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# President Alvi calls for promotion of farm sector

## AVN Report

**QUETTA** - President Dr Arif Alvi recently underlined the need for evolving a comprehensive strategy to resolve the issue of water shortage and increase agricultural production in Balochistan. Speaking at the inaugural ceremony of Balochistan Green Tractor Programme, the president lauded the ongoing projects launched by the provincial government for promotion of the agriculture sector, including the tractor scheme. In Balochistan, he said, immense potential existed for promotion of agriculture, fisheries, livestock and other sectors. Dr Alvi gave the example of Vietnam that he said having a coastline smaller than Balochistan's had increased its annual fisheries exports from \$300 million to \$10 billion. He said that with China alone spending \$70bn per annum on the import of Halal meat, huge foreign exchange could be earned through livestock.



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(25 to 30 mg Florfenicol/kg bw/day)



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Colistin Sulphate ...24 gm (480 M.I.U)

(Leads Specs)

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Dose: 1 gram per 2 liter of drinking water for 3-5 days



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Composition

Each 100 gm Contains

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Oregano Essential Oil.....30000 mg

Propylene Glycol.....200000 mg

glycerol.....300000 mg

purified water (carrier) upto..... qsp 1 Ltr

Dosage: For oral administration via drinking water.  
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# Govt urged to fix poultry meat, raw material costs

## AVN Report

**LAHORE** - The Pakistan Poultry Association (PPA) - North Zone - has said that there is an urgent need to look after the affairs of the country's poultry industry by fixing the cost of broiler meat and raw material used in producing its feed. At a press conference recently, PPA Vice-Chairman Raja Attique-ur-Rehman Abbasi said that across the world, exemption from duties and taxes on food processing was a norm, but in Pakistan, it was not the case.

"The world is facing a food crisis, and prices of food items have doubled due to COVID-19. In Pakistan, the price of corn, a raw material used to produce poultry feed, has reached Rs2,000 per 40 kg, while previously it was available at Rs1,300," Abbasi added. He highlighted that financial managers had slapped 17% tax on soybean, another important raw material for poultry feed, and it was expected that the feed price would rise further. The current price of a bag of poultry feed is Rs3,700, which has increased from Rs3,300.



"We had been labelled as a 'mafia' a few months ago when chicken meat prices crossed the Rs400 per kg mark, which was a temporary phase due to the 'Newcastle' disease; the prices for the past one month are, however, below Rs200," Abbasi pointed out. He added that when the rates were over Rs400 per kg, the government machinery had started raiding offices of poultry companies. "If we are a mafia, then why prices are lower now?" he questioned. He emphasised that the demand and supply mechanism determined market prices. "Poultry

farmers have been facing losses for quite some time, and this will affect the entire sector since the farmers have stopped paying for feed and other allied materials." The association vice-chairman added that the cost of poultry production had been rising steadily for the past two years. Because of that, the farmers had not been getting any significant profit. "In the current situation, the poultry farmers face hefty losses and have become bankrupt," he added.

"The government should take steps to address their problems and announce a relief package," Abbasi said, adding that due to the high cost of production, Pakistani poultry products could not be exported despite being competitive enough. According to the association, a poultry bird is being raised on poultry farms at around Rs198 per kg, but it is being sold at Rs110 per kg live. In other words, the farmers are losing Rs3.6 million per flock, and in this situation, they will be forced to close the farms. "As a result, there is a risk that chicken meat will become scarce if the farms close," he warned.

# I.Coast detects first bird flu cases since 2015

## AVN Report

**ABIDJAN** - Ivory Coast has detected its first cases since 2015 of the H5N1 bird flu in poultry farms, the government recently. "Since July 20, high death rates among poultry were spotted in traditional and modern poultry firms in Mondoukou", east of the country's economic hub Abidjan, Livestock and Fisheries Minister Sidi Tiemoko Toure said in a statement.



He added that "Laboratory analysis confirmed the highly pathogenic H5N1 avian flu virus". The government has ordered all poultry in the affected area slaughtered. With memories in the mind of past outbreaks in 2006 and 2015, ministers have also blocked poultry imports from infected countries. Several west African nations have reported H5N1 outbreaks since January. The flu virus is transmitted both by poultry and migrating wild birds. H5N1 and another strain, H7N9, have both made the jump to humans after infecting poultry, although cases of human-to-human transmission remain rare.

# CPEC's M-14 to help boost livestock farming

## AVN Report

**ISLAMABAD** - The M-14 of China Pakistan Economic Corridor (CPEC) will help boost livestock farming, besides offering many other opportunities, especially jobs for the local people, says a report by Gwadar Pro recently. With the completion of this section, the travel time from Mianwali to Rawalpindi and other destinations would be greatly reduced with less stress for the road users. At the moment, they could only sell their livestock in the animal markets of Kamar Mushani and the city of Esakhel. However, the motorway would allow them to reach the cattle markets of Rawalpindi and Islamabad. The livelihood of the majority of people living in rural areas of D.I. Khan, Mianwali and Attock districts mainly depend on agriculture and livestock rearing. D.I. Khan and Mianwali have some



irrigated agriculture while Attock is mainly rainfed. For the people of these districts, livestock serves as the main economic bank that they sell in hours of need. The villagers of these regions mainly raise sheep, goats and

cows while keeping donkeys and camels for loadings. M-14 is also all set to help Attock farmers to send their poultry products across the country. According to the Economic Survey of Pakistan 2021, more than eight

million rural families are engaged in livestock production and deriving more than 35 to 40 per cent of their income from this source. The four-lane motorway that starts from D.I. Khan on Indus Highway N-55 to Hakla on M-1 would play a crucial role in agricultural development, with livestock as a key subsector. Besides connectivity, the impact of M-14 will be felt in many ways, which means a spurt in local enterprises and small businesses to cater to the increased purchasing power of the farmers, more schools and health facilities supported by the influx of new prosperity in the area, more private and public transport, more food shops, more local production, and more construction of residential and commercial properties. Job opportunities will spring up and set off another set of income-generation activities.



