

THE 'WORLD'S LONELIEST ELEPHANT' MOVES TO NEW HOME IN CAMBODIA

President Alvi, US Pop star Cher bid adieu to Kaavan

AVN Report

ISLAMABAD - Kaavan the capital's lone elephant set to leave for Cambodia on Nov 29 was given a farewell by President Dr Arif Alvi and First Lady Samina Alvi at Marghzar Zoo recently. The president visited the zoo a day after the citizens said goodbye to Kaavan with songs and speeches. Meawhile, US iconic pop star Cher arrived in the capital to see off Kaavan, the lonely elephant at Marghazar Zoo, being relocated to a sanctuary in Cambodia recently. Cher, 74, will remain in Pakistan for three days and on the first day of her visit she called on Prime Minister Imran Khan and offered her support for furthering the green



initiatives of the PTI government through her organisation Free the Wild. Earlier, after living in Islamabad for

35 years, Kaavan will be shifted to a sanctuary in Cambodia following directions by Islamabad High Court (IHC) because of its

improper care due to the absence of natural habitat at the zoo. Speaking on occasion, President Alvi said, "The judgment passed by IHC was in line with the Islamic traditions of caring for animals and keeping them in an environment best suited to them." "Detaching young animals from their mothers is the biggest cause of their emotional distress." He expressed confidence that Kaavan would find happiness in Cambodia after being surrounded by its companion elephants. He appreciated the efforts of the Ministry of Climate Change and the Islamabad Wildlife Management Board for the effective implementation of the IHC order. **Continued on Page 19**

Editorial Board

Founder
Ayaz Mahmood

Publisher & Managing Editor
M Hassan Mahmood

Chief Executive
Syed Hashim A Hasan

Honorary Advisors/Editors (Technical)
Dr Aamir Ismail Rizvi
Dr Hammad A Hashmi
Dr Adil Rasheed

Manager Production & Coordination
M Irfan Ali

Advertising Manager
SM Shakil (0300-2559344)

Business Executive
Haroon Rashid (Islamabad) 0300-9710774

Graphic Designer & Layout
Sh M Sadiq Ali

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

{Disclaimer}

Contents of AVN do not necessarily reflect the views of the publisher, editor and the members of the editorial advisory board. The publisher and the editor bear no responsibility/liability whatsoever for any damage resulting from the use of the contents herein.

Poultry producers demand govt to allow free market to determine prices

AVN Report

LAHORE - The Pakistan Poultry Association (PPA) recently urged the government to allow the free market to operate and let the demand and supply determine the price of poultry (chicken) and its by-products. In a press briefing, PPA Vice Chairman for the North Region Raja Attiqueur Rehman Abbasi said that the poultry sector formed about 40 per cent of the total meat consumption. Abbasi added that the country's Poultry industry supplies prime quality protein food in the form of poultry meat and eggs, at a very affordable price. "The country's poultry industry has an annual turnover of over Rs800bn and provides employment to over 1.5 million people directly and indirectly," he said. The PPA officer bearer added that the industry was producing 1,322 million kilogramme of chicken meat



Continued on Page 19

Predef® 2X

Isoflupredone acetate 2 mg/mL

Sterile Aqueous Suspension



- Long-lasting 48 hour gluconeogenic activity
- The only corticosteroid approved by the U.S. Food and Drug Administration for lactating dairy cows

zoetis
FOR ANIMALS
FOR HEALTH
FOR YOU

Powered by:

GH AZI
BROTHERS

Ghazi House, D-35, KDA Scheme No. 1, Miran Muhammad Shah Road, Karachi-75350, Pakistan.
Tel: +92 21 111 250 365 | Fax: +92 21 3454 3763 | E-mail: mail@ghazibrothers.com.pk



Together, beyond animal health

Imidox injection

A quality product where you can trust!



A proven & tested treatment for:

Babesiosis | Anaplasmosis | Canine Ehrlichiosis

Powered by:

GH AZI
BROTHERS

Ghazi House, D-35, KDA Scheme No. 1, Miran Muhammad Shah Road, Karachi-75350, Pakistan.
Tel: +92 21 111 250 365 | Fax: +92 21 3454 3763 | E-mail: mail@ghazibrothers.com.pk



The Leading Pakistani Brand

Pearl Group



1 VETY BIG GRO
Composition: Antibiotic & Vitamin Complex
Dose: 1 gm per Liter
Best Against Early chicks Mortality & Bacterial Enteritis



3 VETY LINCOCO
Composition: Lincomycin Hd 10gm
Colistin Sulphate 80 M.I.U
Dose: 1 gm per 2 Liter



2 VETY ENROX 20%
Composition: Each ml contain:
Enro Floxacin.....20%
Dose: 1 ml per 4 liter



5 VETY AMANTEX 98%
Composition: Amantadine HCL 98%
Dose: 1 grm per 30-35 liter
1 grm per 40 kg Bb.wt
Get the Amantex-98% Not the flu



4 VETY LYTE
Composition: Electrolytes & Multi Vitamins
Dose: 1 gm per 2-4 Liter



7 VETY TYLO EF
Composition: Each kg Contains :
Tylocin tartrate.....200 mg
Erythromycin Triocyanate50mg
Furatadone Hydrochloride.....100mg
Vitamin A WS2,500,000IU
Vitamin D3 Ws1,500,000IU
Vitamin E Acolate.....10 gm
Dose: 1 gm per liter



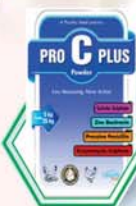
6 VETY VIT-E
Composition: Each 200 ml contains:
Vitamin E.....24000 mg
Selenium.....440 mg
Dose: 1 ml per 8-10 Liter



9 BROXY
Composition: Each 1000 ml Contains:
Tylosin Tartate.....100 gm
Doxycycline HCL.....200 gm
Colistin Sulphate.....450 M.I.U
Bromhexine.....4 gm
Dose: 1 ml per 2 liter



8 COCCI-DOT
Composition: Each kg contains:
Amprolium.....25%
Furatadone HCL.....20%
Dose: 1 gm per 2 Liter



10 PRO C PLUS
Composition: Each kg contains:
Procaine penicillin.....12 gm
Streptomycin Sulphate.....36 gm
Zinc Bacitracin.....52 gm
Colistin Sulphate.....80 M.I.U
Leads Specs
Dose: (60 to 100 gm per 50kg bag of feed)

HICOS 250

(Tilmicosin)

Oral Solution

**For the treatment & control
of Mycoplasmosis in Poultry**



**NOW
AVAILABLE IN
5 LITER PACK**



High Quality - Our Strength

Animal Health Division



WAR OF BASMATI RICE

'Pakistan will fight against India before EU Commission on branding rights'

AVN Report

ISLAMABAD - Pakistan has prepared a detailed response for submission before the European Commission on December 10, 2020, to foil the Indian attempts for obtaining branding rights on Basmati rice, Adviser to PM on Commerce Abdul Razak Dawood said recently.

He hoped that Pakistan's defence was ready and the Indian claim on Basmati rice would be rejected in totality. The decision to

this effect is expected to be announced within a one-year period, he added. Adviser to the PM on Commerce Abdul Razak Dawood said that he would be visiting Afghanistan from November 16 on a two-day visit to kick-start negotiations on the revision of Afghanistan-Pakistan Transit Trade Agreement (APTTA).

"We possess so many documents related to the past on account of minutes of meetings and present ones. We will present all these documentary proofs to the European Union's Commission to prove that Basmati rice is our brand," Adviser to the PM on Commerce Abdul Razak Dawood said in an interview with a local newspaper here at his office recently. He said that India's stance on Basmati rice was impossible to prove because Pakistan possessed every proof to foil New Delhi's attempt. "Our first statement will be submitted on December 10, and then Pakistan will have to submit its application in the second round. We hope that the result in this regard will be announced in one year. I met with the Attorney General yesterday to ensure that we hire a good law firm to defend our

Basmati case before the EU Commission," he added. Regarding Afghanistan, he said that the Afghan side was a tough negotiator but hoped that the revised transit agreement would be done in the next three to four months. He said that the smuggling back of goods into Pakistan was our major concern and



Islamabad conveyed its shopping list with the Afghan authorities. He said that India had not so far taken up its demand for getting the access of Indian goods through the Wagah border.

