of intracellular enzymes (Aspartat aminotransferase and Alkline phosphatase) were also evaluated. Spermatozoa exhibited highly significant ($P<0.01$) percentages of motility at 0, 1, 2 and 3 hours incubation after thawing, viability index and acrosome integrity in rams fed a diet enriched with protected fat and zinc groups as compared with probiotic and control groups. Also, the mean value of extracellular leakage of AST was significantly lower in fat and zinc group as compared with probiotic and control groups. In conclusion, semen freezability was improved in animals fed a diet fortified with fat and zinc with no significant improvement in animals fed the probiotic-enriched diet.

Keywords: Barki ram semen, Freezing, Straw, Feed additives.

https://waset.org/abstracts/18437

Distribution Pattern of Faecal Egg Output and Herbage Larval Populations of Gastrointestinal Nematodes in Naturally Infected Scottish Blackface Lambs in East Scotland

M. Benothman[1], M. Stear[2], S. Mitchel[2], O. Abuargob[1], R. Vijayan[2], Sateesh Kumar[2]

[1]Department of Internal Medicine, Faculty of Veterinary Medicine, University of Tripoli, Tripoli, Libya. [2]Division of Animal Production and Public Health, Faculty of Veterinary Medicine, University of Glasgow, UK. mbenothman@hotmail.co.uk

Parasitic gastroenteritis caused by gastrointestinal nematodes (GIN) is a serious pathological complication in lambs. The dispersion pattern of GIN influences their transmission dynamics. There is no proper study on this aspect in Scottish Blackface lambs in Scotland. This study undertaken on 758 naturally infected, weaned, straight bred Scottish Blackface lambs in high land pasture in East Scotland extending over three months (August, September and October) in a year, and for three successive years demonstrated that the distribution of faecal egg counts (FEC) followed negative binomial distribution, with the exception of a few samples. The inverse index of dispersion (*k*) ranged between 0.19±0.51 and 1.09±0.08. Expression of low k values resulting from aggregation in a few individuals, suggested that a small proportion of animals with heavy parasitic influx significantly influenced the level of pasture contamination and parasite transmission. There was no discernible trend in the mean faecal egg count (FEC) and mean herbage larval population (HLP) in different months and in different years. *Teladorsagia* was the highest pasture contaminant (85.14±14.30 L_3/kdh) followed by *Nematodirus* (53.00±13.96), *Ostertagia* (28.21±10.18) and *Cooperia* (11.43±5.55). The results of this study would be useful in instituting gastrointestinal nematode control strategies for sheep in cool temperate agro-ecological zones.

Keywords: Blackface lamb, Faecal egg count, gastrointestinal nematodes, Herbage larval population, Scotland.

http://waset.org/abstracts/pharmacological-and-pharmaceutical-sciences/19648

Genetic Parameters of Libyan Dairy Cattle

Ashraf M. Ward
Department of Preventive Medicine, Faculty of Veterinary Medicine, University of Tripoli, Tripoli, Libya. ashrafward@yahoo.com

Heritabilities, repeatabilities, and genetic and phenotypic variances for milk yield 3.5% FCM, fat yield and fat percentage in Libyan Holsteins were estimated by lactation using a derivative free; iterative algorithm of REML (MTDFREML). The animal model contained herd-year, calving month, age at calving, permanent environment and animal effects. In all cases, the inverse of the additive genetic relationship matrix was included. Separate estimates were obtained from records projected to 305-d basis and unadjusted data for lactations one through four. Heritabilities were higher for the average of first and second lactations than separate first and second lactations. Heritabilities, repeatabilities and variances for milk yield, fat corrected milk yield (FCM) and fat yield were within the range of values from temperate areas, but those for fat percentage were lower. Age at calving follow patterns similar to those of more temperate areas. There is adequate genetic variance in Libyan dairy herds to make large genetic gains in milk production through conventional selection methods.

Keywords**:** Libya, cattle, genetic parameters, heritability.

http://www.grjournals.com/portals/grjournals/JVA/Vol4%20Issue12/JVA-2014-412-772-777.pdf

مركز البحوث والاستشارات والتدريب - جامعة طرابلس
مبنى رئاسة الجامعة
هاتف : 00218214631088 . ص . ب . 13932 / جامعة طرابلس
الموقع الالكتروني : www.uot.edu.ly/rcc
البريد الالكتروني : rcc@uot.edu.ly
مركز البحوث والاستشارات والتدريب بجامعة طرابلس