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# Anxiety in pets

by Lt Col Retd Dr Hammad Ahmed Hashmi  
 DVM, MSc (Hons), MBA, CMILT(UK)  
 CPD Certified in Pet Nutrition and Pet Psychology  
 National Sales and Technical Manager  
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Anxiety may be defined as diffuse, generalized feelings of apprehension, unease, and nervousness regarding an imminent event, uncertain outcome, or an anticipated threat or danger.

Pets appear to anticipate or predict unpleasant situations, events, or outcomes based on previously learned experiences. It is the body's natural response to stress. It's a feeling of fear or apprehension about what's to come.

Anxiety may be situational, manifesting only in specific contexts (anticipating being left home alone or a trip to the veterinary hospital) or generalized and irrespective of the environment or context (appearing anxious or nervous even when in familiar environments and regardless of the presence of companions)

## Introduction to Anxiety in Pets.

However, you might think that our pets are immune to some of the psychological happenings or situations we undergo as humans. Like us, animals can develop anxiety. Victims of cruelty, abuse or neglect, may be especially prone to anxiety. But anxiety can occur in animals from any background. While they do not have to worry about human worries, they do exhibit anxiety symptoms. Many people suffer from anxiety at some point in their lives. Fortunately for humans, there are resources and tools readily available to assist us in decreasing our anxieties. But what about our four-legged counterparts? Do they feel anxiety too? And if so, how can we best help them once they are unable to precise what's plaguing them

Separation anxiety is most commonly seen in pets. Separation anxiety is triggered when dogs or cats become upset because of separation from their guardians or the people they're attached to. Escape attempts by dogs with separation anxiety are often extreme, resulting in self-injury and household destruction, especially around exit points like windows and doors.

## Separation Anxiety

The most common type of anxiety in pets is called separation anxiety.

One of the most common complaints of pet parents is that their dogs are disruptive or destructive when left alone.

- Their dogs might urinate, defecate, bark, howl, chew, dig or try to escape. Although these problems often indicate that a dog needs to be taught polite house manners, they can also be symptoms of distress.
- When a dog's problems are accompanied by other distress behaviours, such as drooling and showing anxiety when his pet parents prepare to leave the house, they are not the evidence that the dog isn't house trained or doesn't know which toys are his to chew.
- Instead, they are indications that the dog has separation anxiety. Separation anxiety is triggered when dogs become upset because of separation from their guardians, the

### Common Signs of Stress & Anxiety in Pets

 Panting	 Drooling
 Abnormal Bathroom Habits	 Pacing
 Decreased Appetite	 Excessive Grooming
 Hiding	 Dilated Pupils

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 Source: [/www.pethub.com/article/recognizing-abnormal-stress-and-anxiety-dogs](https://www.pethub.com/article/recognizing-abnormal-stress-and-anxiety-dogs)

### Onset of Fear and Anxiety in Dogs

Between ages one and three, owners normally see signs of fear and anxiety in their pets.

Common signs of anxiety in older dogs include:

 Sickness or pain
  Canine dysfunction syndrome
  Loss of bladder or bowel control
  Failing senses

**Understanding Anxiety in Dogs**

If there's a cause for anxiety, fear or stress, chances are they are not acting out of spite or anger toward you

When a dog perceives something as frightening, then the dog's perception is the reality it will act on. Don't take it personally - try to sympathize with your pet

people they're attached to.

- Escape attempts by dogs with separation anxiety are often extreme, resulting in self-injury and household destruction, especially around exit points like windows and doors.
- Some dogs suffering from separation anxiety become agitated when their guardians prepare to leave. Others seem anxious or depressed before their guardians' departure or when their guardians aren't present. Some try to prevent their guardians from leaving.
- Usually, right after a guardian leaves a dog with separation anxiety, the dog will begin barking and displaying other distress behaviours within a short time after being left alone-often within minutes.
- When the guardian returns home, the dog acts as though it's been years since he's seen his mom or dad!

## What Causes Separation Anxiety?

Its causes are multiple, with possible genetic and environmental factors contributing to the most common symptoms. The most endearing qualities of our pets are their loyalty and unconditional love. They are social animals and become intensely bonded to family members. However, when this affection turns into psychological stress, the very relationship that your dog desires can be threatened by inappropriate behaviour related to anxiety. To a pet with separation anxiety, the absence of a family member may be interpreted as abandonment. We cannot be certain of the aetiology or cause of this illness; however, the signs are very unpleasant and are often misinterpreted and treated in a way that may seem intuitive but worsens the situation.