When asked about the market access after the recent US elections, he said that the new government would take some time to settle down but getting market access from Washington was not an easy task yet Islamabad would continue its efforts to get increased market access.

When asked about the establishment of Special Economic Zones (SEZ) under CPEC, he said that it requires a lot of spadework and acquisition of land is a provincial subject. He said that the SEZ at Dabeiji would be quite crucial because land scarcity was hampering Karachi's industrialists. One SEZ at Sundar became successful, and its model would be replicated. He said Faisalabad's SEZ was operating and 10 to 15 units were in the process of relocation. "It would be great if Pakistan would be able to relocate 1,000 Chinese units at Gawadar or other SEZs in Pakistan," he added.

To another query about the export targets, he said that the government wanted to fetch \$27 to \$28 billion exports of goods and services during the current fiscal year. He said that he used to give a range of export targets for the current fiscal, but after the second wave of the outbreak of COVID-19

pandemic, he was a bit reluctant to give any figure. When asked again, he replied that for export of goods, our target stood at \$22 to

\$23 billion and for services \$5 billion, so in totality exports of goods and services could fetch \$27 to \$28 billion.

He said it was not good to rely on five traditional sectors of exports, so the government had prepared the Strategic Trade Policy Framework (STPF) for focusing on pharmaceutical, engineering, agro products, meat and poultry. Our policy is product diversification within sectors like textile and then increase in other sectors. He said that fruits and vegetable exports had so far fetched \$750 million as mango and keno exports were the major contributors. He said the export of mango was targeted at 80,000 tons, but it went up to 125,000 tons in the current season. Our second focus is on geographical diversification to boost up exports to Africa, Central Asian Republics and Russia and other states. Then the government decided to come up with Look Africa policy as one consultant was coming to Pakistan soon to exploit the situation. "We are giving a target of \$5 billion exports to Africa," he added. In Africa, our engineering products such as tractors are going and also rice."

Hilton Pharma announces re-launch of renowned products from Elanco. Esb3 & Cosumix Plus

SWAT - The leading pharma, nutrition and animal health care business group in Pakistan, Hilton Pharma has recently joined hands with Elanco Animal health, world's leading research based,



and multinational animal health business group. Hilton Pharma announced re-launch of renowned & trusted products, Esb3 & Cosumix Plus, (legal trademarks of Elanco Animal Health) for the Pakistan market.

Esb3 & Cosumix Plus belong to the class of anti-microbial drugs, recommended for the treatment and control of bacterial and protozoal infections in poultry. The products were re-launched in the

Continued on Page 15

MEDICINE BUSINESS OPPORTUNITY



EU/Singapore Imported Health & OTC, good quality medicines are available for exclusive distribution country wide with Form 7 on indent or LC cost, including poultry/dairy farm level products like multivitamins, electrolytes, disinfectants, organic acids, immunity booster, emulsifier and feed additives like prebiotics, enzymes, toxin binder, gut health, vitamin/mineral premix. Interested importer/marketing personals looking for long term partnership may contact at email: "jawadimpexint@gmail.com" with their business profile & requirements.



STRIKE **3** diseases with **Esb[®]₃**

- Wide anti-coccidial and anti-bacterial activity
- Highly effective and well tolerated in critical conditions
- High solubility and palatability
- No adverse effect on feed utilization, laying performance or egg shell quality

Composition:

Esb3 contains:
Sulphaclozine sodium 30%



Hilton Pharma (Pvt.) Ltd.
Progressive Plaza, Beaumont Road,
Karachi-Pakistan.
www.hiltonpharma.com

High Quality - Our Strength



Camels are considered one of the most important and ecologically harmless domesticated animals in dry region of Asia and Africa. They have a great economic importance not only as draught animals but also for their milk and other by-products. Camel milk is entirely different than milk from a cow or a goat.

Better for the Environment

Consider the natural habitat of camels. They survive with relatively little water and plant life for long periods of time. For this reason, camels need much less grazing area and can produce milk with a lower environmental impact.

Nutritional Profile:

Components	Amount	Components	Amount
Water	87--91 %	Sodium	360—620 mg/l
Protein	2.7—4.0 %	Zinc	4.4—5 mg/l
Fat	1.8--3.8 %	Pantothenic Acid	0.88 mg/l
lactose	3--5 %	Vit.C	24-36 mg/l
Calcium	100—160mg/100ml	Vit.B12	0.002 mg/l
Copper	1.3--1.8 mg/l	Vit.B6	0.52 mg/l
Phosphate	580—1040 mg/l	Vit.B2	0.42-0.80 mg/l
Iron	1.3--2.5 mg/l	Vit.B1	0.33-0.60 mg/l
Potassium	600—2100 mg/l	Vit.A	0.1-0.15 mg/l
Magnesium	75—160 mg/l	Vit.E	0.53 mg/l
Manganese	0.08--0.2 mg/l	Niacin	4.6 mg/l

Taste:

Its taste is closest to cow milk of any alternative milk. It is a little sweeter but not overly earthy or grassy like stronger flavored goat milk.

Color and odor:

The color of camel milk is opaque white with faint sweetish odor.

What Makes camel Milk Different:

Protein Structure :

Camel milk does not contain the same proteins that people are often allergic to in cow's milk (A1 casein and lactoglobulin) and is usually well tolerated by those with dairy allergies. It has about the same amount of protein and carbohydrates as regular cow milk, but impacts blood sugar divergently.

Fat Content:

Camels produce milk that is naturally low in fat (only 2-3%).Also unlike cow milk, the fats produced by camels in their milk are completely homogenized naturally occurring Omega-3 fatty acids. This means that camel milk can be frozen and thawed without changing consistency.

Immunoglobins:

Camel milk is high in potent immunoglobulins, powerful immune-boosting substances. The immunoglobulins in camel

Camel milk

by Syed Balaj Hussain Rizvi
College of Veterinary and Animal Sciences
(Sub-campus UVAS Lahore) Jhang,
& Syeda Tooba Raza
Govt. Islamia College (LCWU)



milk are smaller than human immunoglobulins and can more easily pass into tissues in the body. These tiny immunoglobulins may be the reason for camel milk's popularity in helping lessen problems like autoimmune disease, allergies and even autism.

Similar to Breast milk:

Camel milk is nutritionally more similar to human breast milk than to regular dairy milk. For this reason, it has been used around the world as a supplement or replacement for breast milk in cases when mom was unable to nurse or baby needed extra milk.

Help for Diabetes

Unlike other milks, it shouldn't cause a rise in blood sugar, but the benefits extend beyond that. In fact, some researchers are even using this milk to reduce the amount of insulin needed.

Immune Boost

Camel's milk contains many of the same immune-protecting substances as human milk. It contains high levels of immunoglobulin A and beneficial enzymes like lysozyme and lactoperoxidase, which are helpful to the body in fighting infection.

Alleviate Allergies

Not only is it considered a

good dairy alternative for allergic individuals, but there is some research indicating that it may actually help reverse allergies.

Heart and Blood Health

The monounsaturated fats (especially oleic acid) present in camel milk give it some of the same benefits as olive oil. It also contains A2 beta casein, which is different than the A1 casein found in most dairy milk. Other research indicates that the unique fatty acid in milk from camels is more beneficial to the heart and to maintaining healthy cholesterol levels. It also helps to prevent anemia.

Angiotensin converting enzyme inhibitors (ACE inhibitors):

Camel milk contains angiotensin converting enzyme inhibitors (ACE inhibitors) are medications that slow (inhibit) the activity of the enzyme ACE, which decreases the production of angiotensin II. As a result, blood vessels enlarge or dilate, and blood pressure is reduced.

GABA:

It contains high amount of GABA which is a chemical messenger that is widely distributed in the brain. GABA's natural function is to reduce the activity of the neurons to which it binds. Some researchers believe that one of the purposes that GABA serves is to control the fear or anxiety experienced when neurons are overexcited.

Protective proteins

Research has also found protective proteins in camels milk that may be antiviral, anti fungal and antibacterial.

Skin & Eye Health:

It improves skin and eye health.

How camel milk dominated over cow milk?

Camel		Cow
10 %	Protein	5 %
10 %	Potassium	5 %
10 %	Phosphorus	5 %
15 %	Calcium	7 %
70 %	Vitamin B1	11 %

Why camel milk is expensive?

Camel milk can cost you 30 times the price of cow milk. Compared to 600million metric tons of cow milk produced worldwide only about 3 million tons of camel milk is produced every year.

