

ANIMAL WELFARE: FUTURE KNOWLEDGE, ATTITUDES AND SOLUTIONS

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Summary

Animal welfare is a factor which affects public acceptability of animal usage systems and hence sustainability. The concepts of welfare, need, stress, health, pain, emotion and feeling are defined and the relationships amongst these are discussed. The scientific assessment of animal welfare, including animal health, has developed rapidly in recent years and the sophistication of this will improve further. Methods of assessment of welfare on-farm and in other animal keeping places is also developing and will provide better tools for animal keepers and inspectors in future. Public concern about the welfare of animals has increased and is increasing rapidly. This has occurred, in part, because of new knowledge about animal abilities and an expansion in the concept of which individuals are sentient. Legislation has an effect on animal welfare if adequately enforced. Recent welfare legislation in Europe and prospects for new legislation are reviewed. Legislation is needed in relation to animal breeding and some aspects of system manufacture as well as in defining how animals should be treated by those responsible for them. The impact of the O.I.E. on world standards is becoming more significant. At present, the greatest effects on animal welfare are the standards set by bulk purchasers of animal products, principally supermarkets and fast food chains. The actions of farmers and others involved in animal usage also have major effects on animal welfare. These actions are affected by financial considerations but also by pressure from purchasers, legislation and the attitudes of family, friends, visitors, other users and the general public. Inclusion of scientific information about animal welfare in university and training courses changes attitudes and practices, generally resulting in improved welfare.

Key words: animal welfare, knowledge, attitudes, solutions

STUDIES ON THE INTERPRETATION OF ELECTRICAL CONDUCTIBILITY VALUES OF MILK IN DIAGNOSTIC OF SUBCLINICAL MAMMITIS IN DAIRY COWS

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Summary

In a farm of dairy cows with an effective of 400 cows, we made three measurements of electric conductivity of the milk (CEL) at 60 day intervals, summing 3784 measurements with the MAST – O – TEST TM 2.0 apparatus. At the CEL negative mammas (CEL -) (3170 mammas) we calculated the mean value of CEL, mammas appreciated as being healthy. These values were reported to the lactation phase: the first third (IL), the middle of lactation (ML) and the last third of the lactation (SL). At the CEL + mammas reported to the lactation phase we also established the CEL dynamics from the papillary and glandular cistern. The mean physiological value of CEL was 55.32 ± 0.54 , with very small variations between the anterior and posterior mammas. The CEL value grew with 6.16% from the beginning of lactation until the end at the healthy mammas; 12.63% of mammas were detected as CEL + with values between 77.91 ± 1.72 and 81.34 ± 1.20 . From 276 CEL + mammas measured repeatedly at 60 day intervals, at three consecutive controls, 40.58% of mammas were positive at a control, 35.86 at two controls and 23.55% at three consecutive controls; the anterior mammas were more affected than the posterior ones.

Key words: mammas, papillary cistern, glandular cistern, CEL

INFLUENCE OF OSIMOL[®] SUPPLEMENTATION ON PRODUCTIVE PARAMETERS OF HIGH PRODUCING DAIRY COWS

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Summary

Ketosis is a disorder of the carbohydrate metabolism that is characterised by abnormal increases in the ketone bodies in the blood (acetonemia), urine (acetonuria), milk and the breath, with a reduction in the blood sugar levels (hypoglycaemia) as well as a

tendency towards fatty liver degeneration. Milk production in cows with ketosis is significantly lower. All dairy cows in early lactation (first 6 wk) are at risk of ketosis. Prevention of ketosis is mainly via nutritional management. Some feed additives, including niacin, calcium propionate, sodium propionate, propylene glycol, and rumen-protected choline, may be beneficial in preventing and managing ketosis. Many preparations are available for prevention and treatment of early lactation ketosis, the main issue about their use is necessity of work force for their application (drenching, silage and feed treatment – sprinkling). Having in mind all above mentioned, the aim of the present study was to investigate the effects Osimol® (Osimol pulvis® Veyx-Pharma GmbH, Germany) supplementation (in pelleted feed) in early lactating dairy cows with diagnosed hypoglycaemia.

Milk production in cows with diagnosed low blood glucose fed wheat bran with supplemented Osimol® after 20 days PP was higher than in control group of cows.

Based on results of this trial it can be concluded that feed supplementation of Osimol® has more than one beneficial effect on ketosis prevention and treatment.

Key words: Ketosis, Dairy cow, Prevention, Feed, Milk production.

INFLUENCE OF BIOCLIMATIC FACTORS IN TIED DAIRY COW SYSTEM ON HEALTH, PRODUCTION AND REPRODUCTION PARAMETERS

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Summary

In last several years, rapid progress on the field of genetics in high yielding dairy cows around the world was done. On the contrary, reproductive efficiency has suffered a dramatic decrease since the mid 1980s. The reasons for the decline in fertility are multifactorial and cannot be solely attributed to an increase in milk production.

On high productive dairy farms, during all year round it can be seen that acting of bioclimatic factors leads to individual and herd disorders, by acting on health and reproductive parameters, accordingly lead to temporary infertility and lower conception.

Dysfunction of ovaries, cases of subclinic endometritis, disorders in reproduction cycle, disorders in ovulation and repeated heats have been recorded mostly during summer. Longer service period was noticed as well as increased insemination index and lower fertility during summer time (June, July and August). Heat stress when temperature exceed 27°C disturbs mechanisms of health and reproduction control and lead to lower milk production and reproduction in high productive dairy farms. During this period influence of bioclimatic factors can easily be seen and leads to lower fertility in both systems of husbandry (free or tied). In our paper we have monitored and analyzed fertility in total of 5272 dairy cows as well as influence of bioclimatic factors on fertility during summer time.

Key words: Insemination index, cow fertility, service period, heat stress.

PIG HEALTH AND PRODUCTION MANAGEMENT

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Summary

Based on the data communicated by the specialized organizations, a report regarding the status of pig meat production in the world was elaborated, having as start point the fodder crisis. The existence of a free trade makes possible the supply with raw materials from any part of the globe, thus the knowledge of the epidemiologic status, fodder price, along with the shelter conditions will set the price of the pig meat. Fodder crisis from 2007 determined a decrease of the production, decrease that is hoped to be balanced this year, in 2009.

Key words: pigs, meat, price

MANAGEMENT OF PORK QUALITY

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Summary

Products preservation duration has a special economical significance and, technically, it means the reduction of the pathogen microbial flora. A 2% lactic acid solution was used, 0.25 – 0.5 liters per half a carcass, for 60 – 120 seconds, 5-85 °C temperature and 1.5 – 3 bar pressure, noticing that pH decreases by 3 units and gets back to normal within 2 days.

For the first variant, NTG and ATP were followed up by sanitation samples into UFC and URL, and the results were significant, noticing a reduction of 99%. For the second variant, when *E. coli*, *Pseudomonas aeruginosa* and *Salmonella enteritidis* were used as indicators, the results were similar.

Key words: pigs, decontamination, lactic acid.

**RFID TECHNOLOGY USED FOR IDENTIFICATION AND
TEMPERATURE MONITORING OF CATTLE**

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Summary

The purpose of this study is to establish the best implantation location of the RFIDs for cattle identification and for the most accurate body temperature determination.

For this study 19 RFID devices have been implanted in 4 (four) different body areas (retro auricular, in the 2/3rd of the neck, retro mammary and the shank region) in 5 (five) cows. The aim of the study was to check the accuracy of the ID sent by the transponder as well as measuring the body temperature indicated by the RFID and the internal body temperature (measured by rectal thermometer) on every two hours for five days. After analyzing the data, it can be observed that the chip implanted in the retro auricular region can estimate efficiently rectal body temperature, with $r = +0.512$ at $p < 0.001$. The transponder's temperature value is highly influenced by the implantation site; by the temperature reading accuracy the best implantation site is the retro-auricular region – followed by the 2/3rd neck region, the retro-mammary region and the shank region.

Key words: dairy systems, monitoring management, body temperature and RFID (Radio Frequency Identification Device)

OSTRICH HEALTH SURVEILLANCE IN A SEMI-INTENSIVE LITTLE FARM BASED ON THE EVALUATION OF THE MAIN HAEMATOLOGICAL PARAMETERS

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Summary

Research carried out in a farm of ostriches, initially populated with 4 adult animals and 8 ostrich chickens were the basis for the determination of the main haematological parameters and compare the data obtained with physiological reference values, published by some advised researchers in the field. Were recorded individual and average values, falling mostly in the physiological limits of species, but also departures more or less important depending on the investigated haematologic parameters.