- You may diagnose this problem by interpreting the symptoms and timing of the inappropriate behaviour. The most common signs are barking, whining, and pacing when a family member leaves or returns to the house.
  - A dog with separation anxiety may cause destruction to physical property, exhibit inappropriate elimination habits or have other traits which undermine a peaceful relationship in the home.
  - Many pet owners mistakenly think this behaviour is the pet's attempt to "get back" at their owner for leaving them alone, but that is far from the case. What is going on is intense fear and anxiety.
  - The treatment for this condition is behaviour modification and a medication frequently used for people who suffer from depression.
  - The goal is to use medication as an aid in treatment and discontinue its use as soon as a positive change in behaviour is accomplished.
- ### What types of stimuli might trigger a fear, phobic, or anxious response?
- Triggers are varied based on the individual pet. Pets may display fear, phobic, or anxious responses associated with people, pets, sounds, objects, or environments. Fears are common in pets when going to the veterinary clinic, and anxiety may manifest in anticipation of medical and grooming procedures. Fear of phobic responses is common with the sound of fireworks or stimuli associated with thunderstorms. Many dogs are anxious when left alone in the absence of their preferred human companion or when confined away from human company.
- ### How are the fearful, phobic, or anxious responses caused?
- Sometimes fear is the result of an early experience that was unpleasant or perceived by the pet as unpleasant.
- If the fearful response successfully chased away the stimulus, or if the pet escaped from the stimulus, the behaviour has been rewarded and therefore is likely to be repeated.
  - In close association with exposure to a stimulus, punishment might further cause fear and anxiety toward that stimulus.
  - If the owner is frustrated or anxious or the stimulus is threatening, this too will further aggravate (and justify) the fear. Finally, if the stimulus retreats or is removed during a display of fear aggression, the aggressive display will have been reinforced.
  - It does not always take an unpleasant experience for fear to develop. Any stimuli (e.g., people, places, sights, sounds) that a dog or cat has not been exposed to during its sensitive period of development, which is up to 3 months of age in dogs and two months of age in cats, may become a fear-evoking stimulus. For example, the dog or cat exposed to adults, but not to children, during development may become fearful when first exposed to the sights, sounds, or odours of young children.
  - The pet's genetics also contribute to its level of fear and phobias to stimuli.
  - The triggers for these behaviours are as varied as there are breeds of dogs and cats.

Continued on Page 12





## PER DOSE CONCENTRATION

Infectious bronchitis virus (M41 strain)..... $\geq 105.8$  EID50  
Infectious bronchitis virus (KM91 strain)..... $\geq 106.1$  EID50  
Newcastle disease virus (LaSota strain)..... $\geq 108.4$  EID50  
Infectious bursal disease virus (CAG strain)... $\geq 106.4$  EID50



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# Transmission and development of flouroquinolones resistance in *Campylobacter* and its effects in poultry industry in Pakistan

by Wafa Yousaf, Usman Waheed, Syed Ehtisham Ul Haque, Muhammad Adnan Saeed, Muhammad Kashif  
University of Veterinary and Animal Sciences, Lahore (Jhang Campus)

Pakistan is an agricultural country. Around 85% of Pakistani people are residing in rural areas and rely on the agriculture system. The poultry sector is playing a crucial role in the economy of Pakistan. About two-thirds of people who live in rural areas play a pivotal role in the up-gradation of agricultural techniques in Pakistan that directly enhance the country's economic status. Their livelihood repeatedly contemplates around agriculture and kindred activities. Pakistan is a country with long records of traditional backyard farming and historical poultry rearing background. Backyard farming is the backbone of the poultry industry in Pakistan, due to which the poultry sector came into being.



Fig 1: Poultry industry in Pakistan provides chicken meat that contributes about 86% of all poultry meat globally.

**The nutritional benefits of Chicken meat and Eggs especially in women and children:** Chicken meat and eggs provide women with Niacin, Folic acid, Vitamin K, Iodine, Iron and Zinc she needs in her daily routine. Most females are iron deficient in both developed and under-developed countries. It is right that vegetables contain less amount of iron as compared to meat. Iron deficiency is of major concern, and during pregnancy, it may lead to different abnormalities of the child, e.g. stillbirth, neural tube defect.



Fig 2: Eggs are best protein source and healthy for humans diet.

**Commercial Poultry and *Campylobacter*:** Growing units in modern commercial poultry production commend infection through contaminated fomites, infected water supply, insects, rodents, and free-living birds resulting in intestinal colonization. Even newly hatched chickens may get transient diarrhoea leading to infection. Vertical transmission in flocks is unclear yet. Over the last few years, *Campylobacter* is causing serious food and health-related issues in poultry and humans that are of serious concern.

**Colonization of *Campylobacter* in Poultry birds at Commercial industry:** High risk factors mainly that are considered mostly are open nature of small-scale commercially available

broiler and native chicken production procedures with easy going undertaking, hygiene and low *Campylobacter* can colonized in all types of birds e.g. layers, broilers, ducks, turkeys and geese. That is why poultry meat is responsible for the foodborne transmission of *Campylobacter* globally. Broilers are considered as the largest source of poultry meat and protein source worldwide.

**Colonization of *Campylobacter* in broiler birds:** *Campylobacter* spp. does not elicit any pathological lesions and clinical signs in broilers. The bacteria colonize the caeca, locating in the intestinal mucous layer over the intestinal crypts of the villi. Secondary infection occurs in internal organs. Colonization of the *Campylobacter* occurs on the first day of inoculation, and the level of colonization is high in ceca at day 5. Broiler shed *Campylobacter* in their faeces. A slight decline of infection has been observed in birds after four weeks.

**1. Colonization of *Campylobacter* in Flocks:** *Campylobacter* is observed very little at commercial farms. It is detected rarely in the birds that are 2-3 weeks age-old. The colonizing probability increases near the slaughtering age between 5-8 weeks. The potential of *Campylobacter* colonization varies according to climatic conditions. The prevalence of *Campylobacter* colonization is less in winter as compared to winter. These variations are also associated with humidity vectors, e.g. flies, rodents, outdoor farm temperature and density of farm biosecurity.

**Characteristics of Microorganism:** *Campylobacter* microorganisms are small (0.2-0.9  $\mu\text{m}$  wide and 0.2-5.0  $\mu\text{m}$  long), spirally curved, and motile Gram negative bacteria that are commonly present in the intestinal tract of poultry birds. Twenty-one *Campylobacter* species have been identified and characterized so far and among them, the most important pathogenic species are *Campylobacter jejuni* and *Campylobacter coli*. Both these *Campylobacter* species are different from other pathogens associated with food-borne disease. They are able to grow in an atmosphere containing approximately 10%  $\text{CO}_2$  and 5%  $\text{O}_2$ , at a narrow temperature range between 30°C and 46°C, and thus classified as thermophilic *Campylobacters*.



