AVN

Agro Veterinary News

Pakistan's First Independent Agro Veterinary Periodical

Vol. 33 No. 09/ December 2021

Published Monthly | Reg. No. MC-1209 | ISSN 17228-1512 | Rs 100

Inside

02 Director Karachi Zoo suspended over death ...

Role of botulinum toxins in disease ... 04

08 Nutritional Fibrous Osteodystrophy

"Fog fever in cattle,winter issue in Pakistan" 12

Karachi : Mahmood Centre BC-11, Block-9 Clifton
Phone : 021-35872289, 35834932, 35833172
Fax : 021-35836940
E-mail: irfan@medicalnewsgroup.com.pk
mkt.dn@medicalnewsgroup.com.pk
Website: www.avnpk.com

Lahore: 1485 C-5/4 Alluddin Road, Cantt.
Phone: 042-36676296 Fax: +92-42-36673518
Email: g.hassni@gmail.com

Islamabad : Phone : 0300-9710774

/AVNNewsPk avnpk.com

Tel: +92 21-35872289

ADB approves $200m for Pakistan to develop irrigation system

AVN Report

MANILA, PHILIPPINES - The Asian Development Bank (ADB) approved a $200 million loan for the development of an irrigation system in Punjab province in Pakistan that will help increase agricultural productivity and enhance food security.

According to a statement issued by the Manilla-based financial institution, the project loan, which is denominated in Japanese yen, will finance the construction of the second branch or Choubara system of the Greater Thal Canal irrigation scheme.

"The scheme will provide reliable irrigation water supply to 704,000 hectares of land in Bhakkar, Jhang, Khushab, Layyah, and Muzaffargarh districts, making them more agriculturally productive," it said.

The government had earlier constructed the main canal and the first branch or Mankera system.

Pakistan has paid $100m penalty to ADB in last 15 years for failure to execute projects

"Given Pakistan's vulnerability to the impacts of climate change, it is essential to build irrigation infrastructure for climate-resilient and sustainable agriculture," said ADB Director General for Central and West Asia Yevgeniy Zhukov.

"ADB's support will help boost the supply of local produce and promote food security while increasing economic growth."

Punjab is the main source of food production for Pakistan's growing population, producing a significant portion of the country's wheat, rice, sugarcane, and maize. Because of Pakistan's semi-arid climate, agricultural production is highly dependent on irrigation. Yet, irrigation efficiency remains low due to water shortages, land degradation, and

Continued on Page 14

Pakistan, Bulgaria sign MoU on cooperation in agricultural research

AVN Report

ISLAMABAD - Ambassador of Pakistan to Bulgaria Mariam Aftab visited the Agricultural Academy of Bulgaria (AAB), met with its President, Prof. Eng. Martin Banev and signed the MoU on scientific and technical cooperation in agricultural research.

Prof. Banev was accompanied by Prof. Elena Todorovska, Chief Scientific Secretary and Ivan Nenov, Director of International Cooperation of AAB. The purpose of the visit was to sign a Memorandum of Understanding on Scientific and Technical Cooperation in the Field of Agricultural Research between Pakistan Agricultural Research Council (PARC) and Agricultural Academy of Bulgaria (AAB) as well as to discuss possible avenues of collaboration/cooperation between the two countries in the field of agricultural research and technology, says a press release.

Welcoming the ambassador to the Academy, Prof. Banev expressed pleasure at the fact that the two countries were finally signing this MoU after prolonged negotiations. He said that the signing of this MoU would be the first step towards a more meaningful and fruitful collaboration between the two countries in this all-important field of agricultural technologies and research.

Ambassador Mariam Aftab thanked the President of AAB for the warm reception. She highlighted that both Pakistan and Bulgaria rely heavily on their agricultural sectors. Therefore, the two countries had a lot to learn from each other's experiences and expertise in agricultural-related technologies.

She said that PARC was interested in learning from Bulgarian experiences in the field of germplasm for cereals, fruits and vegetable crops, value-addition and reducing post-harvest losses in fruits and vegetables, processing and value addition of milk and meat products, veterinary vaccines production technology and control of infectious diseases in animals, exploitation of alternate energy resources for agriculture and collaboration in fabricating farm machinery.

The ambassador also expressed her appreciation that the two institutions were engaging actively and assured her full support for any proposals they finalise in future under the MoU. She also informed the President that she would be meeting the new Minister of Agriculture and Minister of Education from Bulgaria soon to discuss the possibility of exchange of students/professors and the award of scholarships to students from the two countries on a reciprocal basis.

Director Karachi Zoo suspended over death of rare white lion

AVN Report

KARACHI - Director Zoo Khalid Hashmi has been suspended and directed to report to the Government of Sindh after being dismissed from Karachi Metropolitan Corporation.

KMC Senior Officer Mansoor Qazi has been immediately appointed as Senior Director Zoo and Safari ark.

According to details, Metropolitan Commissioner SM Afzal Zaidi issued orders for his transfer on Thursday. Earlier, Administrator Karachi Barrister Murtaza Wahab, in a presser referring to a death of a white lion, said that the incident that took place in the zoo on Wednesday was regrettable. "I am sorry for it because I am the head of the institution, but the officers against whom action is being taken for doing wrong brings a stay order from the court," he added.

Khalid Hashmi, the zoo director, was twice removed from office, but both times he obtained a stay order from the court. Earlier, a senior KMC official with a good reputation was posted, but Khalid Hashmi took a stay order in November.

"Every wrong person says I did nothing wrong, and then new conspiracies start," the Administrator said.

Barrister Murtaza Wahab said an 'incompetent officer' was suspended, and inquiry was ordered. The death of a rare breed of the lion is a loss to Karachi city and its citizen.

Karachi, Nov 25: The Karachi Metropolitan Corporation (KMC) has decided to run a Drive-In Cinema near Beach View Park, given its successful experience of Drive-In Cinema in the past. It will be formally launched on Nov 26.

Historical films will be shown at Sunset Cinema three days a week on Fridays, Saturdays and Sundays, and three shows will be held to entertain the people to remove the effects of the Covid-19 outbreak on the minds of the citizens.

Spokesperson Government of Sindh, Administrator Karachi and CM Advisor on Law Barrister Murtaza Wahab said that in this way, citizens would be able to enjoy the movie in their car with their family members.

Arrangements have also been made for car parking for visitors to the cinema, and 150 cars will be able to park around the cinema at the

Continued on Page 14

Poultry association, cartels hand in glove

AVN Report

ISLAMABAD - Around 85 per cent of the total input cost for broiler chicken was artificially increased or controlled by a cartel in the poultry industry. As many as eight hatcheries of the poultry industry were involved in fleecing consumers through cartelisation and price manipulation of day-old broiler chicks.

As per the Competition Commission of Pakistan (CCP) announcement, an inquiry recently concluded by the commission revealed that a nexus of eight hatcheries enjoyed a bonanza by price-fixing of a day old broiler chicks from 2019 to June 2021.

The inquiry was initiated after the competition commission received several complaints from broiler breeders on Pakistan Citizens Portal, alleging cartelisation in the poultry sector, which led to a price increase of day-old broiler chicks.

In this connection, the CCP inspected the Pakistan Poultry Association (PPA) premises and a company involved in the racket. A forensic analysis of the evidence impounded from these premises revealed that an official of the hatchery played a key role by announcing mutually-agreed prices of day-old broiler chicks. The rates were conveyed to other incubators and PPA daily through SMS and WhatsApp. The evidence collected by the CCP indicated that the rate of day-old broiler chicks announced after the mutual discussion on social media applications between the hatchery players prevailed in the market for all the incubators.

It may be mentioned that the official appointed as the focal person for coordinating rates quoted to another hatchery the price as Rs82.5 for three days. When the CCP checked the market rate for those three days, their rates were the same as quoted by the focal person.

The Pakistan Poultry Association also handed in glove as its official was also a part of the WhatsApp group of the manipulators who fixed rates through SMS and was aware of the pricing discussions and announcements.

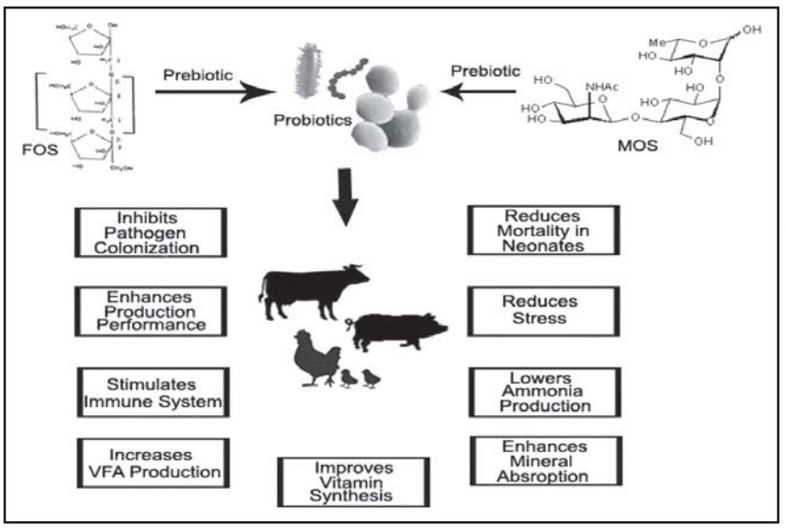
The CCP started the price-fixing arrangement between competitors violates Section 4 of the Competition Act, 2010.

Month-wise, monthly average prices of a day old broiler chicks fluctuated sharply during 2020-21, between the range of Rs20.46 per chick to Rs79.74 per chick. The jump in the price of day-old chicks is also reflected in the price of chicken meat. The other major cost component is poultry

Continued on Page 14

The Use of Prebiotics, Probiotics, and Synbiotics in Animal and Poultry Nutrition

by Muhammad Bakhsh
Faculty of Veterinary Sciences, CVAS-Jhang 35200, University of Veterinary and Animal Sciences, Lahore
Abdullah Channo
Department of Animal Reproduction, Faculty of Animal Husbandry and Veterinary Sciences, Sindh Agriculture University, Tandojam



The goal of animal production is to provide quality and safe food for human consumption, prioritizing animal welfare, respect for the environment, and consumer safety. Along with the intensive development of methods of livestock breeding, animal expectations are rising regarding feed additives that would guarantee such results as accelerating growth rate, protection of health from pathogenic infections, and improvement of other production parameters such as absorption of feed and quality of meat, milk, and eggs. The main reason for their application would be a strive to achieve some valuable effects comparable to those of antibiotic-based growth stimulators, banned on 01 January 2006. High hopes are being linked to the utilization of prebiotics, probiotics, and synbiotics. They are used mainly for maintenance of the equilibrium of the intestinal microbiota of livestock, they end up to be an efficient method in fight against pathogens posing a threat for both animals and consumers.

Usage /of Prebiotics:

Prebiotics act as a food source for the good bacteria that are already living in the gastrointestinal (GI) tract and have been shown to support animal health and performance. A prebiotic is a specialized, non-digestible carbohydrate that beneficially sustains the good bacteria already in the GI tract. A prebiotic is not a microorganism. It is a sort of nourishment source for existing bacteria, allowing the existing normal colony within an animal's gut to grow naturally and reproduce. Prebiotics may be obtained from several sources, including certain yeast cell walls such as *Saccharomyces cerevisiae*.

