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Á. Szabára – J. Majer – Á. Hornyák: **BOVINE VIRAL DIARRHOEA VIRUS INFECTION AND DIAGNOSTIC METHODS OF BVDV-INFECTION IN HUNGARY**

The authors summarize the very complex pathogenesis of BVDV infection, pre- and post-gestation infection and the immunological status of the cattle leading to different outcomes. Acute infection with BVDV results in transient viraemia prior to seroconversion and can lead to reproductive dysfunction and immunosuppression leading to increased incidence of secondary disease. Infection of the dam between 30th and 125th day of gestation may results in the birth of persistently infected calves.
PI animals shed BVDV in all body fluids throughout their life and are the main source of transmission of the virus as virus reservoirs. The authors also summarize the direct and indirect diagnostic tests used at the NFCSO Veterinary Diagnostic Directorate to diagnose clinical cases, and to establish disease prevalence in groups and detect apparently normal but persistently infected animals.


The authors, based on literature data and own investigation, present the relationship between epileptic fits and certain meteorological factors in the case of a Jack Russell terrier suffering from epilepsy for years. The seizure-classification was based upon long-term observation of the animal, registration of fits by owners, and evaluation by a specialist. The measured meteorological values were recorded by a weather station in Budapest. The meteorological analysis and assessment was performed on the interval between 1st January 2012 and 30th April 2014. The results show that the probability for provoked epileptic fits in this animal is sixteen times higher (compared to intermediate intervals) when there is a cold-front characterized complex meteorological change in the atmosphere. The vast majority of fits (83%) started from superficial sleep phase. The authors compared this dog’s sensibility to their previously examined golden retriever and they revealed that certain meteorological conditions could trigger seizures, but it is important to notice that even
when the epileptic symptoms are very similar, meteorological factors affect animals in different ways, and weather-sensitivity could change over time (with age, appropriate therapy and increasing neuronal threshold).


The authors inoculated various food samples, and in some cases microbiological nutrient solutions, with pathogens (*Listeria monocytogenes, Salmonella, Escherichia coli, Staphylococcus aureus*) and with microbes causing food spoilage (*Pseudomonas*). Samples were treated in a high hydrostatic pressure facility at 300–600 MPa for 1–30 minutes. The viable cell counts of the microbe-inoculated samples were taken, and in this way the microbe-destroying effects of various treatments for the given microbes were ascertained.

The examinations were carried out both in laboratory and in pilot plant equipment. The results show that there was no significant difference between the measurements of laboratory and pilot plant products, and the results correlate appropriately with the data in the literature \( r^2 > 0.95 \).

In their study the authors examined the relationship between the marbling grade and the quality level of pork and the possible methods that can be used to grade the marbling characteristic. They have performed instrumental measurements such as colour, texture, pH, water holding capacity, and sensory evaluation for hardness, juiciness, taste, fatness and overall impression.

Based on their study they found that the quality level of pork loin corresponds to the marbling, as the quality level decreases (S → O) the level of marbling. They also established the methods that can be used to grade and differentiate the quality levels and marbling; such as the objective, instrumental colour and texture measurements, with special regards to red colourisation (a*).

Zs. N. Fábri – L. Varga – P. Nagy: PRODUCTION, GENERAL CHARACTERISTICS, CHEMICAL COMPOSITION AND HEALTH BENEFITS OF CAMEL MILK. LITERATURE REVIEW. 1. PHYSICAL AND CHEMICAL PROPERTIES, PROTEIN AND FAT CONTENTS

Based on a large number of publications in the international scientific literature, the authors provide a comprehensive review on camel milk. The milk production potential of camels and the general and specific properties of camel milk are thoroughly discussed. The amino acid, casein, whey protein and fatty acid compositions of camel milk are also
presented in details. Camel milk constitutes approximately 0.3% of global milk production. The mean values of camel milk composition are as follows: 87.53% moisture, 4.46% lactose, 3.82% fat matter, 3.35% total protein and 0.79% minerals (ash). β-casein is the dominant casein in camel milk, and the major whey proteins include α-lactalbumin and serum albumin. Camel milk is known to be beneficial for infants allergic to bovine milk because it lacks β-lactoglobulin, being similar to human milk in this respect. Compared to cow milk and milk of small ruminants, camel milk contains reduced amounts of short chain (C$_4$–C$_{12}$) fatty acids and increased levels of medium and long chain (C$_{14}$–C$_{18}$) fatty acids.


The single and simultaneous fetotoxic effect of copper sulphate and Pyrinex 48 EC (chlorpyriphos) insecticide was investigated by the authors on chicken embryos. The eggs were injected with 0.1 ml of copper sulphate solution (0.05%) and/or with 0.1 ml of Pyrinex 48 EC (chlorpyriphos, 480 g/l; 1%). The treatments were performed on day 0 of incubation, and the embryos were examined on day 3 and 19. Germinal disc was prepared to study the early stage of development. Number of embryonic death, developmental abnormalities and body weight of the embryos were recorded on day 19. The embryo mortality was not influenced by single treatment of copper sulphate, however, Pyrinex 48 EC and the combination of the test items significantly ($p < 0.05$) in-
creased it at early developmental stage. The same tendency was observed in the case of developmental aberration (copper sulphate: 44.4%, Pyrinex 48 EC: 66.7%, combination: 100.0%). Single administration of both test items (copper sulphate: 50.0%, Pyrinex 48 EC: 77.1%) and their combination (97.2%) significantly increased ($p < 0.01$, $p < 0.001$, $p < 0.001$) the embryo mortality at late stage of development. Frequency of abnormalities was not influenced by copper sulphate but single and simultaneous application of the insecticide increased it significantly ($p < 0.01$). Pyrinex 48 EC alone and in combination with copper sulphate significantly reduced the body weight of the embryos, however, the single administration of copper sulphate did not influence this parameter. Developmental abnormalities were observed sporadically due to the single and concomitant administration (abnormal leg position, growth retardation). During the histopathological evaluation drug-induced hepatopathy was not found, however, the ratio of the mitotic cells were markedly reduced due to both test items. Based on the results, addition and synergistic toxic interaction may be between the copper sulphate and Pyrinex 48 EC that can highly reduce the viability of the embryos.