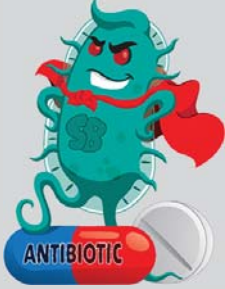
Fig 3: Microscopic image of *Campylobacter*.

**Clinical Signs and Symptoms:** In humans, *Campylobacter* bacteria cause illness that is known as campylobacteriosis, which is the most common human gastro-enteric infection in developed and under developed countries. *Campylobacter* is responsible for diarrhea in an estimated 400-500 million people globally each year. The main sources of these microorganisms are raw or uncooked meat, especially poultry meat.

**Treatment:** In the management of human campylobacteriosis, fluid therapy is the most important. Antimicrobial treatment is needed only in patients with more severe disease and in those who are immunologically compromised. The most common antimicrobial agents used in the treatment of *Campylobacter* infections are macrolides, such as erythromycin, and fluoroquinolones, such as ciprofloxacin and tetracycline.

**Development and Transmission of Fluoroquinolones Resistance:** One of the main factors influencing antimicrobial resistance, especially to class macrolides (fluoroquinolones), is the use of the antimicrobial agents in animal production. In many countries, where fluoroquinolone use in animal production is low, the incidence of fluoroquinolone-resistant strains has remained moderate or low. In case of macrolides, the use of these antimicrobials in animal production as therapeutic or growth-promoting agents has been considered to be one important factor in the selection of erythromycin-resistant *Campylobacter* strains. However, acquisition of erythromycin resistance in *Campylobacter* is a stepwise process and requires prolonged exposure in contrast to the rapidly involving fluoroquinolone resistance.

**Fig 4: Development of antibiotic resistance in poultry is increasing, because drugs are used to add in poultry feed as an additive food source. This emergence of antibiotic resistance is considered as a serious problem for public health.**



**Recommendations:** It is widely accepted that contamination of poultry by *Campylobacter* is a significant risk factor of human campylobacteriosis. Thus, its prevention and control in poultry would reduce the risk of human exposure to *Campylobacter* and is an important food safety issue. The development of antimicrobial resistance in *Campylobacter* is an evolving public health challenge. However, there



Fig 5: If we are not careful, we will soon be in a post antibiotic era. Overuse of antimicrobials in broiler production in Pakistan, calling for urgent actions.

is no effective, reliable, and practical intervention measure available to reduce *Campylobacter* in poultry. So the better understanding of the molecular basis of resistance is urgently needed if it is to be successfully overcome.

Continued on Page 15





# MAXIMUM PROTECTION NDV LOG<sub>10</sub><sup>9</sup> EID<sub>50</sub>

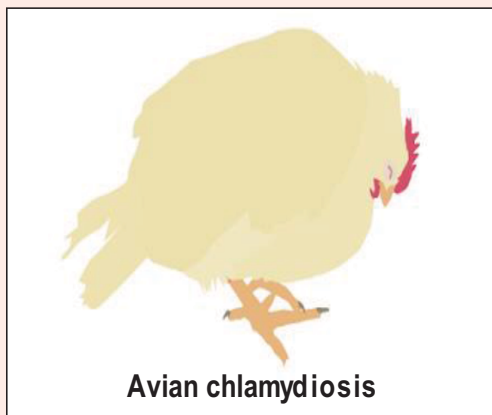
ND Killed Vaccine  
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# AVIAN CHLAMYDIOSIS

## Diagnosis and prevention of zoonotic disease



Avian chlamydiosis

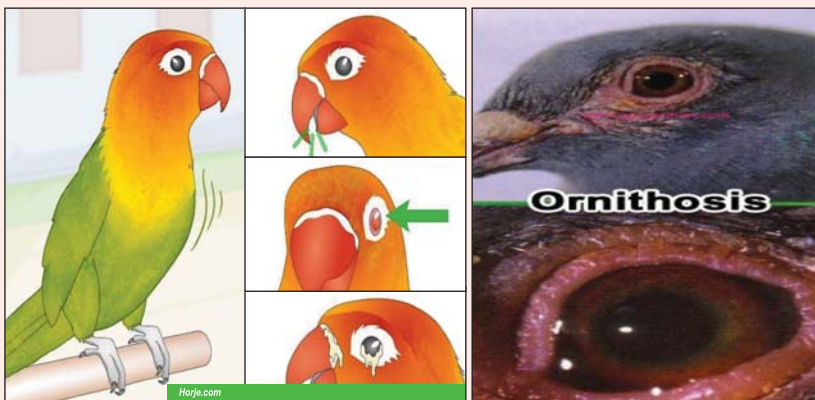
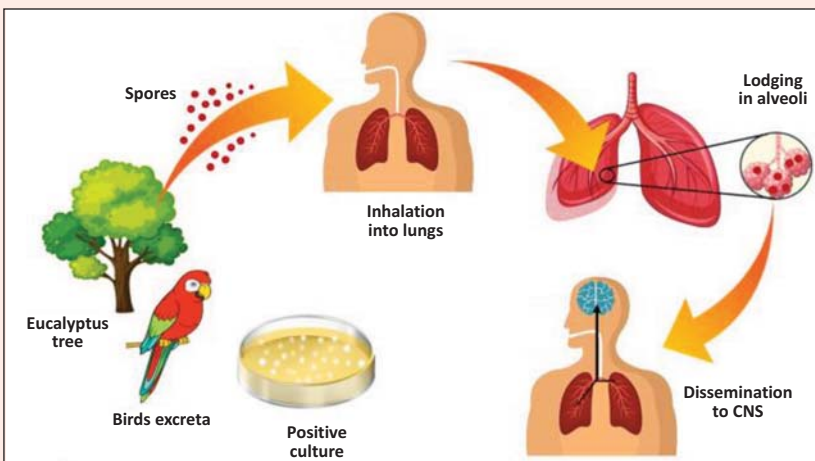
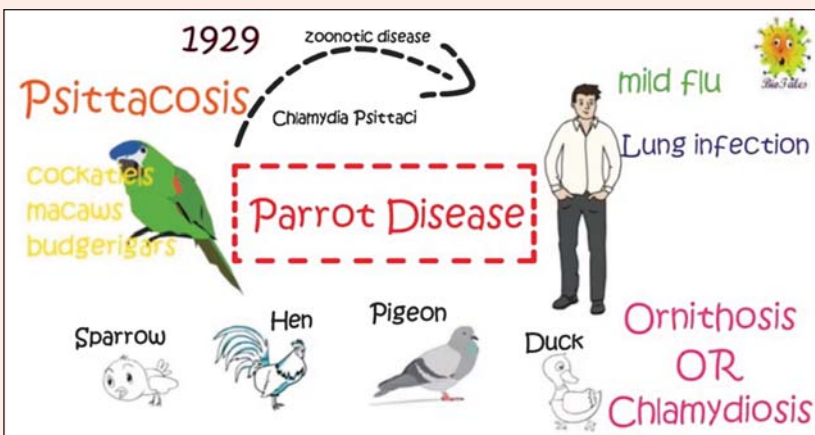