Oscillations found were less important for the hematocrit (29% - 46%) and hemoglobin (8.9 - 16.7 g / dl), the minimum level of the ht is associated with the lowest concentration of Hb. The total number of erythrocytes exceeded physiological limits in all cases tested, the average values (3.32 ± 0.37 t / l) and the oscillations (2.49 - 3.45 t / l) recorded, corresponding to a state of eritrocitosis put on account of sustained physical effort

The total number of leucocytes (10.67 ± 5429) although it was included in the normal range, it revealed a considerable decrease in this parameter (below 6.0 g / l) in half of ostriches investigated. PMN leukocytes had individual insignificant variations in the percentage of eosinophils and basophils (8915 ± 54.76) but neutrophils share has been below the physiological limits. Lymphocyte population was at the upper limit of physiological, substantiated by the average values ($38 \pm 7306\%$) and upper limit of the confidence interval 95% (44.62%). Monocytes proportion slightly exceeded the physiological limits, the average values ($4.41 \pm 3477\%$) and confidence interval 95% (7.32), corresponding to animals with moderate monocytosis (4.5-5%) or extremely evident in one case (12.5%), cell reaction placed on the stress.

Key words: ostrich, hemogram, physiological values, the current references.

RESEARCHES CONCERNING THE UNDERGROUND WATER QUALITY IN ARGEȘ COUNTY

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Summary

Water quality protection is an important part of environmental protection measures. The worldwide community task is to increase the political reaction to the ecological damage and social disintegration issues, before these phenomena become irreversible. The researches in the present paper aim to monitor underground water quality in Arges County. In this purpose there were harvested 72 water samples from 10 localities. From the above samples the following physical - chemical indicators were established: pH, oxygen chemical consumption (CCO-Mn and CCO-Cr), fixed total residue, chlorides (Cl⁻), sulphates (SO₄²⁻), ammonium (NH₄), nitrites (NO₂⁻), nitrates (NO₃⁻), nickel (Ni), Cu (copper), chromium (Cr) and zinc (Zn).

The methods used for assessment and results interpretation are those provided by Law 311/2004 regarding drinking water quality.

The researches led to the following conclusions:

- chemical oxygen consumption (CCO-Cr) established by potassium dichromate method reveals values over the admitted limits by 1.16 - 9.91 times in most of the samples, except the ones from Falfani and Barla localities;

- the water samples from Poiana Lacului are the most polluted, showing values over the admitted limits provided by Law 311/2004 for CCO-Cr, CCO-Mn, chlorides, zinc and nickel parameters;

- the Cu and Cr concentrations are within the admitted limits in all samples harvested;

- the Zn exceed the admitted limits by 2.2 - 67 times in most of the samples;

- the least polluted underground water are those from Cocu, Vedeia, Barla and Falfani.

Key words: underground water, quality, Arges County

DAIRY COW WELFARE ASSESSMENT IN EXTENSIVE BREEDING SYSTEMS

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Summary

The present study's aim was the extensively reared dairy cow's welfare assessment, based on certain animal-linked parameters: body condition (BCS), body hygiene (cleanliness), lameness, skin injuries, vaginal discharge, fur condition, general condition, and flight distance, respectively. The study was ruled in 32 small herds (3 – 15 cows) in Bistrita-Nasaud County. In the months of March and April 2008, 242 dairy cows kept in tie-stall system were assessed, using several indicators determined through specific methods. Within the assessed 242 cows: 117 (48.35%) had BCS between 1.5 and 2, considered as thin cows; 19 (7.85%) presented skin lesions on various body regions; 35 (14.46%) had vaginal discharge; 82 (33.89%) had dull hair on their back; 12 (4.96%) were moderately lame; 37 (15.29%) showed fear at the observer's approach. The proportion of 3 and 4 scores (on a five point scale) was 8% in the udder, 10% in the lower legs, and 17% in the region of the flank and upper legs, respectively. The general condition was good for all the assessed cows. The obtained results showed minimal deviations of the indicators used in dairy cow welfare assessment in extensive breeding systems, except BCS, indicating significant deflections from normality, with negative implications on dairy cows' health and welfare. The welfare degree of investigated cows is below expectations regarding extensive breeding conditions.

Key words: dairy cows, extensive systems, welfare assessment

RESEARCHES REGARDING THE MONITORISATION OF PHYSICO-CHEMICAL PARAMETERS AND THE PRDC INCIDENCE IN A CLOSED CYCLED FARM

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Summary

The researches were made in six shelters from a pig farm, tow with pigs of 10-14 weeks old and four shelters with pigs of 14-21 weeks old. The measurements were taken in

two the first one when the natural ventilation was still on and the second one after the computer assisted ventilation system was on. The factors taken into consideration here are physical factors and the chemical factors, which were correlated to the porcine respiratory disease complex (PRDC) incidence in the pig herd. The use of the computer assisted ventilation system proved to have positive results, both in the improvement of shelter environment quality and also in the welfare state of pigs.

The low percent of morbidity, 2.13%, and mortality, 2.73% indicate the positive impact that the change of natural ventilation with the computer ventilation, on the impact of the PRDC incidence in the pig herd.

Key words: PRDC incidence, physico-chemical parameters, pig farm

RESEARCH UPON THE BIOCHEMICAL INDICATORS IN LAYING HENS, AT THE END OF THE PRODUCTION PERIOD, DEPENDING ON THE HOUSING CAGE SYSTEM

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Summary

The aim of this study is to compare biochemical indicators of blood plasma of laying hens housed in three different housing systems (conventional cage system, enriched cage system and deep litter system). In each housing system, 30 ISA Brown laying hens were observed during the laying period. Blood samples were collected, during week 74 (the last segment of the laying period), in order to determinate the biochemical indicators in plasma. There is a difference between the enzymatic activity in hens housed in cage system (even if that cage is enriched, according to the 1999/74/EC) and in hens housed in deep litter system. The enzymatic activity is more intense in hens housed in cages.

Key words: housing system, GGT, AST, AMYL, uric acid, laying hens

POST-OPERATIVE COMPLICATIONS IN THE ONCOLOGY DOG PATIENT

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Summary

Objective: to investigate post-operative complications in the dogs' oncology patients

Design: retrospective study of the 211 canines with cancer.

Intervention: curative, palliative, or cytoreductive surgery.

Results: after 211 oncology surgery 17 per cent complications were assessed; wound complication (30.5%), excessive pain (25%), hypothermia (22%), and sinus tachycardia (11%) of the total complications.

Conclusion: common complications registered after the oncology surgeries include wound collection, wound infection, pain, and hypothermia.

Key words: oncology surgery, post-operative complications, dog

OESTRUS CONTROL WITH PROGESTINS AND CYSTIC ENDOMETRIAL HYPERPLAZIA-PYOMETRA COMPLEX IN THE BITCH

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Summary

Objective: to investigate dogs with cystic endometrial hyperplasia - pyometra - complex and the relationships between hormonal therapy (progestins) and this uterine pathology.

Design: retrospective study of the 362 canines with cystic endometrial hyperplasia (CEH) or pyometra.

Intervention: ovariohysterectomy

Results: 362 bitches with CEH-pyometra complex, representing 17.8% of the bitches included in this study were assessed. In 75.7 per cent of the cases, bitches were treated with progestins for suppression of ovarian cycles -at variable time intervals.

Conclusion: ovarian cycle suppression with progestins represents an important risk in the development of the CEH - pyometra complex.

Key words: cystic endometrial hyperplasia – pyometra complex, progestins, bitch

THE ANGIOPLASTY USING SYNTHETIC GRAFT PATCHES IN PIGS

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Summary

Angioplasty with patch design of synthetic graft may be used in any situation involving loss of substance in the venous or arterial wall, or in cases of the arterial lumen stenosis. The synthetic materials used must fulfill certain conditions imposed by the proper functioning of the artery, in particular to be tolerated by the host tissue, the area to be unthrombogenic, to be easily to handle and not to degrade in time. The materials used in our observations are used commonly in vascular surgery in humans.

The observations were made on a number of 6 animals of swine species. The materials that were used were represented by the Dacron prostheses and ePTFE and wire suture Prolene 5-0 and GoreTex 5-0.

For surgery the animals were anaesthetized through gas narcosis with Isoflurane. The surgery consisted of median line laparotomy, followed by the identification and isolation of the infrarenal arterial segment of the abdominal aorte. Aortic isolation, its clamping and linear arteriotomy to the long axis of the vessel has been made. The patch fixing was performed by continuous wire suture, starting from one of its ends till complete coverage. The vessel unclamping was made progressively to capture the potential haemorrhage from the suturing site.

Post surgery, within three days, all the animals had a posterior train paresis.

Key words: angioplasty, synthetic patch, pig.