Prebiotics are complex sugars, but not all sugars are prebiotics. Many sugars are digestible by the animal and are used as an energy source. However, chains of the sugar mannose, for example, are not readily absorbed by poultry and livestock but can serve as a nutrient source for bacteria residing in the GI tract. Mannose as a simple sugar or as a chain of molecules (mannan oligosaccharides) also may allow certain pathogens to bind to it rather than to the intestinal cell of the animal, reducing the severity of infections.

Usage of Probiotics:

They are live microorganisms that, when administered in adequate amounts, confer a health benefit on the host. Probiotics help to prevent and control gastro-intestinal pathogens and/or improve the performance and productivity of production animals through various mechanisms. Closely related strains may differ in their mode of action. Interest in probiotics is rising steadily about increasing concern and regulatory control regarding the sub-therapeutic use of antibiotic growth promoters in animal feed. Livestock probiotics commonly feature various strains of *Bacillus, Lactobacillus, Enterococcus* , and *Saccharomyces* yeast. These "good" bacteria have battled it out with pathogenic bacteria since time began. There is much yet to learn about these interactions, but it is understood that certain strains of Bacillus have been proven to decrease the growth of certain strains of pathogenic bacteria including *E. coli, Clostridium, Streptococcus* , and *Salmonella*. Further, probiotics act as a regulator for the immune system. For instance, microbial communities can support the animal's defense against invading pathogens by stimulating gastrointestinal immune responses. This may aid the development of the immune system by stimulating the production of antibodies and increasing white blood cell activity.

Examples of list of probiotic, prebiotic and synbiotic applied or studied in animal and poultry feed.

Prebiotics	Probiotics	Synbiotics
Insulin	Lactobacillus sps.	Lactobacilli + inulin
Galactooligosaccharides (GOS)	Saccharomyces sps.	Lactobacilli + FOS
Fructo-oligosaccharides (FOS)	Streptococcus sps.	Bifidobacteria + FOS
Lactulose	Bacillus coagulans	Lactobacilli + lactitol
Lactitol	Enterococcus faecium	Bifidobacteria and Lactobacilli + inulin
Cereals fibres	Bifidobacterium sps.	
Xylooligosaccharides	Homeostatic Soil	

Synbiotics; A modern approach in Animal Nutrition and Health:

Sometimes probiotics and prebiotics are combined into feed additives to compound synergistic effects. These are referred to as synbiotics. As prebiotics furnish better conditions for probiotics to expand, the colonies of these good bacteria are maintained. Studies have shown that by using the benefits of both prebiotics and probiotics, the number of desirable bacteria in the digestive system increases and demonstrates positive effects on health status. Ultimately, prebiotics, probiotics and combinations thereof hold tremendous potential to positively influence animal health and productivity, and the ability of livestock and poultry producers to get their daily jobs done most efficiently and effectively.

Synbiotics effects on carcass and meat quality:

Dietary synbiotic supplementation into the diet of broilers and livestock are an effective method for improving growth performance and carcass compositions, resulting in the production of meat with a favorable quality and oxidative stability. In broiler chickens, an enhancement in meat quality with the inclusion of probiotics or prebiotics has been observed. Incorporation of yeast cell components *(Saccharomyces cerevisiae)* decreased the shearing force in the cooked breast and drumstick in broilers. It is also demonstrated that meat quality is improved by supplementation with *B.subtilis* and *B.licheniformis*.

Conclusion and Future Perspective:

Probiotic and prebiotic preparations are extremely important sources in animal and poultry production to enhance the health status of animals. Probiotics as dietary supplements affect higher performance and are perfect in stressful situations, as well as during periodic decreases in immune response of individuals. Intestinal epithelium fairly often provides the primary defense line against pathogens which discharged to an alimentary canal with water and feed. A new possibility is that the use of probiotics as some quite vehicles, providing digestive enzymes and other bioactive substances. Therefore, the utilization of probiotics has its reason, not only considering economic aspects, but also health. Another advantage of probiotics is that they are natural supplements. It is worth saying that the perfect complement to the probiotics function in the gut are prebiotics, which are an additional source of energy for intestinal microflora. Provision of a synbiotic in the diet of broiler chickens has the most beneficial effects compared to a prebiotic, probiotic, antibiotic or control treatment. The synbiotics improve weight, feed conversion ratio, and carcass weight, as well as reduce abdominal fat and kidney mass, as a proportion of body weight.

Global Food Security in the context of COVID-19

by Muhammad Irfan
Department of Epidemiology and Public Health,
University of Agriculture, Faisalabad
Muhammad Bakhsh
Faculty of Veterinary Sciences, CVAS-Jhang 35200,
University of Veterinary and Animal Sciences, Lahore

Introduction: As the COVID-19 pandemic situation is progressing, it is critical to control the virus and to avoid the crisis of food security and economy by which world's poor and hungry are affected most. There is no major food shortage emerged yet but food and agricultural markets are facing problems due to shortage of workers because of restrictions on the movements of people and shifts in food demand observed because of closing restaurants and schools and from income loses as well. Limitations made on export by some countries have deranged flow of trade for staple foods such as rice and wheat. The COVID-19 situation is exerting influence on all four types of food security such as availability, access, utilization and stability. This viral situation is affecting access to food most directly and severely. People moved to cheaper and less nutritious foods due to increase in food prices. We indicate the main threats that COVID-19 has to food security and recommend important responses that policy makers think about to stop this global health crisis from becoming a global food crisis.

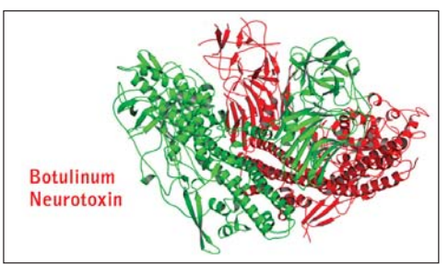
Impacts on food availability and agricultural living: This pandemic situation has deranged a lot of activities in agriculture, livestock, fisheries and their supply chains, that has stopped many facilities in the world. The implications of quarantine and limitations on the movement of goods and people has caused socio-economic backlash for rural farmers, livestock keepers and capture fisheries from developing countries. It is estimated that more than half a billion people may be pushed into poverty due to this pandemic situation. Among these countries from Sub-Sahara Africa, North Africa and Middle East will be affected most.

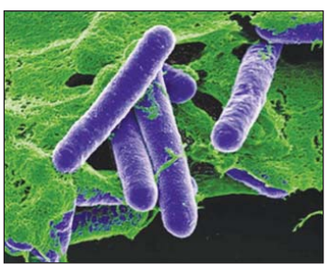
There is reduction in the availability of workers due to limitations on the movement and that is causing problems in harvesting and agricultural activities, post-harvest losses and delay in the delivery of fresh foods in markets. At this stage the main challenge is to provide the food to those who are quarantined and have lost their jobs. The Agricultural Commodity Price Index stabilized in the third quarter of 2021 but remains 14% higher than its January 2021 level. Maize and wheat prices are 44% and 38% higher, respectively, than their pre-pandemic (January 2020) levels, and rice prices are about 4% lower. The primary risks to food security are at the country level: Higher retail prices, combined with reduced incomes, mean more and more households are having to cut down on the quantity and quality of their food consumption. To provide basic foods, it is necessary to make agricultural farms operational, facilitating the transportation, processing and packaging of fishery and agricultural products by reducing problems of food chains, are the ways to maintain the regional food system.

Impacts on Food Safety: There are negligible risks of COVID-19 transmission and exposure through contact with food producing animals like poultry, cattle, horses or sheep or via consumption of contaminated foods. But, still there are chances of human exposure

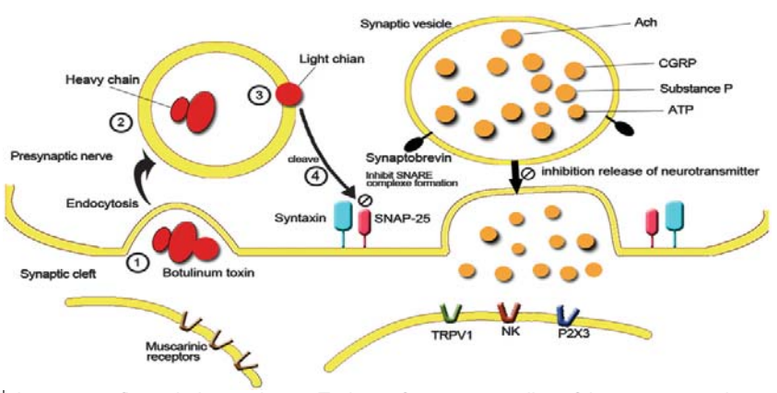
Continued on Page 14

Role of botulinum toxins in disease, its diagnosis and prevention





by Dr Maria Jamil, Dr Aisha Khatoon
Department of Pathology, Faculty of Veterinary Science, University of Agriculture, Faisalabad



Botulinum toxin is a neurotoxic protein that is formed by clostridium botulinum. Botulinum toxin avoids the release of the neurotransmitter acetylcholine from the axon endings at the neuromuscular junction that leads to flaccid paralysis. Infection with the clostridium bacterium leads to the disease known as botulinum. Botulinum toxins are also used commercially for medical and cosmetic purposes.

There are major 7 types of botulinum toxins from A-G. However, type A and B are able to produce the infection in humans and are also used in humans commercially for cosmetic and medical purposes. Type C-G is not much common, while type E and F are also able to produce the infection in humans. However, other types of botulinum toxins produce the disease in other animals. Type A and B botulinum toxins are also used in medicine for the cure of several muscle spasms.

Botulinum toxins are known as the most toxic substance. Naturally, intoxication occurs through the ingestion of formed toxins in food, wound, and intestinal infection. The assessed toxic dose of botulinum toxin type A for a human is 1.3-2.1 ng/kg IV and 10-13 ng/kg IM while 1000ng/kg per oral. , The commercial form of botulinum toxins is available under the brand names such as Botox (on botulinum toxin A), Dysport/ Azzalure (abobotulinum toxin A), Xeomin/Bocouture (into botulinum toxin A), and jeuveau (pra botulinum toxin A).

Humans are usually infected by the ingestion of botulinum toxin from inappropriate canned food, eating in which Clostridium botulinum has been grown. In contrast, toxins may also be entered in the human body by the infected wound. In the infant, the bacterium may grow in the intestine and form botulinum toxin within the intestine and leads a syndrome known as a floppy baby syndrome. Toxins may be transmitted and block nerve and muscle function in all cases. However, in severe cases, botulinum toxins may block the nerve, respiratory system, and heart that leads to death. On the basis of excessive clinical observation, it is also known as sausage poisoning. Toxins act by disturbing the signal transmission in the autonomic motor and somatic system and not affect on sensory signals. Toxins develop under anaerobic conditions, and even in minute doses may be toxic.

Mode of Action of botulinum toxin was clarified in mid-1900sto block the release from nerve ending of the neurotransmitter acetylcholine.

Botulinum toxins are formed by the bacteria belongs to the genus Clostridium, such as clostridium botulinum, C. butyricum, C. argentinense, and C. baratii that are generally dispersed in dust and soil. This bacterium may also be found inside the homes such as on carpet, floor, and countertops, even after cleaning. Foodborne botulism may occur by accidental ingestion of food adulterated with clostridium spores. These spores are germinated by exposure to an anaerobic environment, then this bacterium proliferates and produces the toxin. Critically by the consumption of toxins instead of spore and vegetative bacterium leads to botulism. Botulism is known to be spread by canned foods that are not properly cooked prior to canning. Infant botulism occurs by the consumption of honey or any other food that may carry these spores may be prevented through the elimination of these foods from the diet of children that are ≥12 months of age.