by Dr Maria Jamil,  
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Chlamydiae are tiny gram-negative bacteria. In contrast to other bacteria, chlamydiae multiply only within the cell. Chlamydiosis is known as psittacosis or ornithosis; Chlamydiosis in poultry is caused by *Chlamydiosis psittacosis*. *C. psittacosis* causes disease both in humans and birds. In humans, it is also known as parrot fever because it was first contracted from the parrot. Chlamydiosis is referred to as psittacosis when it affects humans, mammals and psittacines birds such as parrots and parakeets. This disease is called ornithosis when it affects birds other than psittacines. Factors that contribute to the development of the disease or increase its severity include stress due to birds' movement, crowding, change of diet or environment, and concurrent infections with other organisms such as salmonella or *Pasteurella multocida*.

Chlamydiosis transmitted horizontally, such as Infection, occur by inhalation or ingestion of contaminated material. Infective form of chlamydia are also found in faeces. Egg transmission is not known to occur.

Development of this disease occurs after entry into the body mainly through inhalation, the organism multiply in the lung, air sacs and pericardium. They later spread through blood circulation to the liver, spleen and kidney, where multiplication and



production of elementary bodies (an infective form of chlamydia) occur.

Chickens are rarely affected. Chickens appear to be relatively

resistant to infection caused by *C. psittaci*. Most infections in chickens are not noticeable and are short-lived. Symptoms include dullness, fever, abnormal

excretion, nasal and eye discharge and decreased egg production. Mortality varies from 0-30% of affected birds.

Postmortem finding includes pericarditis, perihepatitis, airsacculitis and conjunctivitis. Immunity to chlamydia is usually poor and short-lived as birds become older and become more resistant to clinical disease even though the infection may occur.

Demonstration of Chlamydiosis is done in various ways. Such as by direct smear examination.

Impression smears are made from exudate, lesions, or surface of the liver or spleen or cloacal, tracheal or conjunctival swabs. They are stained by the modified Zhiel-Neelsen method.

Elementary bodies stain red while the background is blue-green. Other staining methods include Giemsa, Machiavelli, Castanada and an iodine technique.

Isolation and identification is a reliable method of diagnosis and involves the isolation of organisms in cell culture or embryonated eggs.

Treatment of infected birds with broad-spectrum antibiotics such as tetracycline, chloramphenicol and erythromycin for several weeks effectively reduces infection doxycycline and Quinolones are also effective against chlamydial infection.

There are no commercial chlamydial vaccines that produce long-lasting protective immunity against chlamydia. Live and killed vaccines (bacterin) are effective. However, hygienic precautions are necessary to minimize the spread of infection to other birds and human attendants.





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## Anxiety in pets

Continued from page 06

- Phobic responses can occur from just one exposure or gradually increase over continued exposure. In many cases of anxiety, neurotransmitter (brain chemical) function and levels may be altered and contribute to the overall behaviour. Again, learning or the consequences of the phobic response (escape, punishment) may aggravate the problem.
- Illness, pain, or the effects of ageing may lead to increased fear or anxiety in situations where there was previously little or no problem. These changes may alter the way a pet perceives or responds to a stimulus.

- Age-related changes in the brain (cognitive decline) or in the sensory system (hearing, sight), arthritis, diseases that affect the hormonal system such as an increase or decrease in thyroid hormones or an overactive pituitary gland (Cushing's disease), and organ degeneration (liver, kidneys) are just a few examples of health- and age-related problems that might contribute to increasing fear and anxiety.

- A full physical examination and diagnostic tests, if indicated, are warranted for any pet with fear or anxiety. Still, especially intense and generalized, have any other concurrent signs or did not arise until adulthood or older age.

### Recognizing the Signs

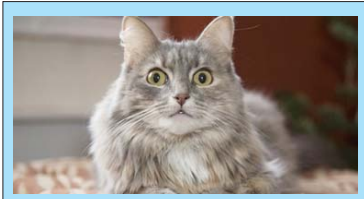
One of the most common complaints of pet parents is that their dogs are disruptive or destructive when left alone or attempting to leave. Their dogs might:

- Urinate or defecate
- Bark or Howl
- Chew/destroy things
- Dig
- Try to escape
- Pace
- Attempt to prevent you from leaving
- Fear may result in aggressive responses by pets.
- Behaviorally, a pet will exhibit changes in body language or activity when afraid.