OBSERVATIONS REGARDING SOME SURGICAL TECHNIQUES OF TONSILLECTOMY IN DOGS

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Summary

Tonsillectomy in dog is applied to cases with chronic recurrent tonsillitis, a disease frequently found in this species and also when medicamentary treatment does not offer favorable results. Often the only effective treatment in chronic recurrent tonsillitis is surgery, especially that delay of surgical intervention leads to metastasization of the infection in endocardium and joints. Given the clinical importance of chronic tonsillitis, with all its implications, and that surgical treatment is most effective, the aim of this work was to use several surgical techniques of tonsillectomy, which can be practically applied in different situations, depending on the material and technical possibilities.

Key words: tonsillectomy, dogs

FEMUR FRACTURES AND TREATMENT OPTIONS IN DOGS WHICH BROUGHT OUR CLINICS

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Summary

In this study, 56 dogs were evaluated which referred to Adnan Menderes University, Faculty of Veterinary Medicine, Department of Surgery, with the complaint of hind limb lameness and also femur fracture was diagnosed through clinical and radiological examinations.

Total percentage of femur fracture within the 187 fracture cases was 29.94% (56 cases). Distribution of femur fractures according to anatomic regions observed as follows: 41 diaphysier (73.21%), 11 supracondylar (19.64%), 2 caput femoris (3.57%), 1 trochanter major (1.78%) and 1 collum femoris (1.78%).

Open reduction and internal fixation were advised to all cases; however, intramedullary fixation could perform only at 42 cases. Bandages, supported with PVC (polyvinyl chloride), were applied in some cases as additional support. As postoperative complications, pin migration (1 case) and infection (1 case) were observed, but both

complications were cured with proper treatments. Fractures were healed without any complications for all cases.

As a result, safety and successfully treatment of femur fractures in dogs by intramedullar fixation, performed with the proper surgical techniques and suitable diameter/size pins is possible.

Key words: femur fracture, treatment, dog

A STUDY ON THE PREVALENCE OF SKELETAL OSTEOSARCOMA IN DOGS AND CATS

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Summary

Skeletal osteosarcoma was diagnosed in 38.9% dogs and 9.09% cats from 136 dogs and 11 cats, after a clinical, radiological, cytological and histological examination in a private clinic. The highest frequency of osteosarcoma was found out in the giant and large size breeds of animals, age of 7 (16.98%) and 9 (24.53%) years old. The presence of more progressive types was pointed out after the histological examination observing osteosarcoma with osteoblastic (75.93%), chondroblastic (18.51%) and fibroblastic (5.56%) differentiation.

Key words: skeletal osteosarcoma, prevalence, dogs, cats

EXTRASKELETAL OSTEOSARCOMA IN DOGS: PRESENTATION OF TWO CASES

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Summary

Two cases of extraskeletal osteosarcoma are presented with different localization. A neoplastic form localized in the peritraheal area was emphasized in a six years German shepherd male dog and another one at the mammary gland of a thirteen years old Teckel female dog. The radiographic images were emphasized in the areas of high radioopacity at the level of soft tissues in the areas mentioned, but histologically is the extraskeletal osteosarcoma.

Key words: extraskeletal osteosarcoma, dog

EXCISION OF THE UROPYGIAL GLAND IN THE HOUSE SPARROW

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Summary

The aim of the current study was to experimentally remove the uropygial gland in house sparrow (*Passer domesticus*). Therefore we made the excision of the preen gland in 33 healthy birds. All individuals were anaesthetised with a combination of a A2-adrenoceptor agonist (xylazine) and a dissociative anaesthetic (ketamine). During anaesthesia and surgery they were monitored for vital signs parameters. All of them breathed air spontaneously during anaesthesia. Surgery was performed within 10–15 minutes. 31 birds had good survival prognostic and 2 birds died.

Key words: uropygial gland, excision, house sparrow, *Passer domesticus*.

DIAGNOSTIC AND TREATMENT MODALITIES OF SHOULDER JOINT DISEASES AT DOG. ARTHROSCOPY VERSUS ARTHROTOMY, REVIEW

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Summary

Forelimb lameness can be one of the most difficult orthopedic problems for clinicians to diagnose.

Arthroscopy is preferable to arthrotomy for the diagnosis and treatment of intraarticular diseases due to superior visualization and lower morbidity. Canine arthroscopy has made significant advancements in recent years and has revolutionized the treatment of intraarticular diseases in small animals. The arthroscopy cannot exclude others methods for the diagnosis and the treatment of shoulder disorders.

Key words: shoulder joint diseases, arthroscopy, arthrotomy

DYNAMICS OF THE NORMAL ASPECT OF TAPETUM LUCIDUM AT DOGS REGARDING AGE

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Summary

The study purpose was to show the normal dog eye fundus status started with young age, to intercept the evolution and development of tapetum lucidum and make correlation directly with age.

Our observation were made on two lots (first one with age between 15-90 days and the second one with age between 13 month-16 years) of dogs, total number of bottoms was 80. To intercept the appearance, development and evolution of tapetum lucidum the eye fundus examination was made after (following) a certain protocol: for the first lot we made eye fundus examination weekly and for the second one eye fundus examination was made sporadically.

Our observation reveal that the dog tapetum lucidum can't be seen in the first life period (1-35 days), his appearance is after this age. The tapetum lucidum prominence is around 40-a day, like zones of different colors, different granulation, uniform or with ought forms. We must mention the fact that after his appearance, tapetum lucidum suffer aspects and color modifications until the age of 90 days when we saw a stabilization of those elements and tapetum lucidum stops his finalization and became definitive.

The examination use indirect ophthalmoscopy method with indirect ophthalmoscope Heine Omega 2C.

Key words: tapetum lucidum, animal eye fundus, dog retina

HEALING EVALUATION OF STIFLE JOINT OCD ON DOGS USING KINEMATIC ANALYSIS

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Summary

In this study we have evaluated OCD healing in dogs, using kinematic analysis performed at 90 days after surgery (collagenic scaffolds loaded with autologous chondroblasts).

The results of kinematic analysis were compared with those obtained in healthy animals and with patterns obtained in day 14 after induction stifle OCD by surgery (3).

Incomplete cover or uncover of screws head by de novo cartilage resulted in persistence of an irritative factor associated with maintaining of discrete changes in kinematic pattern of the hind limbs joints.

In control group individuals, joint movements changed during the time, being characterized by maintaining or even emphasizing of the specific kinematic pattern. That suggests the persistence of joint cartilage damages.

Having capacity to detect subtle changes in joints motion, with dynamic monitoring of these, kinematic analysis allows assessment of joint movement re-establishment after various surgical or medicamentary treatments.

Key words: kinematic, videography, dog, osteochondritis

BIOCHEMICAL BLOOD CHANGES THROUGH NON-IONIZING CONTRAST SUBSTANCES (OPTIRAY 350) IN THE UROGRAPHY OF THE DOG

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Summary

The analysis and semiology of the urinary system imposes methods of clinical examinations as well as paraclinical methods because of its morphological and functional complexity.

Important data is being collected in the paraclinical investigation through the urography with non-ionizing contrast substances (Optiray 350).

A number of 23 biochemical blood parameters have been established to observe the influence of Opiray 350 in the dog's urography and the substance's impact on the cardiovascular, respiratory, digestive and excretory system. The data collection has been taken before and after administrating Opiray 350. The time span chosen to measure the results where 10 minutes, 1 hour and 24 hours after administrating the substance.

The current dissertation will underline biochemical blood modifications on the dog through administrating Opiray 350. Modifications in the great physiological functions and in the 23 analyzed blood parameters where also taken into consideration.

It was also important to point out the product's damaging effect

Key words: urography, Opiray 350, biochemical modifications, dog

COMPUTER TOMOGRAPHY ASPECTS IN FRACTURES OF VERTEBRAL COLUMN IN DOG

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Summary

Fractures of vertebral column were studied by radiology, myelography and computer tomography in 7 adult dogs with street accidents. Computer-tomography allowed the localization and evaluation of degree of compression of spinal cord. In our cases spinal cord compression was induced both by dorsal vertebral arch and by vicious calluses of vertebral body. The compression realized by dorsal vertebral arch induces a primary trauma on dorsal and dorso-lateral part of spinal cord affecting the fascicles involved in proprioceptive transmission and voluntary movements. Clinical recuperation of neurological deficiencies occurred progressively with approximately 2 Olby points/month, from 1 ± 1 to 7 ± 2.5 .

Key words: computer tomography, vertebral column fractures, dog

MYELOGRAPHY FOR THE DOG WITH THE USAGE OF OPTIRAY 350

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Summary

In order to visualize the spinal cord and any changes that occur on anatomical level, the usage of contrast substances is necessary. The radiological examination of the spinal cord and of the spinal channel, through the usage of contrast substances, is called myelography.