‘Cattle owners should take special care of animals from smog’

AVN Report

MULTAN - Livestock Department recently urged upon the cattle owners to take special care of their animals from severe weather conditions and smog.

Cattle are the precious asset of the farmers, and any negligence in animal's care can cause losses to farmers.



This was stated by Deputy Director Livestock, Dr Jamshaid Akhtar while talking to farmers during a session related to "Farmers Day". He suggested farmers construct sheds to keep animals away from extreme winter. The animals should be given fresh water instead of stagnant water. The improper care can put the lives of animals in danger, he noted. The pregnant and lactating animals should be given 100 grams of "Gurr" per day, he suggested. Both the feed and animals should be exposed to direct sunlight as the sun bath is vital for maintaining health.

The animals should be fed, dried and green, mixed fodder. Wanda and mineral should also be given as these provide immunity to animals.

Usually, during November and December, the animals fell prey to some diseases including flu, fever chest infection etc. He advised farmers to vaccinate their animals against different diseases as per schedule.

Livestock dept. distributes 90 poultry units in Chiniot

AVN Report

FAISALABAD - The Livestock Department distributed 90 poultry units among applicants in district Chiniot recently.

The poultry units comprising 12 poultry birds were distributed in three tehsils Chiniot, Lalian and Bohawana at a subsidised rate of Rs 1050 per unit.

Deputy Director Livestock tehsil Dr Qaisar Aziz distributed 30 units in tehsil Chiniot, Dr Atta Subhani also distributed the same number of units in Lalian. At the same time, remaining were given away by a representative of the department in tehsil Bohawana.



Effects of Aflatoxin and Adenovirus in Poultry



Mycotoxins are low molecular weight heat-stable secondary fungal metabolites that are formed through various toxigenic fungi. Worldwide toxin stimulating fungi have existed, and their capability to grow and boost toxins on several cereal crops makes them unavoidable pollutants of animal and human food chain. Due to the high temperature in tropical and subtropical areas makes them more susceptible to the harmful effects of mycotoxins.

Anaerobic condition is considering favourable for the multiplication of these toxigenic fungi in damaged grains and the production of mycotoxins. The significant mycotoxins that are having both immunosuppressive and toxigenic effects primarily include ochratoxin A, aflatoxin B1, trichothecenes, T-2, Zearalenone and Deoxynivalenol. Ochratoxins and aflatoxins are the most vital toxin among all of these mycotoxins and formed through storage fungi. *Aspergillus* species such as *A. flavus* and *A. parasiticus* are nearly found to create aflatoxins in poultry feed throughout the world. Aflatoxins are of 4 types such as AFB1, AFB2, AFG1 and AFG2; among all of this AFB1 is measured as more harmful and its damaging effects range from mild indigestion to severe carcinogenic effect. International agency for research on cancer (IRAC) has recognized the AFB1 as a group-1 carcinogenic agent. AFB1 is considering as the most potent nephrotoxic and hepatotoxic agent leads to mutagenic, immunosuppressive and teratogenic effects in both poultry and livestock. Aflatoxicosis is considering a significant issue in the poultry industry due to its existence and

by Dr Maria Jamil,
Dr Muhammad Kashif Saleemi

*Department of Pathology, Faculty of Veterinary Science,
University of Agriculture, Faisalabad*

toxicities. Aflatoxin adulteration of poultry feed and feed ingredient in Pakistan have already been documented. In poultry feed and feed ingredient occurrence of aflatoxin B1 leads to excessive immunosuppression and retarded growth in birds. Aflatoxins are well known to inhibit protein synthesis and may be detrimental to the cell and tissue involvement in protein syntheses such as liver and gut epithelium. Due to T-2 and AFB1, intoxication hematocrit value and haemoglobin concentration declined. These toxins are hepatotoxic, which leads to enhance serum enzyme concentration. Most of the time, a high level of mycotoxins in field condition resultant in immunosuppression, which exposed the birds to infectious diseases.

Effects of Adenovirus in Poultry:

Hydropericardium syndrome (HPS) and inclusion body hepatitis are the (IBH) are the major diseases caused by fowl adenovirus in birds. The etiological agent of HPS and IBH belong to the fowl adenovirus type 4 serotype. As the name of the illness designates that hydro-pericarditis and hepatitis are the primary pathological outcomes of FAdV-4. Along with these pathological findings, hemorrhagic disorders, anaemia, nephritis, pulmonary oedema, massive mortality was also detected in FAdV-4 infected birds. Mainly fast-growing birds between 2-3 weeks of age are infected by this adenovirus. The FAdV was found in birds to delay the growth of lymphoid organs.

Infected birds with FAdV-4 showed in bone marrow pancytopenia, nephritis and intranuclear inclusion bodies in hepatocytes.

Effects of AFB1 co-infection with Adenovirus in Poultry:

Infected birds with FAdV have declined erythrocytic count and hematocrit value, severe anaemia and enhanced total leucocyte count. Experimentally it has been detected that for the growth of clinical disease of FAdV-4 synchronous immunosuppression is needed. That's why immunosuppression due to chicken infectious anaemia, infectious bursal disease and mycotoxicosis were found to enhance the pathogenicity of FAdV. At Angara Goth in Sindh Province, the first outbreak of FAdV-4 in Pakistan was recognized. In Pakistan, the vertical spread of fowl adenovirus has also been documented. Currently, in the poultry industry AFB1 and fowl adenoviruses, infection is a significant problem because it leads to high economic losses by a reduction in weight and immunosuppression. Recently experiments were also conducted to examine the pathological effects of AFB1 adulteration in birds co-infected with FAdV-4. Currently, high mortality is documented, having lesions of HPS-IBH and AFB1.

So concluded that mycotoxins are well known to produce the immunosuppression that can lead to exposing the birds to various infections. Among these, hydropericardium syndrome (HPS) is the significant disease produced by FAdV-4, which may occur in mycotoxin adulterated flocks. AFB1 and co-infection with adenovirus can cause severe immunosuppression in birds and leads to economic losses.

Govt gives permit to Dubai ruler to 'export' 150 falcons

AVN Report

KARACHI - The federal government has issued a special permit to Sheikh Mohammad bin Rashed Al Maktoum, Vice President of the United Arab Emirates and Ruler of Dubai, to 'export' 150 falcons of rare species from Pakistan to the UAE, sources told recently. According to the sources, the permission was issued by the Ministry of Foreign Affairs and delivered to the UAE's embassy in the federal capital. The rare species peregrine and Saker are used by Arab hunters

to trap houbara bustards. As hunters need to replace ageing falcons with younger ones, the demand for these birds almost always remains stable. Falcons are protected under international nature conservation treaties including the Switzerland-based Convention on International Trade in Endangered Species of Flora and Fauna (CITES), and their trans-boundary travel is restricted. Pakistan is a signatory to the treaty. Trapping and trade in falcons are banned under the wildlife

protection laws of the country. There are no formal shops and markets anywhere for lawful sale and purchase of falcons. The sources said that in the face of a ban on trapping and trade of falcons legally, a 'falcon exporter' has to purchase illegally trapped falcons from illegal wildlife traders. The federal government and the 'exporter' will be guilty of patronising this illegal wildlife trafficking. Besides violating various local wildlife protection laws as well as international nature conservation treaties, the government is putting

at risk the Generalised System of Preferences (GSP) Plus status given to it by the

European Union (EU), the sources explained. The status facilitates the easy access of Pakistani exports to the highly lucrative market of the European Union. A country having the GSP Plus status has to observe international nature conservation treaties, and if it violates these agreements,

Continued on Page 19





MAXIMUM PROTECTION NDV LOG₁₀⁹ EID₅₀



ND Killed Vaccine
Conferring Protective Antibody Titers



MYCOPLASMA GALLISEPTICUM (MG)

A vast infected disease in the poultry industry

by Dr Maria Jamil, Dr Muhammad Kashif Saleemi

Department of Pathology,
Faculty of Veterinary Science,
University of Agriculture, Faisalabad

M *gallisepticum* belongs to the family Mycoplasmataceae. It is the most pathogenic avian mycoplasma. *M. gallisepticum* usually caused chronic respiratory disease (CRD) in broiler and processing plants, enhancing the condemnation. Turkeys are more prone to *M. gallisepticum* infection and lead to swelling of infraorbital sinuses known as infectious sinusitis. It also infects the pigeon, geese, peafowl, chukar, and pheasant of all ages. worldwide *M. gallisepticum* causes the high

has also been reported that chicken lost about 16 eggs over their laying cycle of 45 weeks.