Botulinum may be difficult to diagnose as it may seem similar to diseases like Guillain-Barre syndrome, myasthenia gravis, and stroke. Other tests like brain scan and spinal fluid examination can help to rule out other causes. If earlier, the symptom of clostridium botulinum is identified, then several treatments may be used. Through induction of vomiting to remove the adulterated food that is in the gut or through enemas. Infected material can be removed surgically from wound infection. Botulinum antitoxins are now also available to avoid the deteriorating sign and symptom, while these antitoxins will not reverse the nerve damage. While mechanical respiration can be used to support the patient in case of respiratory failure. The nerve damage usually heals over weeks to months. Fatality rates for botulinum poisoning may be sharply declined with a proper cure. For the cure of botulism 2 preparations of botulinum, antitoxins are commercially available. Trivalent serotype A, B, and E botulinum antitoxin is resultant from equine source by using the whole antibodies. The 2nd antitoxin is heptavalent botulism antitoxin having serotypes A, B, C, D, E, F, and G that are derivative from equine antibodies that have been transformed to make them less immunogenic. This antitoxin is efficient against all strains of botulism instead of serotype H.

INTERNATIONAL POULTRY EXPO 2022

بروز
جمعرات، جمعہ، ہفتہ
بمقام:
ایکسپو سنٹر لاہور

17-18-19 فروری 2022

International Poultry Expo February 17-18-19 2022 IPEX

جنوبی ایشیا کی سب سے بڑی پولٹری نمائش "انٹرنیشنل پولٹری ایکسپو "2022"
تمام افراد اور اداروں کیلئے ایک شاندار موقع جس میں:

سوویئنر، بیگ اور سرٹیفکیٹ انفرادی طور پر شرکت کرنے والے رجسٹرڈ افراد کو ہی دیئے جائیں گے۔

تین روزہ انٹر نیشنل

پولٹری ایکسپو

رجسٹریشن فیس 1000 روپے
سٹوڈنٹس رجسٹریشن فیس 300 روپے

- پولٹری انڈسٹری اور دیگر شعبہ جات سے وابستہ ہزاروں افراد شرکت کریں گے۔
- پولٹری انڈسٹری کو درپیش مسائل اور ان کے حل کیلئے انڈسٹری کے ماہرین اور پیشہ ور افراد کے خصوصی لیکچرز نیز ویکسین، دواء ساز کمپنوں گرینڈ پیرنٹ پروجیکٹ اور پولٹری ایکو پمنٹ کمپنیوں کے سیمینار کا انعقاد بھی ہوگا۔
- پولٹری انڈسٹری سے وابستہ افراد کیلئے اپنی مصنوعات کی تشہیر کیلئے بے شمار مواقع مثلاً سوینئرز، ائی پیکس گائیڈ، آئی پیکس کیٹلوگ، میں اشتہار لگوانے کی سہولت جس کی پبلی کیشن اور تقسیم وسیع سطح پر ہوگی۔
- انٹرنیشنل پولٹری ایکسپو میں شرکاء کی سہولت کیلئے انتہائی مناسب رجسٹریشن فیس صرف **1000** روپے۔
- ملک کے تمام ویٹرنری کالجز اور یونیورسٹیوں کے طالب علموں کیلئے رجسٹریشن فیس صرف **300** روپے۔
- ایکسپو سنٹر میں اسٹالز و ایکسپو ہالز کے اندر اور باہر پر اپنی مصنوعات کی نمائش کے ساتھ ساتھ قد آور بینرز سے بھی تشہیر کا موقع۔
- فارمرز حضرات پولٹری کے شعبہ سے وابسطہ ماہرین، ویٹرنری ڈاکٹرز، فیڈ ملز، ادویہ ساز کمپنیوں اور پولٹری ایکو پمنٹ درآمد کرنے اور بنانے والے ملکی و غیر ملکی اداروں کے مابین سودمند کاروباری مواقع پیدا ہونگے۔

چیف آرگنائزر: IPEX-2022
ڈاکٹر عاصم محمود خان
سیکرٹری: IPEX-2022
میجر (ریٹائیرڈ)
سید جاوید حسین بخاری

LIVESTOCK & DAIRY DEVELOPMENT DEPARTMENT GOVERNMENT OF THE PUNJAB

Pakistan Poultry Association
Poultry House: 24-R JoharTown Lahore
Tel: +92 42 35956022, 5956023 **Fax:** +92 42 35956024 **Mobile:** +92 300 4378496
Email: ppapunjab@gmail.com, ppapunjab@msn.com **Web:** pakistanpoultry.org

Nutritional Fibrous Osteodystrophy

by Saba Rashid ,Dr. Gulam Muhammad, Rehan Ashraf
Department of Clinical Medicine and Surgery, Faculty of Veterinary Science, University of Agriculture, Faisalabad

Fibrous osteodystrophy or metabolic bone disease is a nutritional or metabolic disorder. It is called fibrous osteodystrophy because it is characterized by marked bone resorption with fibrous conjunctive tissue proliferation, hyperostotic distortion of cancellous bones cysts formation and poor mineralization of immature bone. It is a nutritional disorder because afterwards, the biochemistry and other observations revealed, due to low calcium levels and high levels of phosphorus in the blood. Moreover, the ratio of calcium and phosphorus in feed is necessary to avoid this disease. It is a rare disease, and in the caprine family, it is mainly reported in goats under the age of 1 year.

Aetiology lies in rearing management of the flocks, feed intake, or it can be transmitted vertically due to hyperparathyroidism. Due to the increase of parathormone, the calcium level in blood increases because calcium from bones is resorbed, then demineralization of bones occur, and the bones become soft and enlarged. It also depends upon the soil condition where animals graze because the mineral level in the soil affects the quality of grass. Another experimentation revealed that the goats were fed gram, pea husk, and bran were more susceptible to this disease. Low CaCo3 in the pasture is also a leading cause of calcium deficiency.

The calcium-phosphorus ratio in feed should be maintained at 2:1, but generally, from the area where these cases are reported, the ratio provided is 1:6. It is observed that animals that graze freely are less susceptible than those who are stall-fed or in pens.

Clinical signs are secondary and include weight loss, anorexia or difficulty eating, hypersalivation, palpable enlargement of the mandibles and maxilla, protruding tongue, dyspnea, difficulty in mastication, leg deformities and incoordination, exophthalmos, varying degrees of mouth opening, bone deformities and enlargements, enhanced susceptibility to fractures, and locomotion or postural disturbs. Bones, especially those with high renovation rates such as mandible and maxilla, may develop gradual swollenness and deformities. Bilateral symmetric hard masses are on the face. Bones of face and skull are soft and thinner as compared to normal such that on post mortem, the mandible can easily be cut with a knife. Facial hyperostosis with partial obliteration of the nasal cavity (by poorly mineralized woven bone and highly vascular fibrous connective tissue)

During its diagnosis, it is mainly confused with mandible fracture (as the mandible is dislocated sometimes), mandibular swelling, mycetoma, nervous disorder (as due to mandibular swelling eyes movement is disoriented), nasal discharge(respiratory distress may result from a proliferation of tissues near the nasal cavity), and actinomycosis. The hypercalcemia of hypervitaminosis D may be as high as that in primary hyperparathyroidism but is accompanied by varying degrees of hyperphosphatemia and regular serum alkaline phosphatase activity; bone biomarkers are typically not elevated. The skeletal disease is usually absent because the increased blood calcium and phosphorus concentrations are derived principally from augmented intestinal absorption rather than from bone resorption. But later on, when biochemistry and hemogram are done, it becomes clear that there was no abnormality in the hemogram and biochemistry regular Mg, low Ca, and high P levels. In addition to it, deficient vit D3, high ALP and extremely high PTH. So it became clear that low calcium and high P is the ultimate reason.

Hypoglycemia and hypoproteinemia are also evident in biochemical profiles. Radiographs may reveal long bone, pelvic, and vertebral osteoporosis...

Ultrasonography reveals the change in parathyroid glands.

On postmortem, bones were soft, leg deformities, incomplete, broken ribs, the severe diffuse proliferation of loose connective tissue surrounded by osteoid trabeculae, many of which were partially or wholly demineralized accompanied by numerous giant osteoclastic cells.

Calcitonin-salmon (50 to 100 IU/kg; e.g., 200 IU/mL Miacalcin [Sandoz Ltd, Hanover, NJ]) can be used in more severely affected animals. Phosphorus-restricted diets and oral administration of phosphate binders. Oral calcitriol supplementation can reverse hyperparathyroidism but presents a risk in hypophosphatemic patients. However, calcitonin should only be given when plasma calcium concentrations are within reference ranges. Calcitonin decreases calcium resorption from bone because it inhibits osteoclastic activity; however. After all, serum calcium and phosphorous concentrations also decrease; calcitonin must be used with a calcium supplement. It has approximately 7.0% morbidity and 90% mortality.

The struggles of a forgotten community

by Hamna Najam

As humans, men and women have rights and a voice to protect those rights. However, in the Islamic Republic of Pakistan, a community has been stripped from the title of human; they have neither rights nor a voice to demand them. The Transgender community of Pakistan has faced extreme violence, hate and injustice, and their crime is but one, being born.

The stigma attached to transgender has destroyed more lives than any government member would take responsibility for. More than 65 transgender women have been murdered in the past few years only in one province of Pakistan; imagine how many went unreported overall in the country. They are deprived of the love we all receive when we are born, their birth is treated as a time of mourning for the family, and instead of tears of joy, they are welcomed into this world with bellows of sorrow. Most families refuse to accept them as their children, ending up on the streets or in charity centres. Throughout their lives, they are exploited; mentally, physically and sexually abused. They are victims of hate crime and are expected to dance to earn, put on a good show, and sell their bodies to feed themselves.

Education is a foreign concept in their community as esteemed establishments do not enrol such ominous people. Those left for the streets cannot afford it, and those who are reluctantly accepted into the family are not sent to schools for fear of society and the shame they will bring to the family. They are denied entering shopping malls, game arcades, and even most restaurants. Ever since Pakistan was created, the transgender community has lived in shadows, silent and put down. Many reported cases of social violence and police brutality against the community's people whenever they raise voices and demand rights and protection since well-educated people in the Police and Government still believe that these people are not humans and do not deserve fundamental rights. They have told the media that when they report a hate crime and demand to file an FIR, which is a fundamental right of every individual, they are laughed at, cursed and manhandled by most high ranking police officers.

Until recently, the transgender community was not allowed by law to own property without being given a medical identity or open a bank account in their name. Julie, a hermaphrodite and a social rights activist, said, "People have only now learned what it is like to be in lockdown due to the pandemic; our community has been living in lockdown ever since we were born. And still, you all are better off; you have homes and families."

Hermaphrodites of this country face not one but two wars, a war with their soul first as described by Sarah Gill, another transgender person, "A normal person can never understand our state of mind. It is like a soul trapped in a wrong body". Their hearts battle with their bodies every day, giving rise to extreme anxiety, restlessness and depression. The other war is their ongoing battle with society and hate.

And yet, despite the hate they unjustly get, they are loving people who give love to those who are deprived of it just like they were; they have built a strong community for everyone who feels unwelcomed. In society, they spread happiness and smiles everywhere they go. They protect each other as no one protected them, and they are one of the most hardworking and resilient communities In Pakistan. They refer to each other as Khawaja sira or Murats, i.e. a mix of "mard" (Urdu word for male) and "aurat" (Urdu word for female).