Through the usage of the myelography method it is possible to explore cervical, lumbar regions, as well as the sac of the sacral spine. Upon treating and diagnosing, this clinical method is indicated, if traditional x-rays do not show spinal lesions, or when clinical signs contradict x-ray results, and also when multiple lesions appear and there is the need for a more accurate determination of the damaged element, necessary upon surgery. It may also be used when more information is needed to establish a prognosis.

Key words: myelography, Optiray 350, spinal channel

RELEVANCE OF SOME MEASUREMENTS ON RADIOGRAPHS FOR HOOF BALANCE EVALUATION IN HORSE

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Summary

The study was carried on 15 horses (7 sound and 8 lameness horses). Both forelimbs were radiographed and lateromedial and dorsopalmar view were obtained. More parameters, distance and angle, was measured for hoof balance evaluation. In sound horses that the trimming were made four or more a lateromedial imbalance was accompanied from a more intense side bones formation. In lameness horses the values of measured angles, especially of phalanx three bottom, allow evidence of three phalanx rotation that is laminitis specific feature. Three phalanxes fall in the hoof through founder distance measurement was not record.

Key words: horse, hoof balance, radiographs measurements.

INTRAOPERATIVE ANALGESIC EFFECT OF BUTORPHANOL FOR OVARIOHYSTERECTOMY IN BITCHES: A DOSE TITRATION STUDY

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Summary

The research was carried on 32 bitches brought for ovariohysterectomy. For analgesia butorphanol was used in three different doses (0.2 mg/kg - group 1, 0.3 mg/kg - group 2 and 0.4 mg/kg - group 3. During the intraoperative period an acute heart rate, respiratory rate or mean arterial pressure increase equal or higher than 20 per cent of the previous value was considered a sign of intraoperative pain.

Key words: analgesia, butorphanol, ovariohysterectomy, bitches

APPLICATION OF SEVERAL CRYOPRESEVATION METHODS AND MORPHOLOGICAL EVALUATION OF BOVINE EMBRYOS AFTER THAWING

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Summary

In this experiment a number of 243 embryos have been cryopreserved using the Cryogenic device and three different cryopreservation methods: successive glycerol dilution method (82 bovine embryos), 1.5M glycerol method (80 bovine embryos) and 1.5M ethylene glycol and 0.1M sucrose method (81 bovine embryos). After cryopreservation, embryos were thawed for morphological reevaluation. The highest percentage of transferable embryos has been obtained using the 1.5M ethylene glycerol and 0.1M sucrose cryopreservation method. The use of ethylene-glycol and sucrose in cryopreserving the bovine morula or early blastocysts led to high viability rates of 85.1%, proving the possibility of direct embryo transfer when using this protocol.

Key words: cryopreservation methods, bovine embryos

RESEARCH REGARDING THE CRYOPRESERVATION OF BAZNA BOARS' SEMEN FOR THE CONSERVATION OF THE GENETIC RESOURCES

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Summary

The purpose of this paper was to apply the semen cryopreservation protocol for Bazna boars in order to preserve their genetic resources. The research has been carried out on 5 Bazna boars 3 to 4 years old. Semen was manually collected and macroscopically evaluated immediately after recovery. In addition, the concentration of the ejaculates was also assessed. The semen was diluted in BTS medium and transported to the laboratory where microscopic evaluation, dilution and cryopreservation were performed. After thawing, mobility and viability of sperm were assessed. The results show normal parameters of fresh semen and encouraging values after thawing (20-25% mobility and 30-35% viability). We recommend this protocol of cryopreservation for boar semen as a method of preserving the genetic resources of local swine breeds.

Key words: cryopreservation, semen, Bazna boars

THE EFFICIENTISATION OF THE ASEPTISATION OF THE SEMINAL MATERIAL AT BOAR BY USING ANTIFUNGI IN THE DILUTING AGENTS

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Summary

A various group of fungi has been identified by doing qualitative mycologic tests of the diluted seminal material at boar. 98% of these were yeasts. In the diluting agents formula has been introduced an antimycotic agent for a better aseptisation of the seminal material by dilution. The quality of the diluted sperm was analysed with C.A.S.A. system to establish the compatibility. The evaluation of the motility (M%) and progressivity (P%) of the spermatozoons in the witness and experimental samples was periodically carried out during

the 48 hours in which those doses were preserved at +170 C. The mobility parametres studied in dymnamics have progressively decreased along with the increase of the preservation duration both of the experimental lots and the witness ones, but to a lower rate. The results obtained after 12 hours from the dilution demonstrate that the fluconazole of 125 mg‰ has a stimulative effect on the seminal cells, increasing the percentage of those which have a fertilizing capacity.

Key words: boar, motility, progressivity, diluting agent

NEW TESTS TO CONTROL SEMEN QUALITY IN BULLS

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Summary

Until recently, the microscopical control of sperm motility was the most important measure to determine the quality of bull sperm. The introduction of more sophisticated laboratory tests will help to get a better correlation between laboratory findings and fertility in the field. Testing of motility with standardized computer programmes give a big number of new parameters for the characterization of sperm movements. On the other hand, the flowcytometer technology introduced new methods for characterization of live and dead sperm, the determination of intact acrosomes and the detection of the sperm chromatin structure. Correlation of these new tests with field fertility results (non-return rates) give in total the chance to produce more doses of semen of the highly desired bulls.

Key words: semen, quality control, bulls

THE MANAGEMENT OF EQUINE REPRODUCTION – ASPECTS OF THE ACTIVITY OF A PRACTICE IN ROMANIA

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Summary

The current paper describes the activity of our practice, composed of two vets and a technician, in the sector equine breeding, in 2008, with our successes and our problems. In 2008 we worked with 31 breeding mares. The initial examinations, the ultrasound exams and the inseminations were conducted by veterinarians; drug administrations and the assistance of natural breeding were performed also by vet technician.

Frozen-thawed semen inseminations are the future of the breeding horses. From a horse-owners point of view, there are several advantages: delivering a foal with a higher value than form local stallions, avoiding accidents that can occur during natural servicing, avoiding long-distance transportation, etc.

From a veterinarians point of view, acquiring an ultrasound machine is required (more and more accessible price-wise) and consumables, that are available on the Romanian medical market. It also required getting trained in this area. Organizing a serious and trained team is the key to equine breeding success.

Key words: equine reproduction, management

CELL MORPHOLOGICAL AND BIOCHEMICAL STUDIES OF THE SPERM AT TROUT RAINBOW MALE REPRODUCERS (*SALMO GAIARDNERI*)

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Summary

The purpose of these studies consists in the evaluation of the fecundity capacity of the sperm at rainbow male trout correlated with the individual citomorphological, physic and biochemical signs of the sperm, correlated to the survival percentage of the descendant in order to select the young males.

We studied the average individual values and standard deviated, the variability coefficients for the physic and cell morphologic parameters, as well as the abnormalities registered at spermatozoa and their frequency. For the biochemical parameters we revealed the individual values, averages and standard deviation, the variety coefficients, the biochemical parameters of the total sperm or the seminal plasma following the fructose concentration, GOT and phosphates activity.

We searched the effect of the dilution on the fecundity capacity of the seminal material, the evaluation of the registered loses and also the causes of the mortality in the fertilized spawn.

Key words: cell morphology, protoplasm, spermatocrit, spectrophotometry

EFFECTS OF NEGATIVE ENERGY BALANCE ON REPRODUCTION IN DAIRY COWS

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Summary

In many countries the milk production per cow has more than doubled in the last 40 years (OLTENACU, 2007). The increase in production has been accompanied by increasing incidence of health problems, declining ability to reproduce and declining the fertility of modern dairy cows.

High producing dairy cows need to mobilize body reserve to be able to sustain their milk production. In early lactation, until energy intake assures the requirements, dairy cows, especially high producing breeds, enter a state of negative energy balance (NEB), losing high amounts of body condition. The NEB is detectable by measurement of body condition score (BCS), which has been useful in the past and by more sophisticated ways to measure the relationship between adipose tissue and fertility, like metabolic hormones: IGF-I, leptin.

The aim of this study is to summarize the effect of negative energy balance and the risk for reproductive disorders in dairy cows.

Key words: negative energy balance, reproduction, dairy cows

THE RELATIONSHIP BETWEEN BODY WEIGHT AND PROSTATE DIMENSIONS IN GERMAN SHEPHERD DOGS

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Summary

The aim of this study is to analyze the relationship between ultrasonographically measured prostate dimensions and the body weight of dogs. The research was made on German shepherd dogs.