Transmission of *M. gallisepticum* in poultry: *M. gallisepticum* is transmitted both horizontally as well as vertically. The vertically transmitted to egg (transovarial) from breeder to progeny and horizontally transmitted through contaminated water, feed, and environment also by fomites such as shoes, clothes, and equipment. Infection may be dormant in birds for days to a month, but when the birds are in stress, then the horizontal transmission occurs frequently through respiratory route and aerosol. Once the birds are infected, they remain infected throughout life and act as a

thickened

- Mucopurulent sinusitis, fibrous perihepatitis and adhesive pericarditis

- Microscopically: seen mucous membranes become necrotic, hyperplastic, and thickened with inflammatory cells. Lymphoid hypoplasia

Diagnosis of *M. Gallisepticum* infection:

- History, clinical sign, and gross lesions
- Serological test: Haemagglutination-inhibition, ELISA
- Immunofluorescence with species-specific antibodies
- Isolation of *M. gallisepticum* by taken swab samples from the trachea, air sac, lung, choanal cleft, nasal turbinates and infraorbital sinuses.



economic losses in commercial and non-commercial flocks. Adhesins, the integral membrane surface protein that binds to the receptor on host cells permitting the colonization and infection also the major virulence factors involved in immune evasion and antigenic variation. Trachea, nasal passage, conjunctival epithelium are the more prone for initial colonization and infection. But in case of severe and acute disease, an illness may spread to air sac, lung and bronchi. Once birds are infected, they remain a carrier for life.

Economic impact: Every year MG is thought to cost the worldwide poultry industry 780million\$. On egg production alone in the United States, it is believed to cost about 120 million \$. MG infection may cause to the culling of the whole flock to avoid further transmission.

MG infection leads to decreased growth and production, carcass condemnation, and severe economic losses occurred. It

carrier/reservoir for other birds. Often flock to flock spread is occur through direct or indirect contact by the movement of people, birds, or fomites from infected to the susceptible flock.

Factors responsible for spreading the infection:

- Cold weather
- Poor air quality
- Crowding
- Concurrent infection
- Some live virus vaccine

Clinical signs of *M. gallisepticum* in poultry:

- Respiratory distress: marked rales, sneezing, coughing and difficult breathing
- Nasal discharge
- Conjunctivitis and frothiness of eyes
- Infraorbital sinuses swelling
- Decreased weight gain and feed conversion rate
- Leg problem
- Reduced hatchability
- Airsacculitis

Lesions of *M. gallisepticum* in poultry:

- Airsacculitis, Mild catarrhal sinusitis and tracheitis
- Air sac become turbid and

Diagnosis readily bases on real-time PCR because it is sensitive, specific, and fast for detection of *M. gallisepticum*.

Treatment, prevention, and control of

***M. gallisepticum* in poultry:**

- Tylosin and tetracyclines used to avoid the vertical transmission (from hen to egg)
- Antibodies can eliminate the clinical signs
- Vaccination (F-strain, ts-11 and 6/85) and recombinant fowl pox-M *gallisepticum* vaccine
- Prevention is usually through scouring of chicks and poults from *Mycoplasma gallisepticum* free breeder flock
- Good biosecurity to control the infection
- The most effective control program is to avoid entering of disease by good biosecurity plan and then regular monitoring with serology for confirming the infection-free status and to maintain the *M. gallisepticum* free breeder flock.

"It is best to eradicate the whole infected breeder flock for better control."

DC orders for cattle vaccination campaign

AVN Report

SUKKUR - On the directives of Deputy Commissioner Ghotki Khalid Saleem, a cattle vaccination campaign started in the district to protect them from various diseases recently.



Livestock officials had set up camps at the weekly cattle markets and were distributing medicines among the farmers to protect their animals from diseases.

Pursuing the directives of DC, they said that the livestock department had launched the campaign after receiving numerous complaints from different parts of the district concerning the spread of animal diseases.

They said the livestock teams also held meetings with farmers in different areas to get information about diseases. The department also started a special spray and vaccination campaign in villages and weekly cattle markets.

They said the department had carried out a spray of the viruses which were usually transferred from cattle to human beings.

Dutch cull 190,000 chickens after bird flu outbreaks

AVN Report

The Hague: Dutch authorities have culled some 190,000 chickens after a highly contagious strain of bird flu broke out at least two poultry farms, the agriculture ministry said recently.



Health workers slaughtered around 100,000 hens at a poultry farm at Hekendorp outside Gouda while 90,000 chicks were culled at Witmarsum, in northern Friesland. In both cases "a highly contagious strain of the H5 variant" was suspected, the ministry said in a statement.

Continued on Page 17

ایلی ٹاکس

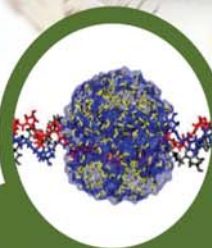
تمام اقسام کے مائیکوٹاکسینز کے لئے



Elitox®
Mycotoxins eliminators



Mycotoxin degrading enzymes



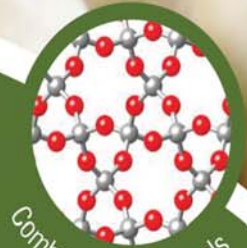
Biopolymers



Vitamins



Plant Extracts



Combination of Minerals

Power Mycotoxins ELIMINATOR

5Star
Components

Afla Toxin
Ochra Toxin
Fumonisin Toxin
Zearalenone Toxin
Trichothecene Toxin
Deoxynivalenol Toxin

Enzymatic Detoxification of
Non Polar Mycotoxins

Adsorption of Polar
Mycotoxins

**Non-Toxic
Metabolites**

Dosage: Poultry: 0.5 - 1.5 Kg / ton feed
Cattle: 10 - 20 gm / head / day
Or 0.5 - 1.5 Kg / ton cattle feed

Sole Distributor in Pakistan:



**JAWAD IMPEX
INTERNATIONAL**
INDENTOR, IMPORTER & DISTRIBUTOR
www.jawadimpexintl.com

Manufactured By:



Impextraco®
Optimizing feed ingredients

ANAVITE

VITAMIN & MINERAL PREMIX

Balanced formulation for optimum performance

balanced formula to
manufacture feed for
**BROILERS &
LAYERS**

برائلر اور لیئر
کے لئے بہترین
متوازن فارمولا



- For better growth
- For better FCR & Egg Production
- To overcome stress conditions
- To prevent from vitamins & minerals deficiencies

Dosage:

Anavite Vitamin Premix.....500 gm / ton feed.

Anavite Mineral Premix.....500 gm / ton feed.



Sole Distributor in Pakistan:

**JAWAD IMPEX
INTERNATIONAL**
INDENTOR, IMPORTER & DISTRIBUTOR
www.jawadimpexintl.com

Manufacturer:

Zagro Singapore (Pvt) Ltd.

www.zagro.com



PHIBRO AB.20 (TOXIN BINDER)

The Unique selling proposition (USP) OF AB 20 is that :

- * It binds my cotoxins NOT Nutrients.
- * It does not depress animal growth.
- * It does not depress tibia mineral concentrations.
- * It does not interfere with the metabolism of nutrients in the animal digestive tract.
- * AB20 is a specially processed smectite or montmorillonite clay, an aluminosilicate material with a 2:1 layered structure.
- * The only toxin binder in market which is characterized by alternating layers of tetrahedral silicon and octahedral aluminum layers coordinated with oxygen atoms.
- * The fineness of AB20 provides a large surface area accessible for binding to more my cotoxins.