There is no conclusive evidence showing exactly why pets develop anxiety. However, because far more pets who have been adopted from shelters have this behaviour problem than those kept by a single family since puppyhood, it

is believed that the loss of an important person or group of people in a dog's life can lead to separation anxiety. Other less dramatic changes can also trigger the disorder, such as a change in schedule, residence, or household membership.

Although these problems often indicate that a dog needs to be taught polite house manners, they can also be symptoms of distress. When a dog's problems are accompanied by other distress behaviours, such as drooling and showing anxiety or depression when his pet parents prepare to leave the house, it's likely evidence that the dog has separation anxiety.



*A fearful pet in Anxiety*

In cats, signs like hiding, not eating, social withdrawal, panting, hypervigilance, dilated pupils, aggression, and twitching tails or ears can indicate stress and anxiety.

### How to Help?

Since a pet can't call their therapist when they need a lift, it is up to pet parents to help their furry friends when dealing with pet anxiety.

First things first, you want to rule out any medical conditions. Some dogs' house soiling is caused by incontinence. Several medical issues can cause urinary incontinence in dogs. Before attempting behaviour modification for separation anxiety, see your veterinarian to rule out medical issues.

Also, be mindful of any medications your pet may be on. Several medications can cause frequent urination and house soiling. If your pet takes any medications, please contact their veterinarian to find out whether their medications might contribute to house-soiling or other problems.

You'll also want to rule out behavioural problems such as submissive or excitement urination,

urine marking, juvenile destruction, boredom and excessive barking, howling, or vocalization due to environmental factors. Do not scold or punish your dog or cat. Anxious behaviours are not the result of disobedience or spite. They are distress responses. If you punish them, they may become even more upset, and the problem could worsen.

**Treatment Options:** Cognitive-behavioural therapy. Consult with your veterinarian or a veterinary specialist in animal behaviour. They will guide you through a program designed to alter the behaviour interfering with a pet being integrated into a family



- With certain pharmaceuticals and behaviour modification programs, 73% of dogs improved in a study of separation anxiety in pets. 43% showed improvement after only one week.

- Desensitization and counterconditioning are common methods, but they are complex and can be tricky to carry out.
- Crate training can also be helpful for some dogs if they learn that the crate is their safe place to go when left alone. However, for other dogs, the crate can cause added stress and anxiety.
- To determine whether or not you should try using a crate, monitor your dog's behaviour

during crate training and when he's left in the crate while you are home. If he shows signs of distress, crate confinement isn't the best option for him. Instead of using a crate, you can try confining your dog to one room behind a baby gate.

- Giving your dog plenty of "jobs" to do can also be helpful. Providing lots of physical and mental stimulation can be a vital part of anxiety treatment. Exercising your dog's mind and body can greatly enrich his life,

decrease stress and provide appropriate outlets for normal dog behaviours.

- Keep your dog busy and happy by incorporating additional aerobic activity into your routine, playing fun, interactive games, walking on new routes and trails, providing food puzzle toys or enrolling in a rewards-based training class.

**Medicinal Therapy:** Medication or supplements may be the right option for your pet, as the use of medications can be very helpful, especially for severe cases of anxiety.

On rare occasions, a dog with mild separation anxiety might benefit from drug therapy alone, without accompanying behaviour modification.

Sometimes for cats, veterinarians will advise using pheromones or calming treats before prescribing medication. Always consult with your veterinarian or a veterinary behaviourist before giving your dog or cat any medication or supplement for a behaviour problem.

*Special Credits to Dr Kenneth Martin, DVM, Diplomate, ACVB; Debra Horwitz, DVM, DACVB & Gary Landsberg, DVM, DACVB, DECAWBM- Behavior, Pet Services*



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# {LIVER FLUKE} لیور فلیوک

تحریر: ڈاکٹر عبدالکبیر آفریدی

تعارف: لیور فلیوک جسے اردو میں گھو، پشتو میں گرگ اور بلوچی میں جگر کرم (جگر کرم) کہتے ہیں۔

جانوروں میں طفیلی کرموں سے پیدا ہونے والی بیماریوں میں یہ بیماری بہت اہم ہے یہ جانوروں کی صحت اور پیداوار پر بہت بری طرح اثر انداز ہوتی ہے۔ بڑے جانوروں کی نسبت چھوٹے جانوروں میں زیادہ حملہ ہوتا ہے یعنی دو سال کی عمر تک اس بیماری کا اثر زیادہ ہوتا ہے۔

یہ بیماری تھلیوں، تالابوں، پانی کی گزرگاہ اور نمی والی زمین پر چرنے والے جانوروں میں زیادہ ہوتی ہے کیونکہ اس کرم کی پرورش کے مختلف ادوار کیلئے ایک گھونگھ/پینی (snail) کی ضرورت ہوتی ہے اور یہ گھونگھے پانی اور نمی والی جگہوں پر ہوتے ہیں۔

جانوروں کے علاوہ یہ بیماری انسانوں میں بھی ہو سکتی ہے۔ بالغ (sexually mature) لیور فلیوک جگر کی Bile ducts میں ہوتے ہیں جبکہ نابالغ (Immature) لیور فلیوک جگر کی بافتوں (tissue) میں ہوتے ہیں۔ اس کے علاوہ یہ جسم کیا اور دوسرے اعضاء میں بھی ہو سکتے ہیں۔ جگر کرم ایک چھوٹے پتے کی مانند ہوتا ہے جس کی لمبائی 18\_30 ملی میٹر اور چوڑائی 4\_13 ملی میٹر ہوتی ہے۔ یہ بھورے (Brownish) رنگ یا ہلکے سرمے (Dirty Grey) رنگ کا ہوتا ہے۔