Key words: prostate dimension, body weight, German shepherd

MEDIUM FOR THE BULL'S SPERMATOZOA REVIVAL - MEDIUM AD SPERM FORTE-

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Summary

Medium for the bull's spermatozoa revival has been examined on the bull native and frozen sperm paying attention to the semen quality parameters. It was main reasons for an application of medium ad sperm forte to notice how that acts on the sperm membrane and their motility. MEDIUM AD SPERM FORTE acts in revival of the spermatozoa by increase motility: activating cell metabolism; activating the cell's "sodium pump", activating diffusion of sperm membrane *in vivo/in vitro*, functional revival all intracellular organelles (mitochondria) of cells, and finally revive intracellular gel consistency of cell organelles.

Key words: medium ad sperm forte, bull's spermatozoa

RESEARCH CONCERNING IDENTIFICATION OF THE „HAL” GENE CARRIER SWINE USING SERUM CREATINE KINASE DOSAGE

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Summary

The levels of Creatine Kinase enzyme before and after exposing to technological stress factors where studied in two groups. Control and experimental group were formed by nine half-bred piglets, tri or tetra racial obtained from breeding between pure Duroc, Hampshire, Landrace and Pietrain.

In the control group, the individual enzyme levels where found near the superior limit of the reference value, but they decreased during the experiment because of the improving maintenance conditions. Two out of five animals of the experimental group were observed to have high increase level ($P < 0,001$); E2 from 298 UI/ml to 945 UI/ml and E3 from 375 UI/ml to 920 UI/ml. Because of these values, the animals were considered as carriers in simple (heterozygote Nn) or double (homozygote nn) dose of HAL gene. This fact is partially confirmed through halothane intubation.

Key words: HAL gene, creatine kinase dosage, swine

ASPECTS REGARDING ANEMIA ASSOCIATED TO CHRONIC GASTROENTEROPATHIES AT THE DOG

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Summary

A number of 60 cases of chronic gastroenteropathies in dogs of different rases and ages, were studied regarding the erythrocytes ballance. In 21 (35%) of these cases we found that digestive disturbances were associated to anemias. The results obtained in this research confirmed that the anemias associated to chronic gastroenteropathies present a etiopathogenetic diversity. Thus, the first place was taken by iron lack anemias, being followed by vitamin B₁₂ and/or folic acid lack anemias 3 (14.21%) și hemolytic anemias 2 (9.52%). There was a problem in differentiating iron lack anemias from those due to iron blocking on the background of cytokins intervention (inflammation anemias). The determination of the level of seric ferritine, known as an important marker of the iron deposits in the body, but also as an accute phase reactant, brought information regarding the differential diagnosis of the two types of anemia. The level of seric ferritine was under the physiologic inferior limit of the species in 8 cases, including first of all the majority of the cases with mycrocytes and hypochrome anemia, with the hemoglobin's value under 8 g/dl; in 5 cases, the ferritine's mycrocytes and normochrome anemia, predominantly, but also from the other categories; in 6 cases the ferritine's value was over the normal superior limit of the species, mainly in the cases with slight anemia. Out of the 16 cases with iron lack anemia only 11 answered the therapy with iron products, while 3 answered the association of iron to erythropietin.

Key words: chronic gastroenteropathy-anemia-cytokins-ferritinemia

ASPECTS REGARDING GESTATION ANEMIA AT THE BITCH

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Summary

A hematological research regarding gestation anemia at the bitch was conducted. In the 60 cases, pregnant females, several hematological determinations were made. The focus was on the incidence of anemia during bitch gestation, on the delimitation of relative anemia from real anemia, on the criteria allowing this delimitation and on how serious real anemia is and the criteria used. Out of the 60 cases investigated, 44 showed anemia, with the hemoglobin's value under 12g/dl (criterion used for non-pregnant females); according to the criterion for pregnant females (the hemoglobin's value under 11g/dl), only 25 cases are compatible with anemia, with real anemia. In our research the cases where the hemoglobin's

values were between 11-12g/dl were classified as with relative anemia. This condition is considered to be the result of hemodilution which installs during gestation. Out of the 25 cases of real anemia, 11 are characterized by slight anemia (hemoglobin between 10-11g/dl), 9 by a moderate form (hemoglobin between 8-10g/dl) and only 6 may be considered with a serious form of anemia. Normocytic and normochrome anemias are predominant.

Key words: gestation-relative anemia-real anemia-limits

THE USE OF LANTUS INSULIN IN DIABETES MELLITUS TYPE I IN DOGS AND CATS

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Summary

Lantus (glargine) insulin is a human insulin with long lasting action, which we have used in the treatment of 7 patients (4 dogs, 3 cats) diagnosed with diabetes mellitus type I, but who did not respond to the initial treatment with Mixtard-30 insulin. These patients were still manifesting the distinctive clinical signs of diabetes mellitus type I, and after the use of Lantus (glargine) insulin the signs disappeared, the glycaemia values were between 140 and 220 mg/dL, and the glucosuria disappeared or was extremely low. The doses we used were 0,5 UI/kg/day for cats and 1 UI/kg/day for dogs, once a day, administered in the evening at approximately 19-19:30, before dinner.

Key words: Lantus insulin, diabetes mellitus, dogs, cats

TAIL VENIPUNCTURE AND CARDIOCENTESIS TECHNIQUES FOR BLOOD SAMPLE COLLECTION IN HORNED VIPER (*VIPERA AMMODYTES*)

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Summary

The ability to collect quality blood samples is essential in any animal class. The production of poor-quality blood data can be useless or, even worse, misleading to the clinician (Mader D., 1996). The two common sites for venipuncture in snakes are the caudal

(ventral tail) vein and the heart. Venipuncture in reptiles is generally a blind technique. In this study we compare the usefulness of two blood sampling techniques in captive horned viper (*Vipera ammodytes*) (n=18): tail venipuncture and cardiocentesis. We noted total time (in seconds) of blood collection and the number of attempts needed.

Key words: tail venipuncture, cardiocentesis, *Vipera ammodytes*

EFFECT OF AMLODIPINE ON BLOOD PRESSURE IN CATS WITH CHRONIC RENAL FAILURE

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Summary

The study was made on seven cats aged between seven and fourteen years, diagnosed with chronic renal failure and secondary arterial hypertension. The blood pressure was measured by oscilometric method at the level of the median artery, with cuffs width of between 30-40% of the limb circumference, placed in the forearm region. For each cat, the systemic blood pressure value was calculated as the mean of five consecutive measurements. Amlodipine was administrated in all cats in dose of 0.625 mg/cat once daily (0.1-0.2 mg/kg), and blood pressure was measured before drug administration and after seven and thirty days of therapy.

Amlodipine decreased blood pressure gradually and significantly ($p < 0,05$) in cats with chronic renal failure and had no significant influence on the renal blood biochemical profile in the present study.

Key words: chronic renal failure, cats, amlodipine

EVALUATION OF ARTERIAL BLOOD PRESSURE MEASURED BY OSCILOMETRIC METHOD IN ANESTHETIZED DOGS

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Summary

The research was made on 5 dogs under anesthesia, age between 2-4 years and weight between 8-17 kg. The blood pressure was measured by oscilometric method on the median artery, metatarsal and median caudal artery and was compared with blood pressure measured by direct method. The invasive measurement of the blood pressure was made by catheterized the femoral artery with 20 and 22 G catheters. The differences between systolic blood pressure, diastolic blood pressure and mean arterial blood pressure values appreciated by oscilometric method and those measured by direct method were under 5 mmHg, and the standard deviation was under 7 mmHg for all tree measuring sites. The correlation between the two methods for the blood pressure measurements was very good and direct proportional.

Key words: arterial blood pressure, dog, oscilometry

CLINICAL AND PATHOLOGICAL ASPECTS IN 2 CASES OF CANINE MASTOCYTOMA

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Summary

Mast cells are well known for their neoplastic transformation in solitary and multiple cutaneous mast cell tumours, as well as visceral and systemic mastocytosis. In this paper we are presenting 2 cases brought in our Emergency Clinic for consultation, which were diagnosed with canine mastocytoma. In both of the patients, the tumor started as a single nodule. They were diagnosed with grade 3 mastocytoma using cytological and histopathological exam. Combined therapy of vinblastine and prednisolon has proven poor efficiency. Survival times, after the diagnosis, were 35 days (patient 1) and 22 days respectively (patient 2).

Key words: mast cell tumor, mastocytoma, dog

BODY WEIGHT AND GESTATION DURATION IN FEMALE RATS EXPOSED TO POTASSIUM DICHROMATE (CRVI) DURING PREGNANCY

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Summary

Administration of chromium (VI) (25, 50 and 75ppm as potassium dichromate) via drinking water during pregnancy in female rats revealed both physical and physiological damage. Lower body weight during all four weeks of gestation comparative to control group (dose dependent) and increase of gestation duration were evident.

The present study suggests a developmental toxicity risk if the mother is exposed to a sufficiently high concentration of chromium (VI) in drinking water during pregnancy.