PHIBRO ANIMAL HEALTH CORPORATION

Glenpointe Centre East, 3rd Fl
300 Frank W. Burr Blvd., Ste 21
Teaneck, NJ 07666-6712
USA

Represented by ELITE MARKETING ASSOCIATES

28, Empress Road, Lahore
Ph# 42-3-6375791, 6368548
Email: info@elitemarketingassociates.pk
Website: www.elitemarketingassociates.pk



GUMBORO CATCHER WINTERFIELD-2512



PoulShot®
IBD Win⁺

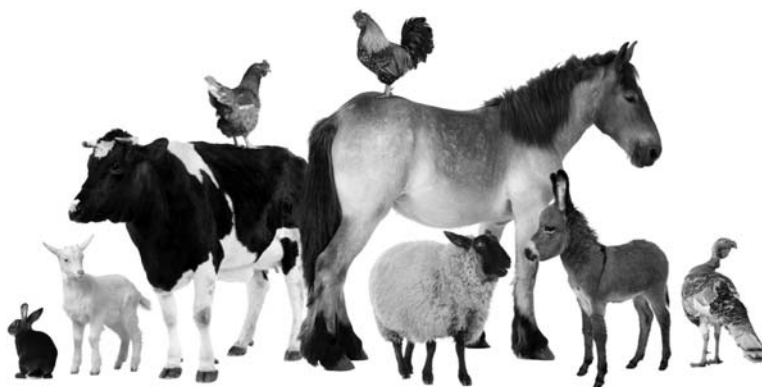


- Early and strong protection against vvIBD and classical IBD.
- Safe & guaranteed immunocompetence



Antimicrobials: Handle With Care

by **Aiman Nihal**, Hajvery University Lahore
and **Mohammad Munawar**,
KBCMA College of Veterinary and Animal Sciences,
Narowal Sub Campus University of Veterinary and
Animal Sciences (UVAS), Lahore



infective agent Sensitivity test. The lowest concentration of a drug that inhibits microbes with a given drug is called the minimum concentration (MIC). The lowest concentration of the drug that reduces the bacterial density to 99.9% is called the minimum bactericidal concentration (MBC). Antibiotic breakpoint concentrations are used to characterize antibiotic activity; the descriptive categories are sensitive, moderately sensitive (intermediate) and resistant. These concentrations are determined by considering the population distribution of the MIC population of a group of bacteria for the pharmaceutical, serum and tissue concentration after a regular diet, and for the given medication. Kirby - Bauer disk proliferation technique, this test is less expensive but less reliable than the micro-weakening method. However, it does provide quality sensitivity information. Filter paper discs that are stained with a certain amount of drug if they are placed on the surface of the agar plates attached to the microorganism culture. After 18 hours, the size of a clear inhibition zone is determined. The drug activity against the test strain is then linked to the size of the zone. The Kirby-Bauer technique does not reliably predict treatment against certain microorganisms (e.g. *Staphylococcus aureus*, *Shigella*).

In agent selection, the choice of an antiseptic agent should be based on its pharmaceutical properties and activity theory as well as various host, patient factors; pharmaceutical properties include the ability of the drug to reach the infection site and achieve the desired level in the target tissue.

- **The spectrum of Activity:** To effectively treat an infectious disease, the anti-infective drug Kazak Rogzin must be activated. Sensitivity testing or medical experience in treating a given infection may suggest the effectiveness of a particular medication. Identify suspected infection aetiology, diagnostic tests, evaluate diagnosis Determine setting for treatment Monitor patients and modify based on cultures, efficacy, and toxicity Switch to oral or home IV therapy when appropriate and Whether the discharge requires a follow-up of the patient's diagnosis or call anaesthesia therapy, which organisms are most likely to be infected. Experimental therapy Guided

therapy Choose patient and infection-based agents, including pathogens, patients, and infectious agents that most likely cause the infection.

- **Experimental therapy includes guided therapy:**

Choose patient and infection-based agents. Choose pathogens, patient and infection-based agents. The approach to the management of infection patients, the choice of method of prevention of infection drugs should take into account the different patient factors to determine what type of medication should be administered, the correct medicine. The route of diet and administration, and the likelihood of adverse effects of the drug, such as immunological status, a patient with a weakened immune system may need a prescription that rapidly eliminates pathogens, an agent caused by bacteria that is just one pathogen.

- **Suppresses the growth or reproduction of bacteriostatic agents:**

The presence of a foreign body, the effectiveness of anti-infective therapy is reduced in patients who have prosthetic joints or valves, cardiac pacemakers and various internal shunts. The pharmacological properties of the drug can vary widely among patients of different ages. In very young and ancient patients, drug metabolism and excretion are usually reduced. Elderly patients also have an increased risk of developing autoimmune diseases when they receive certain antibiotics, such as an underlying disease, occupational kidney or liver disease, which increases the risk of nephrotoxicity or hepatotoxicity when administering certain antibacterial drugs. Patients with central nervous system CNS disorders may experience neurotoxicity (motor impairment) during penicillin therapy. Patients with neuromuscular diseases such as myasthenia gravis have an increased risk of developing neuromuscular blockade during aminoglycoside or polymyxin B therapy.

- **History of drug allergies or adverse drug reactions:** Patients who have had a previous allergic or unfavourable other response to a particular antibiotic are at higher risk of experiencing the same reaction during subsequent administration of the drug. Patients with severe penicillin allergies, for example, should not retake medicine, except in life-threatening conditions.

Pregnancy and lactation:

Because drug therapy during pregnancy and lactation can cause side effects, the mother should weigh the need for antibiotics over the potential harm of the medication. The risk of adverse drug effects for both the mother and the fetus may increase. Also, there is a reduction in the number of plasma drugs in pregnant women, which leads to a decrease in drug treatment. Most medications, including antibiotics, appear in nursing mother's milk and can cause side effects in infants. For example, sulfonamides can cause bilirubin toxins to build up in the newborn's brain. G-Genetic Symptoms Sulfonamides can cause hemolytic anaemia in patients with a deficiency of glucose-6-phosphate dehydrogenase (G-6PD), which causes the patient to metabolize the drug faster, i.e., hepatitis Can develop. Experimental therapy in severe or life-threatening disease, anti-infective treatment must be started before identifying the infected organism. In this case, the choice of drug or drugs is based on clinical experience, which shows that a particular agent is useful in a given setting.

Broad-spectrum antibiotics are usually the best choice unless specific organisms are identified. In all cases, culture samples should be obtained before starting therapy. A combination of drugs in multiple antibiotic medicines should only be given if clinical experience has shown that such treatment is more effective than single-agent therapy in a particular setting. Prescribing multiple agents can increase the risk of side effects of toxic drugs and, in some cases, lead to drug animosity and consequently ineffectiveness of treatment. Indications for multiple agent therapy include increasing the need for antibiotic efficacy. The combination of the rapid effect of two or more agents may allow a reduction in the drug or a faster or increased impact of the drug.

- Treatment of infections caused by various pathogens such as intra-abdominal infections
- Preventing the spread of drug-resistant organisms during the treatment of tuberculosis.

Duration of anti-infective therapy:

To receive treatment, anti-infective therapy should be continued for a long time. In severe uncomplicated infections, treatment should usually be continued until the patient is afebrile and asymptomatic for at least 72 hours-chronic diseases such as endocarditis, osteoarthritis. Treatment may require a more extended period with an analysis of the treatment follow-up culture to assess the effectiveness of the treatment. The patient's response to anti-infective therapy should be monitored, appropriate treatment should be monitored, and the following

Continued on Page 15

Hilton Pharma ...

Continued from page 04

picturesque valley of Swat at Hotel Serena. The 5 day trip included technical and product training sessions of sales team and discussions on marketing strategies to optimize the market share. A one day excursion trip was also conducted at serene mountain range of Malam Jabba nearly 40 km from Saidu Sharif in Swat valley, Khyber Pakhtunkhwa. The day, full of adventure and excitement ended up with the lavish dinner menu of Trout fish and traditional cuisine. Launch of Esb3 & Cosumix Plus created an extraordinary enthusiasm in the team and they returned back with determination and passion to take these products to next levels of market acceptance and customer recognition. Hilton Pharma as always is committed in providing innovative and quality solutions to the Animal Health industry. - **Advertorial**

Antimicrobials ...