بیماری کی علامت: موسم سرما کے شروع میں مرض کی علامت زیادہ ہوتی ہے۔ اس بیماری میں لیور فلیوک جگر میں رہ کر مختلف علامتیں پیدا کرتے ہیں۔ موسم سرما کے شروع میں علامت زیادہ نمایاں ہوتی ہے۔ جانور دن بدن کمزور ہوتا چلا جاتا ہے۔ آنکھیں آندھن سن جاتی ہیں۔ پیٹ بڑھ جاتا ہے آواز دست لگ جاتے ہیں۔ جڑے کے نیچے جوتن اور کھال سخت ہو جاتی ہے۔ بال اور جھڑنے لگتے ہیں۔ ربر بڑھ کر بڈی نمایاں ہو جاتی ہے۔ جانور کا وزن کم ہو جاتا ہے۔ خون کی کمی واقع ہوتی ہے۔ اور جانور جلدی تھک جاتا ہے۔ جانوروں کی قوت مدافعت کم ہو جاتی ہے اور مختلف بیماریوں جلد حملہ آور ہوتی ہے، بعض اوقات جانور اچانک مر بھی جاتا ہے۔

لائف سیکل (زندگی کے مختلف ادوار): لیور فلیوک کی زندگی کا چکر موسم بہار یا گرمی میں شروع ہوتا ہے۔ یہ کرم جانور کے جگر میں آندے دیتا ہے جو کہ پتے کی رطوبت کے ذریعے آنتوں میں پہنچ جاتے ہیں۔ اور گوبر کے ذریعے باہر نکل جاتے ہیں۔ چراہ گاہ میں 9\_10 دن میں موافق حالات میں ان انڈوں سے بچے (لاروا) نکل آتے ہیں انہیں میرا سیڈیم کہتے ہیں۔ یہ بچے پھر ایک



پینی/گھونگھے میں داخل ہو جاتے ہیں۔ جہاں پر اس کی نشوونما ہوتی ہے۔ پینی/گھونگھا نہ ملنے کی صورت میں یہ مر جاتے ہیں۔ پینی یا گھونگھے کے اندر اس کی نشوونما ہوتی ہے۔ میرا سیڈیم سے یہ سپوروسٹ بنتا ہے پھر ریڈیا اور کیریا، سرکیر یا کی دم ہوتی ہے۔ اب یہ پینی سے باہر نکل آتا ہے۔ یہ سرکیر یا گھاس اور جڑی بوٹیوں سے چٹ جاتے ہیں۔ اور اپنے اوپر ایک لعابی جھلی بنا لیتے ہیں جس کے بعد اس ک دم غائب ہو جاتی ہے اسے مینا سرکیر یا کہتے ہیں۔ جگر کرم کی یہی وہ حالت ہے جسے کھاکر موشیوں میں یہ مکمل طفیلی کرم بن جاتا ہے۔ آندے سے سرکیر یا بننے تک کا عمل عام حالات میں چھ سے سات ہفتوں تک مکمل ہو جاتا ہے۔ نمی والی جگہ پر سرکیر یا لگ جھگ نو، دس ماہ تک زندہ رہ سکتے ہیں۔ سرکیر یا چارے اور گھاس کے پتوں کے ساتھ موشیوں کے معدے میں پہنچ کر آنتوں میں سوراخ کر کے گھومتے پھرتے جگرتک پہنچ جاتے ہیں اور تقریباً تین ماہ کے اندر یہ مکمل کرم بن جاتے ہیں۔ اور دوبارہ آندے دینا شروع کر دیتے ہیں۔ اور یہ سلسلہ چلتا رہتا ہے۔

تشخیص: بیمار جانور کے گوبر کا خوردبین سے معائنہ کرنے پر لیور فلیوک کے

انڈے نظر آنے پر اس بیماری کی تشخیص ہو جاتی ہے۔ اس کے علاوہ ذبح شدہ جانور کا جگر سخت ہوتا ہے۔ رنگت میں تبدیلی آ جاتی ہے پتہ کی نالی (bile ducts) میں لیور فلیوک زندہ حالات میں پایا جاتا ہے۔ علاج: علاج ہمیشہ مستند اور تجربہ کار ویٹرنری ڈاکٹر سے کرائیں۔ بھیڑ/بکریاں: کاربن ٹیڑا اور اینڈ ایک مفید دوا ہے۔ لیکن اس کے استعمال میں احتیاط بہت ضروری ہے کیونکہ مطلوبہ مقدار سے زیادہ دوا دینے سے جانور پر بڑے اثرات مرتب ہوتے ہیں اور اکثر اموات واقع ہو جاتی ہے لہذا ریوڑ کے تمام جانوروں کو ایک ہی دوا نہ پلائی جائے۔ پہلے چند جانوروں کو یہ دوا پلا کر 24 گھنٹے تک انکا معائنہ کرتے ہیں اگر کوئی برا اثر دیکھنے میں نہ آئے تو پھر ریوڑ کے دوسرے جانوروں کو دوا پلا دیں۔ ایک سی سی 18 کلو گرام جسمانی وزن کے حساب سے 4 سی سی لیکوڈ پیرافین میں ملا کر پلائیں۔ اگر ایسا کرنا مشکل یا ممکن نہ ہو تو پھر یہ ایک کپسول میں رکھ کر کھلا نہیں۔ اس کے علاوہ مارکیٹ میں دوسری ادویات کے استعمال کیلئے ڈاکٹر سے مشورہ ضرور کریں اور ہدایت لیں۔

کنٹرول: لیور فلیوک کی زندگی کے مراحل میں گھونگھا (snail) بہت اہمیت کا حامل ہے۔ آندے سے بچے (لاروا) نکالنے کے بعد اگر اسے گھونگھا نہ ملے تو یہ مر جاتا ہے۔ لہذا اگر ہم سب زم زندہ اور نمی والی جگہوں سے گھونگھے (snail) ختم کر دیں تو لیور فلیوک کی بیماری پر کنٹرول حاصل کیا جاسکتا ہے۔ گھونگھے ختم کرنے کیلئے کارپسلفیٹ (نیلا تھوٹا) ایک موثر دوا ہے۔

استعمال: 9 کلو گرام کارپسلفیٹ باریک پیس کریت میں اچھی طرح ملا لیں اور پھر زمین پر چڑکاؤ کریں یہ ایک ایکڑ رقبہ کیلئے کافی ہے۔

صفراء عشریہ پانچ فیصد کارپسلفیٹ سلوشن اسپرے کریں (137 گیلن ایک ایکڑ کیلئے)

موسم بہار اور گرمیوں کے شروع میں اسپرے کریں اور دو سے تین ماہ میں دوبارہ اسپرے کریں۔

کارپسلفیٹ کے صحیح استعمال کیلئے محکمہ امور حیوانات کے تجربہ کار ماہرین سے مشورہ ضرور کریں۔

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## President Alvi calls for promotion ...