Key words: potassium dichromate, body weight, gestation duration, rat

THE CONSEQUENCES OF *IN UTERO* EXPOSURE TO ALUMINIUM SULPHATE ON EXPOSURE INTEGRITY BIOMARKERS IN FEMALE RATS AT SEXUAL MATURITY

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Summary

The studies in the field of reproductive toxicology are of opportunity because in Romania there is primary and secondary aluminium industry that represents a real risk for the environment, animals and humans health (4).

The studies regarding aluminium reproductive toxicity are few and some times controversially (1).

The aim of the study was the assessment of aluminium toxic impact on female reproductive system integrity and performances biomarkers, because of lack/controversially opinions regarding aluminium reproductive toxicity.

Key words: aluminium, female sexual organs, level, histoarchitecture

DIOXINS, FURANS AND POLYCHLORINATED BIPHENYLS ANIMAL AND HUMAN HEALTH RISK

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Summary

Dioxins, furans and polychlorinated biphenyls (PCBs) are three of the twelve United Nations Environment Programme (UNEP) internationally recognized Persistent Organic Pollutants (POPs). POPs are organic compounds of mainly anthropogenic origin which are characterized by their lipophilicity, semi-volatility and resistance to degradation. These characteristics pre-dispose these substances to long environmental persistence and to long-range transport. They are also known for their ability to bioconcentrate and biomagnify under typical environmental conditions, thereby potentially achieving toxicologically relevant concentrations. Because of their toxic characteristics they pose a threat to humans and to the environment. It is important to highlight that dioxins, furans and PCBs have similar chemical properties and hazardous characteristics but the sources of releases are different. Therefore an effective approach to controlling and reducing their release into the environment should address all of them, but taking into account the differences (3, 9).

The aim of this document is to provide a concise overview of the health hazards and sources of dietary exposure to dioxins, furans and PCBs. It also gives information on their chemical and physical characteristics, Toxic Equivalent Concentration (TEQ) and legislative limits.

Key words: dioxins, furans, polychlorinated biphenyls

LEAD IN SOME ORGANS AND TISSUES IN ROE DEER

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Summary

The aim of the study was to evaluate the pollution degree with one of the most frequent pollutant – lead- in one of the food chain level, the Roe deer (*Capreolus capreolus*). There were determined the values of lead concentrations in some organs and tissues of Roe deer in two Forest Districts: C. M., county S. – “polluted area” and C., county A. – “control area” considered an area with low risk of pollution with heavy metals.. Results: lead concentrations were higher than maximum admitted limits (0.2ppm), excepting testis and muscles in “control area”; the target organs for lead in polluted area were the bones and in

the "control area", the liver. Lead concentrations were higher in some organs from polluted area comparatively with "control area": muscles, bones, testis, spleen, liver, kidneys.

Key words: lead, organs and tissues, Roe deer

ROE DEER (*CAPREOLUS CAPREOLUS*) AS BIOINDICATOR FOR CADMIUM POLLUTION

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Summary

The study was carried out to evaluate the degree of pollution with cadmium in Forest District C. M., county S. comparatively to another Forest District, C., county A., considered an area with low risk of pollution with heavy metals. It was evaluated the cadmium level in some organs and tissues in Roe deers (liver, kidneys, heart, lungs, spleen, testis, bones, muscles) to appreciate the hazard level and in the future the possible risk for animal health and human consumer. The obtained values were very high in polluted area, significantly higher than in "control area" and than maximum admitted limits (0.02 ppm). The target organ for cadmium pollution were the kidneys. The hierarchy of organs and tissues related to cadmium concentrations was: kidneys, liver, testis, spleen, lungs, heart, bones, muscles.

Key words: Roe deer, bioindicator, cadmium pollution

THE LIVER, A TARGET ORGAN IN CADMIUM INTOXICATIONS; CADMIUM, CALCIUM AND MAGNESIUM LIVER LEVELS IN DEUTERIUM DEPLETED WATER TREATED RATS

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Summary

The present paper deals with the study of the deuterium depleted water effect on the liver levels of calcium and magnesium, after cadmium intoxication; it is well known that cadmium replaces both of them, in cells. The research evaluates the way in which deuterium depleted water can protect living organisms against cadmium intoxication.

Cadmium administration in experimental groups showed a strong augmentation of this toxic metal content in liver, suggesting its high bioavailability. Calcium increasing and magnesium decreasing concentrations in experimental (cadmium) groups show the well known antagonism between these elements.

DDW could counteract the calcium and magnesium replacement in rats' liver, maintaining both calcium and magnesium average values at the control (L1) levels.

Because deuterium depleted water is non-toxic, the decreasing of deuterium level in the organism can be accomplished very easy by consuming deuterium depleted water instead of tap water.

Key words: deuterium depleted water, liver, cadmium, calcium, magnesium, rats

LITTER WEIGHT DYNAMICS FROM BIRTH UNTIL WEANING IN RAT PUPS EXPOSED *IN UTERO* TO POTASSIUM DICHROMATE

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Summary

Hexavalent chromium administration in drinking water during gestational period in female rats revealed significant decrease of litter weight (pup weight) during the first three weeks of age comparative to control group, inversely correlated to exposure level: 25, 50 and 75 ppm Cr (VI) as potassium dichromate.

Key words: potassium dichromate, *in utero* exposure, litter weight, rat

THE CONSEQUENCES OF POTASSIUM DICHROMATE INTAKE ON SOME REPRODUCTIVE TOXICITY MORPHOLOGICAL BIOMARKERS (GENITAL ORGANS AND SEXUAL ACCESORY GLANDS WEIGHT) IN MALE RATS (TWO GENERATION STUDY)

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Summary

Chromium is ubiquitous in the environment, occurring principally in trivalent and hexavalent forms. While Cr III is an essential nutrient, Cr VI is highly toxic and a strong

oxidizing agent produced mainly by antropogenic sources. The aim of this study was the evaluation of morphological biomarkers of reproductive toxicity: body weight, weight of sexual organs (testes, epididymis) and sexual accessory glands (seminal vesicle, prostate and bulbo-urethral gland) in two generations. Potassium dichromate administration during two generation determined in male rats: decrease of genital organs and sexual accessory glands weight in experimental groups comparative to control groups, inversely correlated to exposure levels, with different significance of degree in F₀ and F₁ generations; more evident, with different significance of degree, decrease of genital organs and sexual accessory glands weight in F₁ generation comparative to F₀ generation.

Key words: potassium dichromate, reproductive toxicity, rats

COMPARATIVE STUDY REGARDING THE POTASSIUM DICHROMATE INFLUENCE ON THE RESISTANCE OF ERYTHROCYTE MEMBRANE IN FEMALE RATS IN ACCORDANCE WITH THE DOSE AND EXPOSING LIFE PERIOD

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Summary

The aim of this experiment was to emphasize the influence of potassium dichromate - Cr(VI) administration in female rats (potassium dichromate in drinking water) on hemoglobin (Hb) and resistance of erythrocyte membrane-osmotic resistance (OR) – manifested by hemolysis degree in sodium chlorate hypotonic solution in accordance with the dose and exposing life period. The determination of osmotic resistance was made on blood from mature female rats which received 25, 50 and, respectively, 75ppm Cr(VI) doses in “*in utero*”, suckling and pre-puberty period. The consequence of Cr(VI) exposing was the significant Hb reduction in all experimental groups, with the exception of the groups exposed at 25 ppm Cr(VI) in suckling and pre-puberty period. The osmotic resistance decreased in experimental groups under physiological limits and under the values in control group. The highest hemolysis degree was registered at “*in utero*” exposed female rats. The obtained results pointed out that the hexavalent chromium can induce a hemolytic effect in accordance with the dose and exposing life period.

Key words: potassium dichromate, rats, erythrocyte membrane

CUMULATIVE POTASSIUM DICHROMATE INTAKE EFFECT DURING PREGNANCY ON THE ERYTHROCYTE MEMBRANE FRAGILITY IN FEMALE OFFSPRING AT SEXUAL MATURITY

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Summary

The aim of this study was to evaluate the hexavalent chromium toxicity on erythrocyte membrane fragility exposed in offspring exposed "in utero" at sexual maturity. The research was carried out on Wistar female rats, which received during gestation period different doses of Cr (VI), respectively 25, 50 and 75ppm. Erythrocyte membrane fragility was estimated in offspring at sexual maturity. In this study was observed increase of erythrocyte membrane fragility in direct relation with administered dose of chromium. Significant differences between experimental and control groups were registered. Hemolysis degree was related to dose.