Continued from page 14

parameters should be monitored. The fever curve is an essential diagnostic tool; the fever curve can be a reliable indicator of response to therapy. The effort usually indicates a favourable response. White blood cell (WBC) count, in the early stages of infection, may increase the number of neutrophils from the peripheral blood smear above normal (neutrophilia), and bands with immature neutrophil form may appear left shift. In elderly, frail, or severely infected patients, the WBC count may be normal or abnormal. In radiographic results, small impressions, abscesses or cavities that appear on the radiograph indicate the focus of infection. As evidence of swelling, erythema, and tenderness, pain and swelling may occur when the disease is superficial or in the joint or bone, indicating possible signs of infection. Erythrocyte sedimentation rate ESR. Large elevations in ESR are associated with acute or chronic

conditions, especially endocarditis, chronic osteoarthritis, and abdominal disorders. Normal ESR does not rule out infection. At most, ESR is elevated as a result of non-psychological causes such as collagen vascular disease. **Serum complement concentration**, especially the C3 component, decreases in severe infections due to consumption during the host defence process. Lack of treatment when antibiotics fail, other drugs should not be added indiscriminately or otherwise altered. Instead, the situation should be reassessed, and diagnostic efforts stepped up. The reasons for treatment failure include the laboratory, or the patient may have misdiagnosed the following: Diagnosis, isolated organisms may not be the causative agent of the infection as the patient may have an uncertain condition. The regular non-drug regimen, the drug administration route, the dose frequency, or the duration of therapy may be inadequate or inappropriate. When planning anti-infective drug therapy should consider the appropriate choice of an antibiotic agent, patient factors and drug properties, and the spectrum of drug activity to be administered. **Microbial resistance** is usually caused by resistance to a specific antibiotic; the microorganisms can survive in the presence of the drug. Many gonococcal strains, for example, now resist penicillin. Drug resistance is common, especially in geographical areas where a particular drug has been overused and possibly misused. In unrealistic expectations, antibiotics are ineffective in some cases, such as in patients who require repeated surgical drainage until the duct is removed. For example, the presence of necrotic tissue or pus in patients with pneumonia, emphysema, or renal calcification is a common cause of antibiotic failure. Fever infections should not be treated with drugs unless the cause of the disease is identified. Although fever is often a

sign of infection, it is sometimes caused by non-psychological conditions such as drug reactions, phlebitis, neoplasms, metabolic disorders, and arthritis. These conditions do not respond to antibiotics. One exception to this position is neutropenic cancer patients. With no signs or symptoms of infection other than fever, such patients are widely treated with antimicrobial agents. Occurs within an hour or just before the surgical incision. This peak ensures serum and tissue antibiotic levels. Duration Prophylaxis should be maintained for the duration of the surgery. Lengthy surgical procedures, such as an extra dose in 3 hours, may be required. There is little evidence to support the continuation of prophylaxis beyond 24 hours. The antibiotic spectrum should be appropriate for typical pathogens. In general, first-generation cephalosporins, such as cephalosporins, are the preferred method of treatment for most patients. These agents have a reasonable spectrum, low frequency of side effects, favourable half-life and low cost. Vancomycin is a suitable alternative for penicillin-sensitive patients and methicillin-resistant S. aureus in such conditions. d. The way of administration. Intravenous (IV) or intramuscular (IM) routes are preferred to ensure good serum and tissue levels at the time of incision. **Antibacterial agents:** Used to treat infections caused by bacteria, antibacterial agents fall into several main categories: aminoglycosides, carbapenems, cephalosporins, erythromycin, penicillin (including various subgroups), sulfonamides, sulfonamides, Fluoroquinolones, metronidazole, urinary tract anti-infective aminoglycosides. These amino sugar-containing drugs are mainly used in infections caused by Gram-negative enterobacteria and suspected sepsis. Their activity against anaerobic and collective organisms is minimal-the toxic

potential of these drugs limits their use. Major Aminoglycosides include amoxicillin (amoxicillin), serentimecan (garamicin), kanamycin, pneumocon, netilmson, streptomycin, and tobramycin (nebisin). Mechanism of action, aminoglycosides are bactericidal. They bind to 30S ribosomal subunits and inhibit bacterial protein synthesis by interfering with the process, but some aminoglycosides are also attached to 50S ribosomal subunit. The procedure is not fully known. In the spectrum of activity, streptomycin is active against both gram-positive and gram-negative bacteria; however, widespread resistance to this drug has limited its use to organisms that cause plague and thalassemia, when penicillin to gram-positive streptococcus. And Mycobacterium tuberculosis (combined with other anti-tuberculosis agents). Amoxicillin, kinamycin, heliantoxin, toramycin, pneumococcal, and natalmecan are active against many Gram-negative bacteria (e.g., proteases, serotonin, and pseudomonas organisms). Gentamicin is active against some Staphylococcus strains. It is more active against toxins than Tobramycin. Amexin is a broad-spectrum aminoglycoside that contains activity against most aerobic gram-negative bacilli, as well as many anaerobic gram-negative bacterial strains that are resistant to hitamycin and toramycin. It is also active against tuberculosis and Mycobacterium aureus-intracellular (MAI). Tobramson may be more active than Pseudomonas aeruginosa than Normaican. Normaliman can be active against resistant organisms. It looks less autotoxic than other aminoglycosides. In addition to its activity against gram-negative organisms such as pneumococcal, Escherichia coli and Klebsiella pneumonia, many gram-positive organisms are active against, for example, S. aureus. P. aeruginosa and most streptococci are now resistant to neomycin. Streptomycin is used in the treatment of plague, telaraemia, acute brucellosis in combination with tetracycline, and other anti-tuberculosis agents combined with tuberculosis, gentamicin, tobamycin, amoxicillin, and natalman serious gram. There are treatments for negative bacterial infections, which are caused by Enterobacter, Certia, Klebsiella, and P. aeruginosa, Streptococcus viridins (combined with penicillin), pneumonia (combined with cephalosporins or penicillin), meningitis, complex urinary tract infections Infections, osteoarthritis, bacteria and peritonitis. Neomycin is used for intestinal sterilization; Liver coma (as a side effect); and in its original form, for infections of the skin and mucous membranes (e.g., burns).

Disclaimer

Contents of **Agro Veterinary News** do not necessarily reflect the views of the publisher, editor and the member of the editorial advisory board. The publisher and the editor bear no responsibility/liability whatsoever for any damage resulting from the use of the contents herein.

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.dh@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

Subscribe to

Leader in Agro Veterinary News Journalism since 1988

AVN

Agro Veterinary News

Pakistan's First Independent Agro-Veterinary Periodical

Pakistan's First Independent Agro Veterinary Periodical

Yes I want subscribe to AVN for 1 year (12 Issues)

Rates	By Courier	Rs. 3000/=
	Outside Pakistan	US \$ 150

I wish to pay in the following way (tick appropriate box)

1- Bank Transfer Net of all bank charges to:
A/c Title: **Agro Veterinary News**
Bank UBL A/c # **0949-01032003**

2- I am sending in the name of
Agro Veterinary News Karachi.

☐ Pay Order

☐ Bank Draft

☐ Money Order

Personal Details

(Please write in Block Capitals)

Name

Address

City

Country

Please provide us with these details to aid customer services

Tel: (Res.)

Tel: (Off.)

Fax:

Mobile:

Email:

Profession:

if working company name:

Renewal

Attention Renewing Subscription

Please fill in your subscription number.

Return to:

When complete either mail, email or fax your details to one of the following contact points:

The Circulation Department

Agro Veterinary News Karachi.

Karachi: Mehmood Centre, BC-11, Block-9, Clifton-5, Karachi

Tel: 021-35872289, 35834932, 35833172

Fax: 92-21 35836940

Email: mkt.dh@medicalnewsgroup.com.pk
irfan@medicalnewsgroup.com.pk

November 2020 / AVN 15

ELKOMEC-TRI DRENCH

**Ivermectin 2mg/ml
Triclabendazole 120mg/ml**

**For the treatment and
Control of Internal and
External Parasites of Cow,
Buffalo, Camel, Sheep and Goat.**

***Delivers results for fluke and worm
control in one easy oral dose***



www.elko-organization.com
info@elko-organization.com

Marketed by: SHAHEEN ENTERPRISES



shaheenenterprises96@hotmail.com
Tel. : +92 21 35082488



Insects as poultry feed

(An alternative source of protein in poultry feed)



The consumption of poultry meat and eggs is increasing day by day which increase the demand for poultry feed ingredients to support a sustainable intensive production. More over the constant improvement of the genetic potential of poultry has resulted in an increased density of diets, which limits the inclusion of low quality feed compounds. Therefore the feed industry needs new sources of highly digestible protein with a desirable amino acids. The phylum of insects includes the largest species variety in the world and suitable species providing high protein and sulphur containing amino acids concentrations have been identified which can be successfully exploited as feed items for poultry.