Only recently, there has been some development after the passing of the Transgender persons (protection of rights) Act, 2018, due to irrepressible efforts by various NGOs such as Wajood, The Gender Guardian (TGG) and blue veins. A school purely for Murats of Pakistan was opened in 2018 in Lahore to promote education within the community. To this day, it faces backlash and problems with insufficient resources. A senate committee determined that they could inherit property in February 2018. Pakistani banks allowed them to open bank accounts in August 2018 by adding a box under gender in their name.

Since the act, many transgender men and women have made their mark in various professions, such as the first Pakistani Transgender lawyer; Nisha Rao, in 2020, the first Pakistani Transgender news anchor and media figure; Marvia Malik made her debut in 2018, the first Pakistani Transgender doctor; Sarah Gill, the first Pakistani Transgender fashion model, Kami Sid, the first Pakistani Transgender woman to represent Pakistan in the UN; Ayesha Moghul appointed in 2019 and the first Pakistani transgender chartered accountant; Mahnoor.

Continued on Page 14

DRAP APPROVED

ڈریپ کے ساتھ رجسٹرڈ
کاروبار کریں اعتماد کے ساتھ

bioveta

CLONE B1+H120

ORNIMIX

La Sota

ORNIPEST

Infectious Bronchitis (IB)

ORNIBRON

New Castle Disease (ND)

ORNIPRIM

IBD Hot

ORNIBUR
Intermediate Plus

IBD Intermediate

ORNIBUR
Intermediate

LET'S CARE ANIMALS!

Are now available throughout PAKISTAN

SOLE AGENT FOR PAKISTAN

SNAM PHARMA

61-G, Phase-1, Commercial Area DHA, Lahore-Pakistan.
Ph: (92-42) 35721820-35721821 Fax: (92-42) 35721819
E-mail: info@snampharma.com
Website: www.snampharma.com

Genotypic characterization of ESBL producing Escherichia Coli isolates from Backyard Poultry

by Muhammad Saqlain, Dr Usman Waheed, Dr Muhammad Adnan Saeed, Dr Muhammad Sajid, Abdul Subhan, Fahad Umer

Introduction: The inappropriate use of antibiotics, not only in human medicine but also in animal husbandry, has been considered a main driver leading to the increase of multidrug-resistant bacteria. Food-producing animals, especially poultry, have been suggested as a potential source for transmission of extended-spectrum beta-lactamase (ESBL)-producing bacteria to humans, either by direct contact or consumption of contaminated meat products, leading to the colonization of the intestinal tract and eventually to severe infections. ESBL confer resistance to most beta-lactam antibiotics ,including 3rd- and 4th-generation cephalosporins, which severely limits treatment possibilities for infections caused by these bacteria. The bacterial clonal spread, the successful proliferation of resistance genes throughout poultry production is thought to be highly attributable to mobile genetic elements, in particular plasmids, which transfer resistance genes between bacteria . Plasmids may also play an important role in the spread of resistant traits between animals, food and humans. Antimicrobial resistance (AMR) is a global emerging threat and is one of the major health issues Pakistan is facing at the moment. Bacteria evolve this feature against β-lactams through production of extended spectrum β-lactamases (ESBL) that inactivate antimicrobials including third, fourth-generation cephalosporins and monobactams. There are three main types, blaCTXM, blaSHV and blaTEM, of ESBL-encoding genes. Antibiotics are excessively used during poultry production in Pakistan for treatment, prevention of diseases, and as growth promoters. This provides selective pressure for the emergence of novel bacterial resistance in poultry microbiota. These resistant microbes are then excreted in the feces in large amount that can persist in the environment and thus serve as pool of resistance gene for other microbes.

The aim of the present study was to test the feasibility of automated nucleic acid extraction by Genejet Genomic DNA purification Kit and a multiplex PCR amplification assay for simultaneous identification of blaTEM, blaSHV and blaCTX-M genes in a series of clinical archival isolates of Enterobacteriaceae with previously characterized ESBL phenotype.

Material and Methods: Cloacal swabs of live bird. Bufferd peptone water as transport media and transportation is done in ice packs. Next step was processing of samples within lab.1) Pre-enrichment is done in Nutrient broth added with Cefotaxime antibiotic@ 4mg/ml over night.2) Enrichment is done on MacConkey Agar supplemented with Cefotaxime @4mg/litre for over night 3) colonies growth on Agar colonies matching with colony characteristic of E.coli are further grow into Nutrient Broth.4) Pure Culture into Nutrient broth.5) Phenotypic Detection by Double Disk Diffusion Test by using pure Culture.6) Application of Antibiotic Disks CTX 30 and AMC 30 on Muller Hinton Agar at distance of 15-20mm.7) Positive samples were selected for DNA Extraction and then Multiplex PCR.

Phenotypic Detection:

Double disc Synergy test: Discs containing cephalosporin (cefotaxime or ceftriaxone, ceftazidime, cefepime) are applied next to a disc with clavulanic acid, amoxicillin + clavulanic acid or ticarcillin + clavulanic acid. Positive result is indicated when the inhibition zones around any of the cephalosporin discs are augmented in the direction of the disc containing clavulanic acid. The distance between the discs is critical and 20 mm center-to-centre has been found to be optimal for cephalosporin 30 μg discs; however it may be reduced (15 mm) or expanded (30 mm) for strains with very high or low resistance level, respectively.

Genotypic Detection:

Multiplex PCR:

Primers used

Primer name	Sequence	TM in æC	Amplicon size
bla-SHV.SE	atgcgttatattcgcctgtg	45	747
bla-SHV.AS	tgctttgttattcgggccaa	45	
TEM-164.SE	tcgccgcatacactattctcagaatga	53	445
TEM-165.AS	acgctcaccggctccagatttat	52	
CTX-M-U1	atgtgcagyaccagtaargtkatggc	54	593
CTX-M-U2	tgggtraartargtsaccagaaycagcgg	58	

Thermalcycler Conditions:

Step	Temperature (°C)	Time	Cycle
Initial Denaturation	95	15 min	
Denaturation	94	30 s	30x
Annealing	60	30 s	
Extension	72	2 min	
Final Extension	72	10 min	

Results of Double Disc Synergy Test:

Psittacosis (Ornithosis, Parrot Fever); Hazards to Fancy Bird industry and impacts on Public Health

by Dr Abdul Subhan, Wafa Yousaf, Shanza Khan

Department of Pathobiology Microbiology Section, CVAS Jhang, University of Veterinary and Animal Sciences (UVAS) Lahore.

Introduction: Psittacosis (also known as parrot fever or ornithosis) is a bacterial infection of humans that can result in severe pneumonia and death. Avian chlamydiosis in psittacine birds or humans is called psittacosis or parrot fever, while in commercial, domestic poultry is known as ornithosis. Psittacosis is a type of lung infection caused by *Chlamydia psittaci*, obligate intracellular bacteria. This bacteria is carried by the birds that belong to the parrot family, including parakeets, budgerigars, and lovebirds. Other birds may also have these bacteria, including poultry, pigeons, and canaries. Infection of humans with C. Psittaci is usually acquired from direct contact with infected living birds or carcasses. The disease in humans starts as fever and headache changes to cough, difficult respiration, and may die. Psittacosis is necessary for public health concerns because this disease has zoonotic potential.

Important Properties: The chlamydiae consist of three species, C trachomatis, C psittaci, and C pneumoniae. The first two contain many serovars based on differences in the cell wall and outer membrane proteins. Chlamydia pneumoniae contains one serovar-the TWAR organism.

Chlamydia psittaci is about 0.5μm in size and belongs to the Chlymediaceae family. This bacteria is gram-negative and is difficult to stain with gram staining. They are rod-shaped or coccoid incubation period is 7-21 days. This bacterium is non-motile and survives at 37°C temperature. Their cell wall contains lipopolysaccharides.

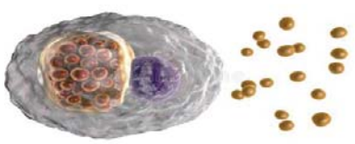


Figure: 1. Structural view of chlamydia psittaci bacterium

These bacteria exhibit a dimorphic growth cycle, and infection starts when this bacterium becomes metabolically inert and shows resistance to the environment. Infectious structures are known as 'Elementary bodies' while large structures, 'Reticulate bodies', are responsible for intracellular replication. Elementary bodies are small, about 300-350 nm in diameter, and the only stage of infection for developing the chlamydial cycle.

Disease: Chlamydia psittaci causes pneumonia, nervous disorders, poor growth in poultry and wild bird, but after transmission to humans, it cause atypical pneumonia. Psittacosis can be mild, moderate, or severe, but some do not show any symptoms. Older people with low immunity generally experience more severe reactions. The complications of untreated psittacosis include inflammation of the brain and heart. Pregnant women are more prone to this disease.

This disease also transfers to goats, sheep, and cattle.

Clinical Signs and Symptoms: In humans, symptoms start from mild fever, headache, chill, general malaise, muscles ache, and later on, it turns into coughing, shortness of breath, and dyspnoea that should not be ignored and need serious medical attention.

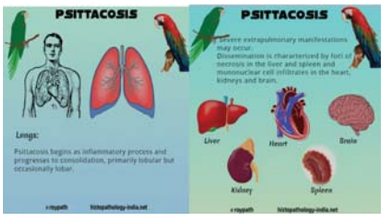


Figure: 2. Clinical signs and symptoms of psittacosis

Pathogenesis: Chlamydia psittaci is usually acquired by infected birds through the respiratory route by inhalation in the contaminated environment or by direct contact with feces, carcasses, shed feathers, secretions, droppings, and respiratory fluid, maybe through biting or mouth to beak contact. Human-to-human transmission is sporadic.

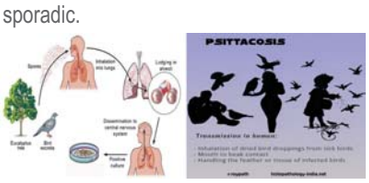


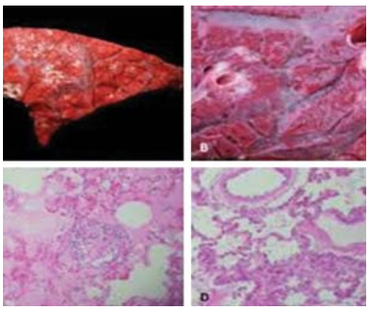
Figure: 3. Life cycle of *chlamydia psittaci*

Diagnosis: It is difficult to detect the organism from the sample if the person is taking an antibiotic treatment, so it is suggested to take the samples from the patient before antibiotic treatment. Different serological tests are performed for diagnosis, e.g., ELISA, CFT, and MIF. The culturing of chlamydia in the laboratory is a laborious

Continued on Page 14

“Fog fever in cattle,winter issue in Pakistan”

by Dr Muhammad Shoaib
DVM UVAS Lahore



What is Fog Fever

Fog fever is one of the more common causes of acute respiratory distress in cattle, particularly adult beef cattle, and is characterized by sudden onset, minimal coughing, and a course that ends fatally or improves dramatically within a few days.

Fog Fever is an acute pneumonia of young cattle which can occur from four to ten days after changing the feed of animals.