Key words: chromium, erythrocyte membrane, rats, gestation

THE CONSEQUENCES OF *IN UTERO* EXPOSURE TO LEAD ACETATE ON EXPOSURE AND INTEGRITY BIOMARKERS OF REPRODUCTIVE SYSTEM IN FEMALE RATS AT SEXUAL MATURITY

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Summary

The aim of the study was the evaluation of lead toxic impact on the female reproductive system integrity and exposure biomarkers, because of lack of researches and contests related to the opinions regarding lead toxicity on the reproduction function in females and presences in Romania of the pollutant lead industry. The objectives of this research were the evaluation of lead levels in ovary

and uterus (exposure biomarker) and structural changes of the genital apparatus (ovary, uterus) (integrity biomarkers). From the results of the studies results that exposure to lead acetate *in utero* period of female rats determined in adult period.

Key words: lead, rats, ovary, uterus, cervix, histoarhitectonic

CORRELATIONS BETWEEN THE LEAD RESIDUES IN HONEY BEES AND THE APIARY LOCATION

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Summary

The main sources of the honey's contamination are the residuum resulted from non – ferrous industry, but also from the industry that use or transform lead and its derivatives. But the widest contamination is the result of the utilisation of the auto vehicles (1, 4, 5).

In order to reduce the detonating effect into the explosion engine and to increase the efficiency of the combustible, it is used to add lead tetraethyl to gas. After such a “useful” action, this chemical compound of lead and the escapements are simultaneously eliminated, contaminating the entire area and, inherently, the honey (3, 6).

Key words: lead residues, honey, apiary location

INVESTIGATIONS CONCERNING THE LEAD RESIDUES IN APIARY PRODUCTS (HONEY WAX)

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Summary

It is well – known the fact that the wax is the second economic importance product, obtained from the bees. The term refers only to the wax obtained from the bee (*Apis mellifera L.*), because it is, in exclusivity, a secretion product of the working bees (4,7).

The role of the honey wax within the beehive is totally different, respectively it constitute a unique material used by the bees to make honeycombs, in which cells is deposited the honey and in which cells the bees are growing the brood of the three castes (queens, drones, working bees).

The honey wax is a valuable apiarian product and it has various uses in a multitude of areas. It is a prized product, but the demand exceeds the supply. That aspect, including

the higher prize also, determine sometimes illegal practices to the people that are manipulating the honey wax, respectively the substitution with similar products (2,5).

Key words: lead residues, apiary products

THE PHYSIC-CHEMICAL QUALITY FOR REFRIGERATED WILD BOAR MEAT

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Summary

The researches have been followed the dynamic of the physic-chemical parameters from wild boar meat stored in refrigerated conditions for 30 days long period. This study is important to explain correctly the biochemical processes in wild animal meat during the slow maturation period, as well as that its hygienic risk for consumer.

For physic-chemical analysis, have been chosen like parameters: the pH, the easy hydrolyzed azoth, the free ammonium, the globulines presence, the peroxidase presence, the aminated azoth and the total azoth. It was analyzed a total number of 875 wild boar meat samples which revealed: an easy growing up of pH (from 5.2 to 6.7 value) and easy hydrolyzed azoth (from 9.4 to 27.8 mg NH₃ %), a getting down of total azoth (from 5.4 to 1.2 g %) and a significant growing of aminated azoth (from 98.7 to 496.5 mg NH₃ %). The quality indicators have been revealed slow variations and recording negative fluctuations (from hygienic point of view) after 10 – 12 days long of storage.

Key words: parameters, physic-chemical, wild boar, meat

THE ASSESSMENT OF MICROBIOLOGICAL QUALITY OF SOME TRADITIONAL ROMANIAN CHEESES

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Summary

It has been analyzed a total number of 954 cheese samples. The samples have been harvested from 9 types of cheese in different market places. The obtained statistical analyzed results have led to the conclusion that all types of cheese have been recorded unconformingly samples. It has been noticed either the getting over of some microbial parameters (coliforms, coagulase-positive staphylococci, sulphite-reducing bacteria) or the

presence of some pathogen and opportunistic bacteria (*Clostridium perfringens* has been isolated from 1.68% samples; *Proteus* sp. has been isolated from 0.84% samples).

Key words: cheeses, bacterial, yeast, moulds, parameters

IDENTIFICATION OF *LISTERIA MONOCYTOGENES* IN FOOD USING IMMUNOENZYMATIC METHODS

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Summary

The paper presents a study about isolation and identification of *Listeria* spp. and *Listeria monocytogenes* in raw meat, meat products, raw milk and dairy products. The data presented in this paper have to emphasize the importance of isolation and identification of *Listeria monocytogenes* in food, using immunoenzymatic methods along with standardized schemes of work.

Detection of *Listeria* was performing according to standard methods SR ISO 11290/2000. To confirm the obtained results was used immunoenzymatic monoclonal antibodies method, made by the miniVIDAS analyzer equipped with LIS and LMO kits.

Key words: *Listeria monocytogenes*, food, immunoenzymatic methods

FOOD CONTAMINATION WITH PSYCHROPHILIC BACTERIA

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Summary

Psychrophile/psychrotrophic bacteria are a major interest particularity in food microbiology, defined as microorganisms that have complex skills to adapt to extreme conditions of life.

Using the data presented in this paper shows that foods of animal origin contaminated with psychrophile/psychrotrophic bacteria could present organoleptic change (appearance, color, consistency, smell and taste) even if there are kept at temperatures considered optimal for conservation.

Key words: psychrophilic bacteria, food contamination

EVOLUTIONAL MORPHOLOGY OF THE UMBILICAL CORD IN THE PERINATAL LIFE TIME IN CALVES

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Summary

The immediate functional closure of the fetal circulation that is followed by anatomical obliteration of the umbilical structures take place during the first few hours or days of the new borne life and become conjunctively consolidated in the subsequent life time. Little appears to be known in animals regarding the quick functional response to birth changes and the transformative morphology of the umbilical residual structures. The present paper underlines the changes which occur in this anatomical area at the parturition, after the shutting down of the placental circulation in calf. The observation focuses on the morphological ground of the dynamic changes which involve the communication channels like the umbilical ring crossed by extra-abdominal vessels surrounded by the Wharton's jelly.

Key words: umbilical cord, evolutional morphology, calves, perinatal time

MORPHOLOGICAL ASPECTS OF DIGESTIVE APPARATUS TO PARTRIDGE (PERDIX PERDIX) AND DOVE (COLUMBA)

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Summary

The Gray Partridge is considered to be one of the bird species most need of urgent conservation action, and has a locally particular concern due to its massive decline. *Perdix* is a genus of partridges with representatives in most of temperate Europe.

The Gray Partridge has been badly affected by agricultural changes and its ranges have contracted considerably.

There were studied two species, dove and Gray Partridge and the morphopathological aspects of the digestive tube were identified.

Key words: partridge, dove, morphological aspects of digestive tube

COMPARATIVE RESEARCHES REGARDING THE STERNUM IN OSTRICH (*STRUTHIO CAMELUS*) AND NANDU (*RHEA AMERICANA*)

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Summary

The morphology of the sternum in some birds' species, that have no capacity to fly, was the one that lead to name of this group "ratite". The etymology of the word comes from the phonetics of the English word "raft" that in translation means a wooden platform or a platform made of light materials, used to carry water. The oblate aspect of the sternum is given by the lack of the sternum's carreen in all the species of the group.

As the data from existing literature are summary, we realized a comparative study of sternum in *Struthio* and *Rhea*.

Key words: sternum, *Struthio camelus*, *Rhea americana*

APOPTOSIS AND NECROSIS

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Summary

Apoptosis is a physiological process that is triggered by the activation of genetic self-destruction programs existing in the genome of all cells. In this way, the multicellular organism destroys the undesired cells from a tissue.

Apoptosis is an active form of cell death characterized by biochemical and morphological processes, especially by chromatin condensation, poly-nucleosomal DNA fragmentation and the fragmentation of the cell into apoptotic bodies. Each cell receives multiple signals, which by means of specific receptors can induce the cell to enter the cell cycle or apoptosis. The alteration of a specific receptor can lead to the appearance of a malignant clone, due to the imbalanced relation between apoptosis inducing or repressing signals and proliferation. The antiapoptotic Bcl-2 protein may inhibit apoptosis induced by the absence of growth factors, neurotrophic factors and cytokines.

In apoptosis, by the mechanisms in function, the cell actively participates in its own death. Morphologically, it is characterized by compact cytoplasm, vacuoles in the cytoplasm membrane, nuclear chromatin condensation, DNA fragmentation and the formation of apoptotic bodies. Unlike the images observed in necrosis, in the case of apoptosis chromatin does not flocculate, mitochondria are not swollen and the cell membrane is not permeable to staining agents. Apoptosis does not trigger inflammatory reactions, since lysosomal enzymes are not released.