Insect Production

Black soldier fly BSF (*Hermetica illucens*) and the common housefly (*Musca domestica*) are two insects that are mainly investigated. The flies are bred, eggs laid and larvae hatch-all under controlled conditions at around 30 degree Celsius. The larvae are then fed until they reach a suitable size (in case of BSF, they reach 2cm in two weeks).BSF can be reared on variety of food or animal waste, the house fly is usually fed on manure or abattoir waste. Insects have impressive life cycles. A female housefly lays 750 eggs a week and the larvae increase in weight over 400 times in just a few

days and BSF can develop from egg to adult in 38 days. In large scale facilities, the larvae are harvested, then cooked or dried before being turned into a meal. In terms of food conversion, insects are highly efficient.

Nutritional Value

Relative to lysine, BSF meal contains higher levels of threonine, valine, isoleucine and leucine when compared to fish meal. Insects are also relatively high in fat, supplying energy at levels comparable to, if not higher than that of cereals or legumes. The metabolize-able energy value of housefly maggots was evaluated in two trials (14.2 MJ/kg DM; 17.9 MJ/kg). Total tract amino acid digestibility is high, between 91 and 95 percent, but individual amino-acid digestibility for poultry have yet to be determined.

Waste Benefits

In nature, insects play a vital role in waste biodegradation, breaking down organic matter so that nutrients are available in the soil for plant growth. Commercial production could collectively convert 1.3 billion tons of waste per year, significantly reducing the disposal and transportation costs as well as the environmental footprint. By utilizing nutrients in waste, they also reduce the risk of organic pollution. It was found that BSF reduced the levels of nitrogen, phosphorus and potassium in pig manure by 50 to 60 percent.

Insect Meal In Poultry Trials

Trials feeding insects to poultry have been published since the 1970s and have found that BSF larvae meal supported good growth in chicks. More recently,

an experiment compared the performance of broiler chicks fed diets containing soybean meal, fishmeal or BSF larvae meal at 5 to 6 percent. Results showed that BSF meal produced similar growth rates to fishmeal in the starter period and the same as soy in the grower phase. Housefly maggot meal has been used in many broiler trials, also with success. In one example a 25 percent maggot meal diet yielded better live weights, feed intake and daily gain when compared to a 25 percent fishmeal diet. In a seven-month layer trial, maggot meal replaced meat and bone meal with increased egg yield and hatchability. As insects feed on waste, there may be concern over hygiene and the spread of disease. However, initial research suggests that insects pose less risk of transmitting zoonotic diseases than livestock species. Before harvesting larvae are removed from waste, they void their guts pre-pupation, clearly presenting the need for a *Hazard analysis and critical control points* (HACCP) system to be in place. Key elements are the drying step to prevent bacterial growth and oxidation. Nutrient sources would also have to be tested regularly to control the risk of bacterial or heavy metal contamination. Internationally specific regulatory framework for the use of insects as feed has yet to be developed and legislation intended for livestock is challenging its development of insects, along with rules governing the use of wastes.

‘PM’s Agriculture Emergency programme will bring prosperity to farmers’

AVN Report

MULTAN - South Punjab Livestock Additional Secretary Aftab Pirzada recently said that livestock improvement initiatives taken under Prime Minister's Agriculture Emergency programme would bring prosperity to farmers and cattle rearers.

During a visit to directorate livestock Multan, Pirzada said that process of registration of calves under Calf Fattening and Calf improvement programme would conclude on November 15, 2020.

He said that calf improvement programmes coupled with a scheme for distribution of poultry sets would improve farmers and cattle rearers' living standards.

Additional secretary livestock disclosed that poultry sets, each containing a dozen cocks, would be distributed among the aspirants during the ongoing month in Multan division. Total 1772 cocks would be distributed, says an official release.

Director livestock gave a detailed briefing to the secretary.

Later, additional secretary livestock visited Qasba Maral where he inspected development schemes and ordered officials to complete the work within the specified time.



Dutch cull 190,000 ...

Continued from page 09

There were no other poultry farms within a one-kilometre radius of the outbreaks, it added.

"Both farms were cleared to prevent further spread of the disease," the ministry said. Seasonal bird flu has been detected at various farms around the Netherlands since October, blamed mainly on migratory birds. Dutch Agriculture Minister Carola Schouten on October 23 imposed preventative indoor containment on all commercial poultry farms after two dead swans were discovered carrying the highly contagious H5N8 variety of bird flu.

The new measures come as the Netherlands also battles the second wave of COVID-19 which continued to infect around 6,000 people a day.

WE ARE PROUD OF PROVIDING BEST QUALITY SB CHICKS & FEEDS



New Introduces a new range of most effective & economical
LIVESTOCK & POULTRY MEDICINES



SB SULFATRIM
(ORAL SOLUTION)

SB SULFATRIM
(ORAL SUSPENSION)

SB TYLAN 10%
(WATER SOLUBLE POWDER)

SB NEOXY
(WATER SOLUBLE POWDER)

SB ADLEK
(WATER SOLUBLE POWDER)

SB CIPRIN 20
(LIQUID)

SB TOLCOX
(POULTRY COCCIDIOSIS)

SB S3
(ORAL POWDER)

SB TYLAN 10%
(FEED PREMIX)

SB COMBI F.T
(ORAL DRENCH)

SB FLUKINEX
(ORAL DRENCH)

SB LEVONEX
(ORAL SOLUTION)

SB TIAMULIN 45% O/P
TIAMULIN HYDROGEN FUMARATE

SB AMOXYTIN O/P
AMOXICILLIN TRIHYDRATE
COLOSITINE SULPHATE

SB EXITIL
ALBENDAZOLE 12.5%

SB PIPRAZINE
(POWDER)

SB HELMIN
(SUSPENSION)

SB AMPROL 50
(WATER SOLUBLE POWDER)

SB COXI NIP
(WATER SOLUBLE POWDER)

SB RENAL
(WATER SOLUBLE POWDER)

SB VITA POWER
(WATER SOLUBLE POWDER)

SBC 20
(EFFERVESCENT GRANULES)

SB TIACLOR O/P
TIAMULIN HYDROGEN
CHLORTETRACYCLINE HCL

SB TIAMULIN 12.5% O/P
TIAMULIN HYDROGEN FUMARATE

SB TIAMULIN 12.5% O/L
TIAMULIN HYDROGEN FUMARATE

SB ASPER C
(EFFERVESCENT GRANULES)

SB VITA L
(FEED PREMIX)

SB MINERAL MIX
(FEED PREMIX)

SB ENROFLOXACIN
(ORAL SOLUTION)

SB ENROFLOXACIN
(POWDER)

SB ORAMOX 20
(WATER SOLUBLE POWDER)

SB ORAMOX +
(WATER SOLUBLE POWDER)

SB PROTECTIN O/P

TYLOSINE TARTRATE
DOXYCYCLINE HCL
COLOSITINE SULPHATE
PHENYLBUTAZONE
BROMOHEXINE



SB Pharma

48 - C, Satellite Town Near Chandni Chowk, Rawalpindi
PHONES : 051-4927501 - 13 (13 LINES) UAN : 111- 50 50 50, FAX : 051-4927520
E-mail: sbpharma@isb.paknet.com Website: www.sadiqbrothers.com

President Alvi, US Pop ...

Continued from front page

He stressed the need for raising public awareness about animal rights and environmental care. The president called for the implementation of Pakistan Prevention of Cruelty to Animals Act (1890). Dr Amir Khalil, who is leading a team from Four Paws, an Austrian animal rescue organisation, in a briefing said Kaavan would be initially kept for a month at the Cambodian sanctuary to be later shifted to a 25,000-acre forest area for its free movement.

He said his organisation would move a request through the climate change ministry to the Civil Aviation Authority for a direct air route of the aircraft carrying Kaavan to cross over Sri Lanka instead of India.

Minister for Climate Change Malik Amin Aslam, State Minister Zartaj Gul and Austrian Ambassador Nicolaus Keller were also present.

Later, Four Paws spokeswoman Marion Lombard said on Nov 29 the preparations for Kaavan's departure would start at 6 am. The elephant will be sedated at 10 am and shifted to Nur Khan airbase by 1 pm.

"It will be airlifted by a Russian cargo aircraft to Cambodia," she said.