The animals are offering less protein feed or dry feed because of unavailability of Maize, Barley and Lush green Fodders.But the microbes inside the rumen change themselves according to the condition and adapt that condition and start living on less protein feed or dry feed.

In autumn when we suddenly offer the lush green fodder/Lucern/Burseem or high protein feed,the animals turn into untreatable and dangerous disease called as **"Fog Fever"**.

Causes of Fog Fever

The rumen fermentation pattern has been adapted the situation of dry feed/less protein feed because the animals are on dry feed for extended period of time,the protein dietry concentration increase dramatically as we change the feed lush green fodders.In this situation the main Culprit is "Tryptophan" ,one of the amino acids from plant protein.The microbes present in rumen can degrade the Tryptophan. This Tryptophan is degraded into Indol-acetic acid. Then this Indol-acetic acid is converted into 3-Methyindole(3MI).

The rumen bacteria convert the Tryptophan which is in feed into a substance "3-methylindole(3-MI) at very high Rate.

Role of 3-MI:

3-MI which is produce in rumen is highly absorbed from rumen wall and circulate in body.3-MI is very toxic to primary cells in the interior surface of the lungs.thus higher production of 3-MI ,higher the rate of destruction of lungs

So, that's why pneumonia occurs in Cattle in autumn season.

Why at time of Feed change:

The main reason behind this,is that the rumen bacteria adapted the environment of dry feed rumen and start living on less proten feed.At this situation,the rumen bacteria do not convert the Tryptophan into 3-Methylindole and No cases of lungs issues occurs

But in autum , sudden change in feed and bacteria convert the Tryptophan in to substance and that's why there shows the signs of Pneumonia.

Sign/Symptoms Of Fog Fever:

The affected animals shows the sign/symptoms of Pneumonia and Pulmonary Diseases,some of them are following:

1-Difficult in breathing
2- Coughing
3- Froath at Mouth
4- Anxiety(Separate from group)
5- No water and Feed intake
6- Collapse and
7- Sudden Death. (Within 6-8 hrs) after signs/symptoms.

Some Animals don't shows the signs of fever,but some have normally 103°F.

Some animals get mild problem and recover within 1-2 days without any medication.But some animals get very this situation very fast and don't even recover with medication and can prove very lethal.All the animals get same feed but some of them,will get this problem.Even if you're rearing a herd of 100 animals and after feed change , only 50 will be affected and just 30 out of 100 animals will get this problem very severe and can die within 6-8 hours of sign/symptoms.Because the chemical effect the Lungs that's why the signs of Pneumonia and Respiratory diseases are shown.

Mild cases may go unnoticed. Cattle are subdued but still alert; there is tachypnea and hyperpnea, but auscultation is usually unrewarding. Such cattle usually recover spontaneously within days. Severely affected cattle show extensive respiratory distress with mouth breathing, extension of the tongue, and drooling. A loud expiratory grunt is common, but coughing is unusual. In the early stages, auscultation reveals surprisingly soft respiratory sounds. Mild exercise increases dyspnea and may precipitate death. If death does not occur, the animals improve dramatically and resume eating by the third day. At this stage, auscultation reveals harsh respiratory sounds and, in some animals, dorsal (emphysematous) crackles. Some cattle have subcutaneous emphysema extending along the back from the withers. Full clinical recovery may require 3 wk.

Lesions:

In affected cattle that have died or been slaughtered in extremis, the lungs are heavy and do not collapse normally. They are widely affected, with various degrees of firmness; there is extensive edema and emphysema, often with the formation of large, air-filled bullae in interlobular and subpleural regions. Submucosal hemorrhages are often present on the larynx and in the trachea and larger bronchi. Histologically, the lesion is characterized by congestion, alveolar edema, hyaline membrane formation, and areas of early alveolar epithelial hyperplasia of type II pneumocytes; occasionally, areas of bronchiolar necrosis may be found. The emphysema is often dramatic and is limited to interstitial fascia, where it is accompanied by edema.

In animals slaughtered after 3 days of illness, the lungs are still heavy and do not collapse normally. They are pinkish gray and of increased firmness; edema and emphysema are inconspicuous or absent. Histologically, widespread alveolar epithelial hyperplasia characteristic of a diffuse, acute, proliferative alveolitis is seen.

Diagnosis:

Diagnosis is based on history, signs, and lesions. Because the syndrome is not specific with regard to cause, evidence must be obtained from history of management factors such as change in pasture.

Treatment:

There is No Specific treatment of this problem.Mild cases recocer itself without treatment.But the severe cases can be lethal and no drug response to this situation in severe cases.

Removing sick animals from the pasture has not proven to reduce this condition but it can stop further cases,But some believes that removing of sick animals from pasture can be proven more lethal.

Prevention:

A medical approach to control involves feeding monensin or lasalocid, which inhibit the bacteria that convert l-tryptophan to 3-methylindole. Treatment with monensin can be started 1 day before introduction to pasture, whereas lasalocid requires a 6-day pretreatment period. These drugs are of no benefit after onset of clinical signs.

In this disease, prevention is more important than treatment because if animal get affected, can't recover.So,if we care then we can prevent animals from this fever,Even if we care after sign/symptoms then we can prevent rest 50% animals....

Main thing in prevention is that if animals are feeding dry feed/less protein feed,then putting them on lush green fodder,we should care about them. We should slowly putt them on lush green fodder in 8-10 days. So that ruman can adapt this situation.

This disease Fog Fever can be called as "Acut Pulmonary Bovine Edema and Emphysema"

But in Pakistan it is called as " Winter Fever"

Why called Fog Fever:

➢ The name of this disease is because of "Foggage". There is no link of this disease with Fog.

From several years,the department of Livestock is arranging the seminars in many areas of Pakistan to give the knowledge about this disease to farmers,so that this disease eradicated from Pakistan as soon as possible.

ADB approves $200m ...

Continued from front page

mismanagement of water resources.

"By integrating infrastructure and agricultural interventions, this project directly supports smallholder farmers to manage their limited resources more efficiently and maximize the benefits from irrigated agriculture," said ADB Principal Portfolio Management Specialist Natsuko Totsuka.

"The project will strengthen the capacity of local authorities to maintain these irrigation systems, boost rural economic growth and help to reduce poverty in the province."

Director Karachi Zoo ...

Continued from page 02

same time. The citizens in these cars will be able to enjoy the movie.

He said that films would be screened in six categories, including classic novels and animated films.

The Karachi Metropolitan Corporation decided to run drive-in cinemas based on no profit no loss as the purpose of this cinema is to provide better entertainment to the citizens near the sea.

Poultry association ...

Continued from page 02

feed, which accounts for 68 per cent of the total cost of chicken production. In May 2021, the CCP also found a nexus between poultry feed companies and issued show-cause notices. The inquiry team concluded that 85 per cent of the total input cost for broiler was artificially increased or controlled by a cartel in the poultry industry. The feed companies have obtained stay orders from the Lahore High Court against the show cause proceedings.

It is also interesting to mention that most incubators involved in cartelisation are vertically integrated and involved in the entire poultry supply chain, from breeding to poultry feed production.

Following the findings of the inquiry report, the commission will issue show-cause notices to poultry companies involved in the production and sale of day-old broiler chicks for violation of rules.

Global Food Security ...

Continued from page 06

to COVID-19 through consumption of aquatic animals such as finfish, mollusks and amphibians. Many new cases have been reported recently in Beijing that are linked to a major wholesale fresh food market, increasing the chances of exposure of disease through this route.

Impact on Human Nutrition and Health: According to the Global Reports on Food Crisis, in 2019, 135 million people were food insecure. This number may increase to 265 million people in 2020, due to the effects of pandemic on economy and disturbance in supply chains. The COVID-19 pandemic is creating worrying impacts on household incomes, food supply chains, health services, and schools. Moreover, strategies such as social distancing and hygiene measures like frequent handwashing are difficult to put into practice for the millions of people living in high density communities and whose housing is either precarious or insecure, with poor sanitation conditions and limited access to clean water. Many of those affected also face malnutrition and suffer from non-communicable diseases, and infectious diseases such as HIV/AIDS and tuberculosis. When the crisis began, an estimated 10.5 million children under the age of five suffered from wasting, 78 million children presented stunted growth, and 17 million were overweight, together with some 400 million women suffering from anemia. The present circumstances only worsen the difficulties already faced by a great number of families to access affordable and healthy diets.

Policies to address Food security: The post-pandemic phase may result in key changes within the food systems with emphasis on strengthening resilience to address the inequality of accessing healthy food. For example, locally produced food may be an opportunity for a new agro-food system that would reduce long-distance transportation and distribution by third parties with significant carbon footprints, although the evidence is mixed as to whether local production is always more "climate-friendly". As in other conflicts, uncertainties about and/or an absence of governance, weakened institutions, changing donor funding priorities/involvement and diminished local research capacity constrain traditional opportunities for long-term contingency planning and access to and integration of local expertise that is essential for timely, evidence-based decision-making.

Previous global outbreaks like Ebola had adverse impacts on food and nutrition security, mostly for vulnerable populations including children and elderly, women, and the poor.

New or adapted policies will need to address tax and trade rules to continue the supply chain and adopting fiscal measures in case food prices abruptly increase. Currently, cash and in-kind transfers, new credit lines for strategic actors in the food chain, subsidies, loans and income support for families, distribution programs (e.g., food banks), and continuing school-feeding delivery for the most vulnerable and poorest people have been implemented to maintain trade and food supply chains while promoting social protection to ensure food access. Prices have declined for raw commodities such as wheat, vegetables, and other crops, yet consumers are often paying more for processed food products.

Last March, the United Nations allocated US$2 billion for a COVID-19 Global Humanitarian Response Plan, intended for agencies such as WHO, UNICEF, and the WFP to reach out to the most vulnerable communities and provide them with food, water and sanitation, and vaccinations, as well as testing materials COVID-19 and medical equipment.

The struggles of a ...

Continued from page 08

It was imperative to name these women as their stories are nothing short of inspiring millions of others. These and more have given a voice to their community and made it clear that they can lead just as expected and successful lives as others with proper resources and support. Many of these women had to let the medical board choose a gender for them; many had to hide their identities throughout their education not to be kicked out of those establishments; many of these women were maltreated and put in jail for raising their voices. All of these women were threatened and abandoned by their own families.

These women and others have made us all proud by rising through the flames of hell lit by their fellow humans. There has been progressing, but these struggles were necessary is a shame. There is a long way to go before they are entirely accepted as respectable members of society, but I hope that day is not far as they deserve nothing less.

Hazards to Fancy Bird ...

Continued from page 10

and time-consuming process, so now a day's diagnosis is made by serological methods.

Treatment: Different antibiotics such as tetracycline, chlortetracycline, oxytetracycline, doxycycline, erythromycin, and Vibramycin are used to treat the cases of psittacosis. It is recommended that treatment be continued for 10 to 21 days after the appearance of clinical signs and diagnosis to reduce the chances of relapse. Most patients respond to oral therapy with tetracycline or doxycycline. Tetracyclines are considered the drugs of choice for the treatment of psittacosis. The disease is rarely fatal inadequately treated patients.

People at risk

- A "psittaculturist" (Parrot Breeder)
- Those who keep birds as pets.
- The person in contact with chickens is at a higher risk of infection because the infection is endemic in poultry.
- The person who works at the pet shop.

Where to get help?