Zeiss (24) defines apoptosis as a highly regulated process, characterized by specific morphological and biochemical properties. The apoptotic process is initiated by both physical-biological and pathological stimuli, and the full expression of apoptosis requires a signal cascade in which caspase activation plays a central part. By the elimination of the genes that control caspase-dependent apoptosis, the apoptotic phenotype is transformed into a necrotic phenotype both in vitro and in vivo. This suggests the fact that necrosis and apoptosis represent the morphological expression of a similar biochemical mechanism by both a caspase-dependent mechanism and a non-caspase-dependent mechanism with effectors such as cathepsin B and apoptosis inducing factor. The program of cell death, either by apoptosis or by necrosis, is mediated by an integrated cascade, which can be accessed from multiple sites and propagated by many ramification points. A cell can die either by apoptosis or by necrosis, depending on the physiological environment, developmental stage, type of tissue and nature of the cell death signal.

Developing tissues follow a fine line between proliferation and death; in order for a tissue to develop and grow, this should resist to apoptosis. Cell subpopulations at a given time and location must submit to apoptosis so that the tissue maintains its normal shape and function. This proves the close relationship between the mechanism of neoplastic development and proliferation and reflects the intersection between apoptotic pathogenic pathways and cell cycle mechanisms. The coexistence of apoptosis and necrosis characterizes both developmental processes and acquired morbid processes; the morphology of apoptosis is caspase-dependent, and any deviation from this pathogenic pathway results in death through necrotic morphology.

Key words: apoptosis, necrosis

ANATOMO-CLINICAL ASPECTS OF OSTEOSARCOMAS IN DOGS AND CATS

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Summary

The authors describe 19 cases of osteosarcomas in dog and cat, presented at the Faculty of Veterinary Medicine in Bucharest between 2008-2009 for diagnosis and therapy.

Clinical examination followed by radiological examination of the modified area was used. The certitude diagnosis was established after cytomorphologic exam of the biopunction achieved with a fine needle into the affected region.

Following this examination were described 4 morphocytologic forms of osteosarcoma. They are:

- 5 cases of osteocitar osteosarcoma
- 8 cases of osteoblastic osteosarcoma
- 4 cases of osteoclastic osteosarcoma
- 1 case of condrosarcoma

Key words: osteosarcoma, bone tumors, dog, cat

HISTOPATHOLOGIC ASPECTS OF KIDNEYS IN YOUNG PIGS

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Summary

Kidney's histostructural research in pigs during the first 4-5 days of life has pointed out glomerular lesions, tubulogranular nephrosis and diffuse and circumscribed collagen formations.

In pigs having 4 or 8 weeks of age was noticed acute glomerular nephritis (serous, cystic, hemorrhagic) interstitial lymphohistiocystic hyperplasia, atrophies and/or cystisation of the urinary tubes, urinary retention cysts.

Renal glomerular injury influences also interstitial morphofunctional integrity and its injury have consequences upon the whole nephron which causes lethal kidney failure.

Key words: histopathologic aspects, kidneys, young pigs

GASTRIC MUCOSA INJURY ASSOCIATED WITH OXIDATIVE STRESS

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Summary

This study aims to explain the participation of ROS in cronic gastric mucosal damage by drinking water with pH 4 and by undergoing 30 minutes for three times per day of water immersion. After four weeks the animals which were exposed at two damaging factors

were sacrificed and gastric mucosa was collected for analyzing lipid peroxydation and superoxide dismutase activity. The levels of malondialdehyde and 4-hydroxynonenal used as indicators of lipid peroxidation, increased from 5.85 ± 0.04 nmol/g to 12.25 ± 0.95 nmol/g for acid group and from 5.85 ± 0.04 nmol/g to 14.06 ± 1.20 nmol/g for water immersion group. In the control group the total glutathione was 230.20 ± 20.12 mg/100g and 170.32 ± 97.66 mg/100g reduced glutathione. In the acid group the level of total glutathione decreased to 200.10 ± 19.10 mg/100g and 145.56 ± 13.85 mg/100g reduced glutathione. In water immersion group the level of total glutathione decreased to 180.70 ± 16.82 mg/100g and 130.60 ± 10.64 mg/100g reduced glutathione. Superoxide dismutase in control group was 340.30 ± 28.77 U/g of tissue. In acid group decreased to 255.18 ± 22.84 U/g and in water immersion group decreased to 215.73 ± 20.60 U/g.

Key words: gastric mucosa, superoxide dismutase, malondialdehyde, stress

CUTANEOUS TUMORS' INCIDENCE IN DOG

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Summary

The study was effected inside discipline of Morphopathology and Necropsic Diagnosis and has as material the necropsiated cadavers of 1823 dogs, as well the samples send by Surgery Clinic and by private consulting cabinets in aim to diagnosis. From the total dog number, 527 have presented tumoral increasing in different organs or tissues, and from the total tumor formations 121 were cutaneous tumors.

The microscopic evaluation established the tumor category (benign or malign), as well the histological particularities in aim to ascertain the neoplastic type.

Key words: cutaneous tumors, dog

OBSERVATIONS CONCERNING FEATURES OF SUBMANDIBULAR GLAND SECRETION IN RATS

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Summary

The submandibular gland harvested from 5 white Wistar rats was histologically processed for structural and functional considerations. Was found to contain only one type of the acini, namely serous acini, similar but not identical with those from thyroid gland. In addition to excretory channels encountered in most mammals, in the rats there are also granular channels containing secretory cells, whose moderate PAS + secretion we consider to be mucoproteic. Although glands containing a single type of acini are not considered mixed, submandibular gland of the rats may be considered a gland having mixed secretion, because in the mixed serous secretion produced by the cells of the serous acini is added the mucoproteic of the cells of granular channels.

Key words: submandibular gland, secretion, rats

HISTOPATHOLOGICAL ASPECTS OF SOME PARENCHIMATOUS ORGANS IN DOGS HAVING ULCEROVEGETANT ENDOCARDITIS

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Summary

In this work there are pointed out such matters as histopathologic, organic, cardiac, pulmonary, hepatic, renal and splenic lesions in three dogs having ulcerovegetant endocarditis.

Microscopically, the following were identified: granular miocardosis and fibrinoidea necrosis of the endocardium and ulcero-vegetant endocarditis; stasis pulmonary edema and compensatory alveolar emphysema, in two cases; exolobular hepatic stasis, in one case, granular nephrosis and white renal infarction, in two cases; red marginal splenic infarctions, acute evolution, in two cases.

Key words: histopathological aspects, parenchimatous organs, ulcerovegetant endocarditis, dog

RESEARCH REGARDING HAEMOCYTE PROFILE FROM *APIS MELLIFERA CARPATICA* BEE HAEMOLYMPH ORIGINATED IN THE SOUTH OF ROMANIA

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Summary

The studies were carried out in 2007-2008, in the frame of the Pathology Department from Beekeeping Research and Development Institute - Bucharest.

There were performed morpho-cytological investigations on haemolymph samples collected from honeybees originated from honeybee colonies located in the southern part of Romania.

These researches mainly aimed to identify and classify the haemocytes according to the literature, to study the morphological characters of haemocytes, to establish an optimal staining method for morphologic studies, to study the stage transformation of haemocytes.

The haemolymph samples were collected from healthy honeybees and slides were prepared using the following staining methods: Giemsa, May Grünwald-Giemsa and May Grünwald-Giemsa (according to Shapiro), modified and adapted for the haemocytes sensitivity testing.

The following parameters of the haemocytes from centrifuged and non-centrifuged haemolymph were investigated and described: the density and their type, percentage of the different cell types in honeybees from healthy and natural infected colonies, stages of haemocytes formation by morphometrical analyses using specific measurement software.

Key words: *Apis mellifera carpatica*; morpho-cytometry, haemocyte; nonfagocyte cell, phagocyte cells

ENERGY, PROTEIN AND MINERAL PROFILE IN PERIPARTAL PERIOD AT DAIRY COWS

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Summary

The economical desideratum in the cow farms is being represented on one hand, by obtaining a high production of milk with a high content of proteins, and on the other hand, by the achievement of one calf a year. For this to happen there has to be a bond between the axis hypothalamus – hypophysis – uterus – ovaries. The progresses registered in the domain of breeding cows regarding the production and the quality of milk, involves the necessity of doing some ample investigations of the intermediary metabolism of nursing animals, with the purpose of a rentable lead for the fodder's regime.

Through this work we want to be able to establish the condition of health for cows in peripartal period.

The research was made on 20 (HF) cows, with over 8000 liters of milk production in the private area.

In the conclusion, the most important factors for maintaining a physiological condition are being represented by a proper feeding during mammary repose.

Key words: energy, protein, mineral profile, dairy cows, peripartal period