Continued from front page

Balochistan Governor Zahoor Ahmed Agha, Chief Minister Jam Kamal Khan and Minister for Agriculture Zamarak Khan Piralizai also spoke on the occasion.

The president, while speaking to the lawmakers at Governor House, said Gwadar would become an important trade and economic hub of the country by connecting Balochistan with Central Asia. The president also held a meeting with the governor and chief minister to discuss the security situation and development projects in Balochistan.

## Transmission and development ...

Continued from page 08

### Control and Management:

*Campylobacter* infections typically cause self-limiting gastroenteritis and the most important treatment is to avoid dehydration by fluid therapy. Antimicrobial treatment is needed only in the most severe and persisting infections or infections of

young children, pregnant women as well as old and immune-compromised patients. Globally, the incidences of resistance to several important antibiotics useful in the treatment of campylobacteriosis are increasing and multiple resistance patterns to several classes of antibiotics are emerging. Since several antimicrobials are no longer effective in the clinical treatment of campylobacteriosis, new generation of antibiotics and novel treatment should be evaluated. Modern molecular approaches, such as genomics and proteomics, are expected to provide new insights into the molecular mechanisms involved in the development of antimicrobial resistance in *Campylobacter*.

**"Never believe that animals suffer less than humans. Pain is the same for them that it is for us. Even worse, because they cannot help themselves"**

~Louis J. Camuti

وحید، پروفیسر ڈاکٹر محمد فیاض قمر (Jhang UVAS Campus) ڈپٹی ڈائریکٹر ڈاکٹر غلام اکبر بزدار (R&DC Rakh Khairwala Layyah) کی سائنٹیفک راہنمائی بھی شامل کی گئی۔ اس تحقیق کے پرنسپل انویسٹیگیٹر ڈاکٹر محمد اشتیاق



کا کہنا ہے کہ اس تحقیق سے حاصل ہونے والے نتائج کو استعمال کرتے ہوئے

بھیڑوں میں پوشیدہ ساڑ کو انتہائی پہلی سٹیج پر تشخیص کیا جاسکتا ہے جو بھیڑوں میں ساڑ کی مرض کو کم کرنے میں فائدہ مند ہے پاکستان بھر میں بھیڑوں کی اجمہری ہوفارمنگ کے لیے فائدہ مند ہے۔



پوشیدہ ساڑ و پھیلائے والے جراثیموں کی تشخیص کے لیے RapID Staph Plus System کا استعمال کیا گیا۔ تھلی بھیڑوں میں ساڑ کی انتہائی پہلی سٹیج پر تشخیص کے لیے دودھ میں موجود ایک انزائم Lactate Dehydrogenase کا تناسب چیک کیا گیا۔ جس کا تناسب متاثرہ بھیڑوں کے دودھ میں بہت زیادہ تھا۔ اس تحقیقاتی کام کے تمام مراحل کے لیے پروفیسر ڈاکٹر سید احتشام الحق، ایسوسیٹ پروفیسر ڈاکٹر عثمان

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## بھیڑوں میں ساڑو کی قبل از مرض تشخیص کے ضروری اقدام

ساڑو (Sub Clinical Mastitis)  
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بقیہ صفحہ نمبر 15

اینٹیل سائنسز لاہور (جھنگ کمپس) میں مکمل کیا اس تحقیق کے لیے ضلع لیہ میں موجود تھلی بھیروں کے مختلف ریوڑ سے دودھ کے سپل اکٹھے کیئے گئے بھیروں میں دو طرح کا ساڑو پایا جاتا ہے ظاہری ساڑو (Clinical Mastitis) جس کا تناسب بھیروں میں کم ہوتا ہے۔ پوشیدہ

بڑھوتری کا رک جانا بھی شامل ہے۔ دودھ میں جراثیموں خارج ہونے اور دودھ کے اجزائیں تبدیلیوں کی وجہ سے دودھ انسانی استعمال کے قابل بھی نہیں رہتا۔ ڈاکٹر محمد اشتیاق ایم فل مائیکرو بیالوجی کے طالب علم نے بھیروں میں پوشیدہ ساڑو کی مرض پر تحقیقاتی کام پونیورسٹی آف ویٹرنری اینڈ

ڈاکٹر محمد اشتیاق ایم فل سکالر کا تحقیقاتی منصوبہ  
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پاکستان میں بھیروں کی کل تعداد 31.2 ملین ہے ایک اندازے کے مطابق سالانہ 41 ہزار ٹن بھیروں کا دودھ انسانی استعمال میں آتا ہے بھیر کے دودھ کی بڑھتی ہوئی مانگ کی وجہ اس میں موجود 8% صلاحیت 15% ہوتی ہے۔ تھلی بھیر کا دودھ باقی ماندہ بھیر کی نسلوں سے زیادہ ہوتا ہے اس وجہ سے اس کے بچوں کی بڑھوتری بھی اچھی ہوتی ہے۔	ساڑو بھیروں میں پایا جانے والا ایک
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