- Doctor
- Veterinarian

Preventive measures

- Do not handle sick birds.
- Do not breathe in a contaminated environment.
- Do not inhale dust from dried bird droppings, feathers, or cage dust.
- Isolate sick birds from the rest of the flock.
- Treat infected birds with appropriate antibiotics for at least one month.
- Clean cages with appropriate disinfectants.
- Clean the cages regularly, using plenty of water.
- Wear masks and gloves while cleaning the cages to prevent infection.
- Always wash hands thoroughly after tending to birds.

Conclusion

Psittacosis is an infectious disease of public health significance. The disease is caused by Chlamydia psittaci, which primarily affects poultry and fancy birds. Inhalation of the organisms is the usual mode of transmission. Clinical signs in humans are from mild influenza to fatal pneumonia. Outbreaks of this disease are recorded from different countries in the world. Diagnosis is based on cultural isolation, serological and molecular techniques. Vaccines are not available for this disease. Psittacosis is a dreadful disease challenging the fancy birds' industry worldwide. Still, the situation in Pakistan is particularly ignored. It is very shocking, and it demands great attention for its control.

Karachi
Mehmood Centre, BC-11, Block-9, Clifton-5, Karachi
Tel: 021-3587 2289, 3583 4932, 3583 3172
Fax: 92-21 35836940
Email:irfan@medicalnewsgroup.com.pk
mkt.dn@medicalnewsgroup.com.pk

Lahore
11485 C-5/4 Alluddin Road, Cantt.
Tel: 042-3667 6296
Fax: 92-42 3667 3518

Islamabad
House no. 128, Street-11 sector E/17
Tel: 051-210 6747

بقیہ: **بروسیلوسس۔ ایک خطرناک حیوان آور بیماری**

سے زیادہ اثر انداز ہوسکتے ہیں۔ مثلاً ڈیری فارمرز، جانوروں کے ماہرین، چوپالوں، ذبح خانوں کے کارکنان اور شکاری حضرات وغیرہ، اس کے علاوہ ایسے لوگ زیادہ متاثر ہوتے ہیں جو ان ممالک میں رہتے ہیں جہاں موثر عوامی معلومات نہیں ہوتی۔ ان کے پاس صحت اور جانوروں کے موثر اقدامات کے لیے نہ ہی تحقیق اور نہ ہی معلومات ہوتی ہے۔ ایسے لوگ (unpasteurized) کچا دودھ اور اس سے تیار شدہ مصنوعات کو استعمال کے لیے فروخت کردیتے ہیں جس سے یہ بیماری مزید پھیلتی ہے۔ مختلف لیبارٹری کے کارکنوں اور جانوروں کے فارمز کے مزدور بھی اس بیماری سے متاثر ہوسکتے ہیں۔

یہ بیماری عوامی صحت اور معیشت کو بری طرح متاثر کرتی ہے۔ یہ جانوروں کی پیداواری صلاحیت کو کم کرکے لائیوسٹاک سیکٹر کی معیشت پر ایک گہرا اور منفی اثر ڈالتی ہے اور لوگ معاشی استحصال کا شکار ہونا شروع ہوجاتے ہیں۔ تاہم بروسیلوسز کا علاج اینٹی بائیوٹک سے کیا جاسکتا ہے مگر بہتر یہ ہے کہ اس کی احتیاطی تدابیر پر عمل کرکے بیماری کو روکا جائے۔ اس بات پر زور دیا جائے کہ جب کسی جانور میں بخار ہو اور اس کی وجہ معلوم نہ ہو تو اس بیماری میں بروسیلا کو بھی چیک کرلینا چاہیے۔

پس منظر: بروسیلوسس (Brucellosis) کی بیماری سب سے پہلے 1850ء کی دہائی میں برطانوی طبی ماہرین کی مالٹا میں کریمیا کی جنگ کے دوران توجہ کا باعث بنی۔ اس لیے اس کو مالٹا بخار بھی کہا جاتا ہے۔ اس بیماری اور اس جراثیم کے مابین تعلق کو پہلی دفعہ 1887ء میں ڈیوڈ بروس (David Bruce) نے رپورٹ کیا۔ بروس نے اس جراثیم کی شناخت کے بعد اس کو کوکائی (Coccus) قسم کے بیکٹر یا میں شامل کیا۔ اس کے بعد 1897ء میں ایک سائنسدان برنارڈ بینگ نے باسیلیس (Bacillus) بیکٹر یا کو گائے میں بڑھتے ہوئے اسقاط حمل کے ایجنٹ کے طور پر الگ کیا۔ اس حالت کو بینگ کی بیماری (Bang's disease) کا نام دیا گیا۔ اس وقت یہ بات کوئی نہیں جانتا تھا کہ بیسلیس Bacillus بیکٹر یا کا مالٹا بخار کے ساتھ کوئی تعلق ہے۔ مالٹا کے ایک سائنسدان اور ماہر آثار قدیمہ نے، جون 1905 میں بکری کے unpasteurized دودھ کو بے قابو بخار (undulant fever) کا موجب قرار دیا۔ پھر 1910ء کی دہائی کے آخر میں امریکی بیکٹر یولوجسٹ Alice C. Evans جب بینگ بیسلیس (Bang Bacillus) کا مطالعہ کررہے تھے۔ ان کو آہستہ آہستہ یہ احساس ہوا کہ یہ بروس کوکس (Braice Cocas) سے الگ نہیں ہے۔ اس گول ساخت کے ساتھ ساتھ بارڈر لائن کی مورفولوجی کا بھی اچھی طرح مطالعہ کیا گیا۔ جس سے یہ بات سامنے آئی کہ یہ دو بیماری پیدا کرنے والے جرثومے کوکس (Cocus) نہیں تھے بلکہ ایک بیسلیس (Bacillus) اور ایک کو کو باسیلیس (Coccobacillus) تھا۔ امریکہ کے ڈیری مویشیوں میں بینگ بیسلیس (Bang Bacillus) عام پائی جانے والی بیماری کے طور پر جانا جاتا تھا۔ یہ ان مویشیوں میں زیادہ رپورٹ ہوتا تھا جن میں متعدی اسقاط حمل ظاہر ہوتا تھا۔ Evans نے یہ بات سوچنا شروع کی کہ مالٹا بخار امریکہ میں نہ ہی رپورٹ ہورہا ہے اور نہ ہی کوئی تشخیص ہے جب کہ یہ بیکٹر یا اس وقت دریافت ہوچکا تھا۔ وہ یہ بات سوچنے لگی کہ بہت سے کیسز (Cases) میں متعدد بخار کی بیماریوں میں وجہ کچا دودھ (unpasteurized milk) پینا ہے۔ پھر 1920ء کی دہائی کے دوران یہ مفروضہ درست ثابت ہوا۔ ایسی بیماریاں جو کہ غیر تشخیص شدہ اور علاج نہ ہونے کے باعث مزید مہلک ہوجاتی ہیں۔ ان کو مطالعہ کیا گیا۔ اس پیش رفت کے بعد بیکٹر یالوجیکل سائنس میں وسیع تبدیلیوں کا ظہور ہوا۔ امریکہ کی ڈیری انڈسٹری میں کافی نئی تبدیلیوں کا آغاز ہوا۔ ان تبدیلیوں میں pasteurization اور ڈیری فارمز کی صفائی، دودھ کی صنعتوں کے متعلق قوانین بنائے گئے اور اس طرح جانوروں کی خوراک کے معیار کو بہتر بنانے کے لیے بھی اقدامات اٹھائے گئے۔ تاہم حفظانِ صحت کے نئے قوانین پر عملدرآمد معمول نہ بن پائے۔ اگرچہ ان اقدامات نے کئی دہائیوں تک لوگوں کو کافی حد تک متاثر کیا۔ جانوروں سے دودھ نکالنے کے وقت صفائی کا خیال نہ رکھنا، کچا دودھ پینا، فارمز میں گندگی ہونا یہ سارے ایسے عوامل تھے جن پر اچھے اور مزید اقدامات کی ضرورت تھی۔ Evans نے اس پر کئی دہائیوں تک کام کیا پھر اس بیماری کو سائنسدان بروس (Bruce) کے نام پر بروسیلوسس (Brucellosis) کا نام ملا۔ پھر 19 ویں صدی میں اسے بحیرہ روم بخار اور مالٹا بخار کے نام سے پہچانا جانے لگا۔ پھر 1989ء میں سعودی عرب میں ایک نیوروللوجسٹ نے بروسلوسس میں اعصابی نظام کی شمولیت کو دریافت کیا۔ مزید یہ کہ بروسیلوسس (Brucellosis) کو دنیا میں اہم حیوان آور بیکٹر یل بیماریوں میں ایک اہم بیماری کے طور پر جانچا جانے لگا۔ لوگوں میں بروسیلوس ایک وسیع پیمانے پر علامات ظاہر کرسکتی ہے۔ مگر کبھی کبھار یہ مہلک بھی ہوسکتی ہے۔ یہ بیماری گھریلو جانوروں، انسانوں اور جنگلی حیات کو متاثر کررہی ہے۔ بروسیلوسس کو عالمی زونوٹک بیماریوں کی تقسیم میں سب سے عام اور اہم ترین بیماریوں میں شمار کیا جاتا ہے۔ انسانوں میں یہ بیماری بنیادی طور پر B.melitensis ، B.abortus اور B.suis کی وجہ سے ہوتی ہے۔ دنیا بھر میں B.melitensis انسانوں میں بروسیلوسس کی سب سے زیادہ وجہ کے طور پر سامنے آئی ہے اور یہ کہ اس نے بھیڑ اور بکریوں میں قوت مدافعت بڑھانے میں بھی مشکلات پیدا کی ہیں۔

بیماری کی وجہ: بروسیلا بیکٹر یا کی ساخت: بروسیلا ایک چھوٹا، گرام منفی، ایروبک، کوکوبیسلائی، غیر متحرک، غیر بیضوی اور فیکلٹیٹو انٹرا سیلولر بیکٹر یم ہے۔ اس کا جینیاتی مادہ گول کروموسومز پر مشتمل ہوتا ہے اور اس کا سائز 0.6- 1.5µm ہے اور قطر 0.5- 0.7µm ہے، اس کی اہم ترین انواع (Species) میں B.suis ، B.ovis ، B.melitensis ، B.canis اور B.abortus وغیرہ شامل ہیں۔

B.abortus اور B.melitensis نے انسانوں میں رپورٹ ہونے والی بیماریوں میں سب سے زیادہ عام ہیں۔ قدرتی طور پر B.abortus کو اگر B.melitensis سے موازنہ کیا جائے تو B.abortus کم مہلک ہے۔ B.suis زیادہ تر سور (pigs) کو متاثر کرتا ہے جبکہ B.canis کتوں کو متاثر کرتی ہے۔