Equally popular among children and adults, Kaavan, the male Asian elephant born in Sri Lanka in 1985, was gifted by the Sri Lankan government to the then president of

Pakistan. An elephant named Saheli was brought from Bangladesh in 1990 that remained as Kaavan's partner until it died in 2012. Zookeepers temporarily chained Kaavan in 2002 for its aggressive behaviour. Animal rights activists have been campaigning to free Kaavan and to treat animals in a better way at the zoo.

On May 21, 2020, the IHC ordered that all animals, especially Kaavan, be immediately relocated to better sanctuaries.

After Kaavan, two Himalayan brown bears will also be relocated to Jordan on Dec 6, completing the process of relocation of all animals at the zoo.

Poultry producers ...

Continued from front page

and 17,500 million table eggs annually. He claimed that the industry has provided affordable meat to the masses since its establishment.

Abbasi said that the rates of poultry products were based on demand and supply mechanisms, and added that products being perishable items can't be stored for long and have to be sold. "Therefore, most of the time poultry farmers have to sell their broiler below the cost of production," he said.

PPA Regional Secretary Major (R) Syed Javaid Hussain Bukhari shared that the farmers during the last six months were selling day old chicks and broilers at an average price of

Rs4-20 and Rs90-130 respectively. Whereas cost of production of day old chick was Rs45 and Rs160 of chicken meat, he claimed.

He maintained that the PPA through various press conferences and press releases had fully apprised the government that the situation would lead to acute shortage of poultry products as losses would result in reduction in production and that would also increase prices.

"We had advised the government that in the event of an increase in price, supply would partially but gradually increase to some extent," Bukhari said, adding that they had strongly advised the government not to intervene in the free market mechanism.

"The governments paid no heed. Our pleadings fell on deaf ears and as a result, poultry farmers are bearing huge losses," he added.

He shared that from October 20 onwards this year, the PPA had established stalls of broiler meat where a subsidy of Rs10 per kilogramme on chicken meat is provided to the customers.

"60 more such stalls were inaugurated today at Tollinton Market in Lahore where subsidised chicken meat would be sold," he added.

The Association strongly urged the government to allow free market mechanism functions to regulate demand and supply and not to intervene in market prices.

Govt gives permit to ...

Continued from page 07

the EU has the powers to strip the state concerned off its GSP Plus status. This would restrict easy access of Pakistani exports to EU markets, badly affecting foreign exchange earnings of a foreign currency-starved country. The permit issued in favour of the UAE vice president on Sept 15 this year reads, "The Ministry of Foreign Affairs of the Islamic Republic of Pakistan presents its compliments to the Embassy of UAE in Islamabad and with reference to its... regarding the export of falcons has the honour to inform that the esteemed embassy may export one hundred and fifty (150) falcons from Pakistan to the United Arab Emirate (UAE) for the personal use of His Highness Sheikh Mohammad bin Rashed Al Maktoum, vice president of UAE and ruler of Dubai, from Karachi/Bahawalpur/Rahim Yar Khan/Islamabad/Quetta." "In this regard, the concerned authorities have been requested to accord facilitation for the export of one hundred and fifty (150) falcons from Pakistan to UAE. The Ministry of Foreign Affairs of the Islamic Republic of Pakistan avails itself of this opportunity to renew to the esteemed mission of the assurances of its highest consideration."

The permit was issued under the signature of the foreign ministry's deputy chief of protocol.

PHARMAGAL-BIO



پیسٹیفارم

مریضوں میں رانی نھت کی بیماری کی دیکھتین

PESTIPHARM

New Castle Disease
(Hitchner B1)

برسیفارم

مریضوں میں گھورو بیماری کی دیکھتین

BURSIPHARM

Infectious Bursal Disease
Strain 2512 (Intermediate Plus)



Chakwal Pharma International

House of Quality Medicines & Vaccines
www.cpi.net.pk

VMD
Livestock pharma
Belgium

لیواویٹو-15



LEVAVETo-15

GASTRO-INTESTINAL NEMATODES:

- ✓ Trichostrongylus spp
- ✓ Bunostomum spp
- ✓ Oesophagostomum spp

PULMONARY STRONGYLES:

- ✓ Dictyocaulus viviparus



Orient Traders International

CM-10, Block A, Kazimabad, Model Colony, Karachi ☎ +92 21 34513184 ; +92 21 34592425 www.oti.net.pk

COVID-19

DISINFECTION & CLEANING
Virucidal activity:
En 14675:2015

Type	Micro-organism	Disease	Dilution
Coronaviridae	Coronavirus	Infectious bronchitis, MERS	1:200



**POWERFUL
BROAD SPECTRUM
DISINFECTANT**

اے وی این

پاکستان کا پہلا آزاد وٹرنری رسالہ

ایگزیکٹو وٹرنری نیوز

جائیدادیں منجمد کرنے کے اختیارات دینے کا فیصلہ کیا ہے۔ 15 دن کی میعاد ختم ہونے سے قبل منقولہ وغیرہ منقولہ جائیداد ضبط کرنے کا آرڈر اپیشل جج کسٹمر کی عدالت میں پیش کرنا ہوگا جس میں جائیداد منجمد کرنے کی وجہ بیان کرنا ہوگی جس کے بعد اپیشل جج کسٹمر منقولہ وغیرہ منقولہ جائیداد منجمد کرنے کے احکامات کو مزید جاری رکھنے یا نہ رکھنے بارے فیصلہ کرے گا۔



وفاقی حکومت نے ایف بی آر کو اسمگلنگ کی کمائی سے جائیدادیں بنانے والوں کا سراغ لگا کر ان کے خلاف کارروائی کرنے اور 15 دن کیلئے منقولہ وغیرہ منقولہ

پولٹری مصنوعات کی برآمد پر ڈیوٹی ڈرا

اسلام آباد: حکومت نے پولٹری انڈسٹری کو فروغ دینے کیلئے انڈوں، مرغی، زندہ چکن، چوزوں کی پیداوار کیلئے انڈوں اور گوشت سمیت مجموعی طور پر 8 پولٹری مصنوعات کی برآمد پر 0.78 فیصد سے 3.12 فیصد تک ڈیوٹی ڈرایک کی سہولت فراہم کرنے کا فیصلہ کیا ہے جس کیلئے باقاعدہ طور پر نوٹیفیکیشن جاری کر دیا گیا ہے۔

نوٹیفیکیشن کے مطابق ایف بی آر نے پولٹری انڈسٹری کو مراعات دینے کیلئے 5 مارچ 2009 کو جاری ہونے والے ایس آر او میں ترامیم کردی ہیں۔

پولٹری مصنوعات کی تیاری کیلئے استعمال ہونے والے 109 اقسام کے خام مال کی درآمد سے پیدا ہونے والی 7 اقسام کی پولٹری مصنوعات برآمد کرنے پر 0.78 فیصد سے 3.12 فیصد تک ڈیوٹی ڈرایک کی سہولت فراہم کی جائے گی۔

یوٹیلٹی اسٹورز کو مزید 25 ہزار میٹرک ٹن چینی دینے کا فیصلہ اسلام آباد: یوٹیلٹی اسٹورز کو سستی چینی کی فراہمی کے لیے وزارت صحت و پیداوار نے اسے مزید 25 ہزار میٹرک ٹن درآمدی چینی دینے کا فیصلہ کیا ہے جس کے لیے سہری تیار کر لی گئی۔



یوٹیلٹی اسٹورز کو درآمدی چینی دینے کے لیے سہری اقتصادی رابطہ کمیٹی کو پیش کی جائے گی۔

ٹریڈنگ کارپوریشن آف پاکستان (ٹی سی پی) نے مجموعی طور پر ایک لاکھ 27 ہزار میٹرک ٹن چینی درآمد کی ہے، درآمدی چینی میں سے 25 ہزار میٹرک ٹن چینی یکم نومبر کو یوٹیلٹی اسٹورز کو دی جا چکی ہے، مجموعی طور پر یوٹیلٹی اسٹورز کو 50 ہزار میٹرک ٹن چینی دی جائے گی۔



Fluximine® Injection

Non-Steroidal Anti inflammatory
Analgesic Agent



Powered by:



Ghazi House, D-35, KDA Scheme No. 1, Miran Muhammad Shah Road, Karachi-75350, Pakistan.
Tel: +92 21 111 250 365 | Fax: +92 21 3454 3763 | E-mail: mail@ghazibrothers.com.pk