پھیلاؤ: بروسیلوسس ایک اہم اور خطرناک بیماری مویشیوں، بھیڑوں، بکریوں، خنزیروں اور اونٹوں میں پائی جاتی ہے اور ان کے خون، رطوبتوں، جنین کے ساتھ براہ راست رابطے، بچہ دانی اور متاثرہ جانور سے رابطہ، غیر پاسچرائزڈ دودھ اور پنیر وغیرہ سے انسانوں میں یہ بیماری منتقل ہوسکتی ہے۔ خاص طور پر لیبارٹری کے ورکرز، قصائی، کسان اور ویٹرنیرز اور پیرا ویٹرنری سٹاف اس سے زیادہ متاثر ہوسکتے ہیں۔ جانوروں کے کھلے زخم سے رابطے، کچا گوشت، صفائی کا خیال نہ رکھنا اور بذریعہ سانس یہ بیکٹر یا جسم میں داخل ہو کر بیماری کا باعث بن سکتا ہے۔ یہ بیماری انسانوں سے دوسرے انسانوں میں بھی منتقل ہوسکتی ہے۔ یہ دودھ پلانے سے ماں سے بچے میں منتقل ہوسکتی ہے۔ خون کی منتقلی سے اور ماں سے پلیسینٹا (Placenta) کے ذریعے بھی بچے میں یہ بیماری منتقل ہوسکتی ہے۔ یہ جراثیم اوپری انتوں اور سانس کے نالیوں کے میوکوسا کے ذریعے داخل ہوسکتا ہے۔ بروسلا جراثیم کے جسم کے اندر داخل ہونے کے بعد علامات کے ظاہر ہونے تک دو سے چار ہفتے لگ سکتے ہیں یا بعض اوقات اس سے بھی زیادہ وقت بھی لگ سکتا ہے۔

بروسیلوسس ایک ایسی متعدد بیماری ہے جو جسم کے مختلف حصوں کو متاثر کرتی ہے۔ اس بیماری سے جسم کا کوئی بھی عضو یا نظام متاثر ہوسکتا ہے۔ یہ براہِ راست یا بالواسطہ جانوروں سے دوسرے جانوروں میں منتقل ہوسکتی ہے۔ مگر انسانوں سے دوسرے انسانوں میں منتقل ہونے کے شواہد بہت کم ہیں۔ وہ لوگ جو جانوروں سے براہِ راست رابطے میں رہتے ہیں یا ایسے لوگ جو جانوروں سے مصنوعات تیار ہونیوالی بناتے ہیں۔ ان کا اس بیماری سے متاثر ہونے کا امکان زیادہ ہوتا ہے۔

طبی علامات: انسانوں میں اس بیماری کی طبی علامات میں کمزوری، بخار، پسینہ آنا، بھوک نہ لگنا، سردرد، کمر کا درد، تھکاوٹ، وزن میں کمی، پیٹ میں درد، متلی، قبض، کھانسی، بے خوابی، نمونیا، یرقان، تولیدی بیماریاں اور دوسری مختلف قسم کی علامات شامل ہیں۔ کچھ کیسز میں جوڑوں کا درد، پاؤں جلنا، دل کا دورہ، سردی لگنا اور پسینہ آنا بھی شامل ہیں۔ ایسے مویشی جو اس بیماری کا شکار ہوتے ہیں۔ ان میں مختلف طبی معاملات ظاہر ہوتی ہیں۔ جن میں اسقاط حمل کے زیادہ واقعات اور جوڑوں کا درد وغیرہ شامل ہیں۔ جانوروں اسقاط حمل کے دو اہم وجوہات ہیں۔ ایک erythritol جو کہ جنین (Fetus) میں انفیکشن بڑھاتا ہے اور دوسرا اینٹی بروسیلا اینٹی باڈیز کی کمی ہے۔ یہ بیماری نر جانوروں کو بھی کافی حد تک متاثر کرتی ہے۔ یہ ان کے تولیدی راستے اور تولیدی اعضا پر کافی برا اثر مرتب کرتی ہے۔ جیسا کہ تولیدی اعضاء کی سوزش اگر ہم کتوں کی بات کریں تو B.canis کتوں میں بروسیلوسس کی وجہ بنتا ہے۔ یہ بیماری ایک سے دوسرے کتے میں Breeding یا پھر مادہ اسقاط حمل کی رطوبتوں کے ساتھ رابطے سے بھی پھیل سکتی ہے۔ انسان جو ایسے متاثرہ جانور کے ساتھ رابطے میں ہیں ان میں یہ بیماری ہوسکتی ہے۔ کتوں میں یہ بیکٹر یا لمفیٹک سسٹم، گردوں اور آنکھوں کو بھی متاثر کرسکتا ہے۔

ضروری نہیں ہے کہ اس بیماری میں بخار ہو۔ اس میں آنکھوں کا انفیکشن بھی ہوسکتا ہے۔ یہ ریڑھ کی ہڈی کو بھی متاثر کرسکتی ہے۔ (اگر جانوروں کو دوسرے جانوروں کے ساتھ ملاپ سے پہلے خون کے ٹیسٹ کرلیے جائیں تو اس بیماری پر قابو پایا جاسکتا ہے۔ اینٹی بائیوٹک کا استعمال کرکے بھی اس کا علاج کیا جاسکتا ہے مگر اس کا علاج نسبتاً مشکل ہے۔)

بیماری کی تشخیص: یہ بیماری انسانوں میں کوئی منفرد علامات ظاہر نہیں کرتی اس لیے ضروری ہے کہ لیبارٹری سے تصدیق کرکے اس کو واضح کیا جائے۔ اس کے تشخیص کے لیے تین اہم ترین طریقہ کار ہیں۔ ان میں مائیکروبائیولوجیکل، سیرولوجیکل اور مالیکولر طریقہ کار شامل ہیں۔ بروسیلوسس کی تشخیص کے لیے بروسیلا کے جراثیم کو خون یا پھر بون میرو سے کلچر کرسکتے ہیں۔ وہ لوگ جو بروسیلوسس بیماری کا شکار ہونے کے بعد صحت مند ہوجاتے ہیں ان کے جسم میں یہ جراثیم کئی مہینوں تک رہ سکتا ہے۔ مزید بروسیلوسس کی مکمل تشخیص اس کی علامات، کوئی پرانی علامات متاثرہ جانوروں یا ان کی مصنوعات (دودھ، پنیر وغیرہ) سے رابطہ سے کی جاتی ہے۔ اس بیکٹر یا کو الگ کرنے کے لیے زیادہ تر خون کو کلچر کیا جاتا ہے۔ لہٰذا لیبارٹری میں عارضی تشخیص کے بارے میں بتایا جاتا ہے۔ بروسیلا کی مختلف انواع (Species) کی شناخت کے لیے مخصوص لیبارٹریز موجود ہیں۔ ابتدائی طور پر اس بیماری کی تشخیص کے لیے روز بنگال پلیٹ ٹیسٹ (RBPT)، سٹینڈرڈ ٹیوب اے گلوٹینیشن STAT ، کیے جاتے ہیں جن کو مزید انزائم لنکن امیونوسوربنٹ ایس سے (ELISA) سے کنفرم کیا جاتا ہے۔ روز بنگال ٹیسٹ (RBT) انسانوں اور جانوروں دونوں میں اس بیماری تشخیص کے لیے استعمال کیا جاسکتا ہے۔ سیرولوجیکل ٹیسٹ مختلف وبائی امراض کی تحقیق کے دوران کیے جاتے ہیں مگر یہ 100 فیصد accurate نتیجہ نہیں دیتے۔ تاہم مختلف ٹیسٹوں کی حساسیت اور امتیازی صلاحیت (Specificity and sensitivity) کی بنیاد پر مختلف ٹیسٹوں کو آپس میں موازنہ کرکے بہتر نتائج والے ٹیسٹ کو چنا جاسکتا ہے۔ اس طرح مختلف تکنیکوں معیاری حوالہ ٹیسٹوں اور تحقیقی ماڈلز سے موازنہ کرکے ان کی تشخیصی کارکردگی دیکھی جاتی ہے۔ مالیکولر بائیولوجیکل تکنیک میں PCR سب سے معیاری تصدیق شدہ تشخیصی طریقہ کار ہے مگر یہ مقابلتاً ایک مہنگا ٹیسٹ ہے اور چند مخصوص لیبارٹریوں میں ہی اس ٹیسٹ کی سہولت موجود ہے۔ جن میں سے ایک بہاء الدین زکریا یونیورسٹی ملتان کی ون ہیلتھ ریسرچ لیبارٹری بھی شامل ہے جو کہ UDL (یونیورسٹی ڈائیگناسٹک لیبارٹری) کے ساتھ مل کر یہ سہولت فراہم کررہی ہے۔

بیماری کا علاج: انسانوں اور جانوروں میں یہ بیماری دائمی اور کافی شدید ہوسکتی ہے۔ ڈوکسی سائیکلین (Doxycycline) ، ٹیمپسین، جینٹامائیسین اور ٹیٹراسائیکلین کے نتائج حوصلہ افزا ہیں۔ تاہم اس بات کا خاص خیال رکھا جائے کہ انسانوں میں یہ ادویات ماہر طبی ڈاکٹر اور جانوروں میں ویٹرنری ڈاکٹر کے مشورہ سے ہی استعمال کی جائیں تاکہ بیماری کا موثر اور بروقت علاج کیا جاسکے۔

بیماری کا روک تھام: اس بیماری کے مکمل خاتمے کا ایک یہی طریقہ ہے کہ متاثرہ جانور کو cull کردیا جائے/ مار دیا جائے تاکہ یہ دوسرے جانوروں کو متاثر نہ کرسکے۔ تاہم ترقی پذیر ممالک میں یہ ممکن نہیں۔ ایسی صورت حال میں فارمر حضرات میں اس بیماری کے بچاؤ سے متعلق معلومات فراہم کرکے اس بیماری سے بچا جاسکتا ہے یا کم از کم اس کی شرح کو کم کیا جاسکتا ہے۔ ان معلومات میں متاثرہ جانوروں کی علامات، تشخیص، پھیلاؤ وغیرہ شامل ہیں۔ مزید برآں متاثرہ فارمز میں بیماری آنے کے بعد مختلف کیمیکلز کے استعمال سے/ فارم پر جراثیم کو ملف کرکے فارم کی صفائی ستھرائی کو بہتر بنانا بھی شامل ہیں۔ ان ممالک جہاں پر جانوروں کو مارا (Cull) نہیں کیا جاسکتا تاکہ بیماری کو مزید پھیلنے سے روکا جائے تو وہاں پر انسانوں کو بیماری سے بچانے کے لیے مکمل حفظان صحت کے اصولوں پر عمل کیا جائے لیبارٹری ورکرز اور پیشہ ورانہ افراد جو جانوروں سے رابطے میں رہتے ہیں۔ ان کو اپنی صحت کا مکمل خیال رکھنا چاہیے۔ ان لوگوں کے باقاعدگی سے ٹیسٹ کیے جائیں تاکہ بیماری کو مناسب طریقہ سے روکا جاسکے۔ پوری دنیا میں وقت کے ساتھ اس بیماری کی آگاہی بڑھ رہی ہے۔ اس کے کنٹرول اور روک تھام کے لیے ویٹنیرینرز اور ڈاکٹرز کے ساتھ ساتھ عام لوگوں کو بھی آگاہی مہم کا حصہ بننا چاہیے تاکہ اس بیماری کو کنٹرول کیا جاسکے۔ اس لحاظ سے ترقی پذیر ممالک کو چاہیے کہ کسانوں اور مختلف لوگوں میں جو جانوروں کے پیشے سے تعلق رکھتے ہیں ان کی رہنمائی کی جائے۔ ان میں مکمل آگاہی کے لیے ایک مکمل نظم وضبط کے ساتھ تحقیقی معلومات فراہم کی جائے۔ صحت کے اس پروگرام کے لیے ایک فریم ورک میں ویٹرنریز، میڈیکل ورکرز اور حیاتی ماہرین اور دوسرے پیشوں کے لوگوں کو ایک ہو کر اس خطرے سے نمٹنے کے لیے ایک مربوط نظام میں کام کرنا چاہیے تاکہ اس کے پھیلاؤ کو روکا جاسکے۔ تاکہ قومی اور بین الاقوامی سطح پر اس زونوٹک بیماری کے خطرے کو کم کیا جاسکے۔

اس بیماری کو کنٹرول کرنے کیلئے مختلف اقدامات ہیں جن میں اچھی طرح ابلا ہوا دودھ استعمال کرنا، گوشت کو اچھی طرح پکانا، صفائی ستھرائی کا خیال رکھنا، بیماری کے پھیلاؤ روکنے کے لیے آگاہی پروگرام اور عملی اقدامات، کسانوں اور فارم ورکرز کو مکمل آگاہی، تحقیقی اداروں کے اس بیماری سے متعلق تحقیقات اور عام لوگوں کو اس بیماری کے متعلق جانکاری اس میں شامل ہیں۔ اس بیماری کی کئی ویکسینز موجود ہیں جن میں سے کچھ کافی حد تک موثر بھی ہیں۔ ضرورت اس امر کی ہے کہ اچھی کوالٹی، محفوظ، کم قیمت اور مؤثر ویکسین بنائی جائیں کہ فارمرز کو اس کے استعمال کے لیے قائل کیا جاسکے۔

شکاری حضرات اگر احتیاطی تدابیر اپنائیں تو وہ اس بیماری سے بچ سکتے ہیں۔ ان میں ماسک، دستانے، ہاتھ باقاعدگی سے دھونا، شکار کے وقت اور بعد صفائی کا خیال رکھنا شامل ہے۔ گوشت کو اچھی طرح پکا کر کھانے سے شکاری نہ صرف خود اس بیماری سے محفوظ رہ سکتے ہیں بلکہ دوسروں کو بھی اس سے بچا سکتے ہیں۔ ان شکاری حضرات کو شکار والے علاقے میں جانے سے پہلے وہاں کے محکمہ صحت سے اجازت لے لینی چاہیے کہ آیا اس علاقے میں کوئی ایسی زونوٹک خطرناک بیماری تو نہیں جس کی وجہ سے وہ شکاری نہ صرف خود اس بیماری کا شکار ہوجائیں بلکہ معاشرے کے دوسرے لوگوں کو بھی اس بیماری سے متاثر کریں۔

مختصراً بروسیلوسس ایک اہم حیوان آور بیماری ہے جو انسانوں اور جانوروں کی صحت کو بری طرح متاثر کرسکتی ہے۔ یہ متاثرہ جانوروں میں اسقاط حمل کا باعث بن کر نہ صرف فارمرز کی معاشی حالت پر بلکہ ملک کی اقتصادی اور معاشی حالت پر کافی گہرا اثر مرتب کرسکتی ہے۔ اس امر کی ضرورت ہے کہ اس بیماری کی روک تھام کے لیے قومی اور بین الاقوامی سطح پر اقدامات کرنے چاہیں تاکہ اس کے ممکنہ نقصانات سے بچا جائے۔ خاص طور فارمرز حضرات اور وہ لوگ جو جانوروں سے بالواسطہ یا بلاواسطہ طور پر منسلک ہوتے ہیں، ان کو اس بیماری مکمل طور پر آگاہی دی جائے۔

A Meeting of Broiler Wing PPA (NR)

LAHORE - A meeting of Broiler Wing PPA (NR) was held recently at Poultry House 24-R, Johar Town Lahore. Existing issues related to Poultry sector were discussed in detail and its solutions were recommended by the stake holders.

UVAS holds farewell ceremony in the honour of Prof Dr Athar Mahmud

AVN Report

LAHORE - The Academic Staff Association (ASA) of the University of Veterinary and Animal Sciences Lahore arranged a farewell reference and party in the honour of Chairman Department of Poultry Production Prof Dr Athar Mahmud on his retirement.

Vice-Chancellor Prof Dr Nasim Ahmad chaired the reference. At the same time, Deans, Directors, Chairpersons, ASA faculty members, Syndicate members, Advanced Studies and Research Board members and Academic Council members were present on occasion.

Speaking on occasion, Prof Dr Nasim Ahmad lauded the outstanding services and contributions of Dr Athar Mahmud for UVAS, especially for the development of the Department of Poultry Production at Ravi Campus. He said Dr Athar Mahmud had developed strong linkages with the poultry industry and always played a vital role in the betterment of students. He said Prof Athar is a good team builder, sportsman in athletics, coach/trainer and has much more management skills.

President ASA Prof Dr Aneela Zameer Durrani presented the vote of thanks.

Earlier, Dr Shahid Mehmood spoke about the contributions of Dr Athar for UVAS. Prof Athar earned more than 27 years of experience from 1993-2021 in teaching, research, administration and providing extension services to poultry farmers. He won the Best University Teacher Award from HEC in 2016 and Gold Medal from World Poultry Science Association - Pakistan Branch to recognise his services for the poultry industry in 2018. He was a prolific researcher and published more than 100 peer-reviewed journal articles along with 60 abstracts and conference proceedings and 04 books on poultry production.

Dr Athar joined the College of Veterinary Sciences, Lahore, as Lecturer in January 1993. He completed his PhD in Poultry Nutrition in 2010 and was promoted to the status of Associate Professor in 2011. He served as Director Student Affairs from 2012 to 2014 in City Campus and then at Ravi Campus till his retirement. In 2014, he was promoted to Professor and Chairman of the Department of Poultry Production. He has expertise in Poultry Nutrition, Waste Management and its Utilisation. Prof Athar secured and managed six different competitive research projects worth Rs. Three hundred sixty-nine million and three developmental projects were amounting to Rs. 265 million. He is an HEC approved supervisor and supervised 62 MPhil and 16 PhD scholars.

Earlier, UVAS Qirtas Society students won 6 positions in All Pakistan co-curricular activities held under "Mehshar-e-Khayal" competitions like Urdu essay, Bait Bazi, English poem, article writing and quiz organised by the University of Engineering and Technology Lahore.

بروسیلوسس۔ ایک خطرناک حیوان آور بیماری

تحریر: ڈاکٹر میاں محمد اویس، ڈاکٹر گوہر خادم، ڈاکٹر مسعود اختر، ڈاکٹر محمد عرفان انور (ون ہیلتھ ریسرچ لیبارٹری، ڈیپارٹمنٹ آف پیتھو بیالوجی، فیکلٹی آف ویٹرنری سائنسز، بہاءالدین زکریا یونیورسٹی، ملتان۔ پاکستان)

تعارف: بروسیلوسس بیماری ایک متعدد زونوٹک اور معاشی لحاظ سے ایک اہم بیماری ہے جو عالمی سطح پر دونوں جانوروں اور انسانوں کو متاثر کرتی ہے۔ یہ دنیا کے زیادہ تر حصہ میں انسانوں اور جانوروں کے لیے ایک اہم مسئلہ ہے۔ بہت سے ترقی یافتہ ممالک میں اس بیماری پر کافی حد تک قابو پالیا ہے۔ ان ترقی یافتہ ممالک میں ایک مربوط منظم پروگرام اور مختلف ویکسینز سے اس پر قابو پالیا گیا ہے مگر بہت سے ممالک میں حفظانِ صحت کے اصول و قوانین سائنسی بنیادوں پر مرکوز نہیں ہیں لہٰذا جیسا کہ لاطینی امریکہ، ایشیا کے ممالک، افریکہ، بحیرہ روم اور مشرق وسطیٰ میں ابھی بھی یہ بیماری پائی جاتی ہے۔

بروسیلوسس (اسقاط حمل) ایک خطرناک بیکٹریل بیماری ہے جو کہ تقریباً پوری دنیا میں انسانوں اور جانوروں کو متاثر کرتی ہے۔ اس بیماری کو ورلڈ ہیلتھ آرگنائزیشن (WHO) اور فوڈ اینڈ ایگری کلچر آرگنائزیشن (FAO) نے اہم ترین زونوٹک (Zoonotic) بیماروں کی لسٹ میں شامل کیا ہے۔ بروسیلوسس کو بینگ کی بیماری، مالٹا بخار اور بے قابو بخار بھی کہا جاتا ہے۔ صحت عامہ اور معاشی لحاظ سے اس بیماری کی کافی اہمیت ہے۔ یہ بیماری ایک بیکٹریل جرثومے بروسیلا (Brucella) کی مختلف انواع کی وجہ سے ہوتی ہے۔ یہ بیماری براہِ راست یا بالواسطہ متاثرہ جانوروں سے دوسرے جانوروں میں ان کی رطوبتوں یا مصنوعات سے منتقل ہوسکتی ہے۔ ابھی بھی دنیا کے غیر ترقی یافتہ اور بیشتر ترقی پذیر ممالک میں نظر انداز کردہ زونوٹک (Zoonotic) امراض میں اس کا شمار کیا جاتا ہے۔ کم آمدنی والے ممالک اس مرض سے زیادہ متاثر ہوتے ہیں۔ ایک اندازے کے مطابق یہ بیماری ہر سال دنیا میں 500,000 افراد کو متاثر کرتی ہے۔ اس خطرناک بیماری نے مویشیوں کی صنعت کو 344 ارب ڈالر کا نقصان پہنچایا ہے۔ لاطینی امریکہ میں بوائن برسیلوسس سالانہ 600 ملین ڈالر کا نقصان کرتی ہے۔ بروسیلوسس ایک اہم بیکٹریل زونوٹک بیماری ہے جس کی نوع/قسم B.melitenis سب سے زیادہ خطرناک ہے اور کافی زیادہ انفیکشن پھیلانے کا باعث بنتی ہے۔ بحیرہ روم کے ممالک، لاطینی امریکہ اور ایشیا کے مختلف ممالک اس سے متاثر ہو چکے ہیں۔ مگر اس کے خاتمے کے اقدامات کی وجہ سے یہ مویشیوں کے ریوڑوں میں ختم بھی ہو رہی ہے مگر دنیا کے بہت سے حصوں میں یہ بیماری دوبارہ ایک اہم زونوٹک بیماری کے طور پر سامنے آرہی ہے۔ کم آمدن والے علاقوں میں تشخیصی سہولت کم ہونے کی وجہ سے یہ بیماری کم رپورٹ ہوتی ہے۔ وہاں اس بیماری پر اتنی تحقیق نہیں کی جاتی جس کی وجہ سے اس بیماری کے کنٹرول اور بچاو کے لیے خاطر خواہ اقدامات نہیں کیے جاتے۔ جس سے ماحول، انسانوں اور جانوروں کی صحت کے ساتھ ساتھ معیشت پر بھی منفی اثرات مرتب ہوتے ہیں۔ اس بیماری کے پھیلاؤ کے مختلف عوامل ہیں جن میں پیداواری نظام، زرعی شعبے کا طریقہ کار، کھیتی باڑی کے طریقے، غیر موثر انتظامی امور اور جنگلی جانوروں سے رابطے شامل ہیں۔ وہ لوگ جو اپنے کام کے دوران جانوروں سے رابطے میں آتے ہیں اور وہ لوگ جو براہ راست جانوروں کے خون یا تولیدی رطوبتوں سے رابطے میں ہوتے ہیں وہ اس بیماری

بقیہ صفحہ نمبر 16

Printed at Clifton Printers, BC-11, Block-9, Clifton, Karachi - 75600, and published by S. Hashim Hasan, 1485 C/5-4, Allauddin Road, Lahore Cantonment, Lahore.