



پروفیسر بلالہ پولیو

فرز خواب سی دنیا دکھائی دیتی ہے جو لوگ جاں جہاں تھے ہوئے فسانہ وہ

ڈاکٹر ظفر الطاف مرحوم

پاکستان نظام تعلیم کا ادھورا خواب... جب ہم بچے تھے تو ہمیں ان لوگوں کی باتوں سے بہت متاثر کیا کرتے تھے۔ ان لوگوں کی باتوں سے ہمیں یہ احساس ہوتا تھا کہ دنیا بھر میں ایسے لوگ ہیں جو اپنی زندگی بھر کے لیے ایک ہی کام کو چن لیتے ہیں۔ ان لوگوں کی باتوں سے ہمیں یہ احساس ہوتا تھا کہ دنیا بھر میں ایسے لوگ ہیں جو اپنی زندگی بھر کے لیے ایک ہی کام کو چن لیتے ہیں۔ ان لوگوں کی باتوں سے ہمیں یہ احساس ہوتا تھا کہ دنیا بھر میں ایسے لوگ ہیں جو اپنی زندگی بھر کے لیے ایک ہی کام کو چن لیتے ہیں۔

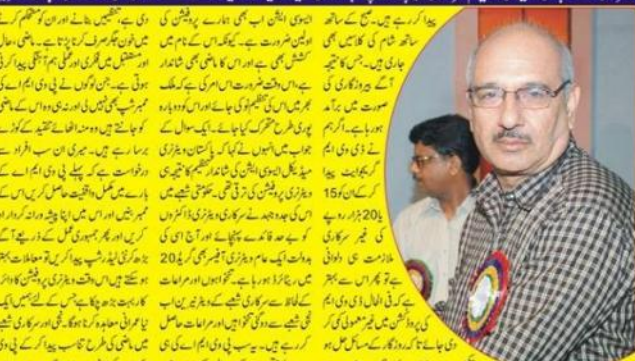
ویٹرنری کے شعبے میں تربیت یافتہ افرادی قوت کی کھپت کے بلر میں تہی وی ایم سی سرو کے انعقاد کرے ڈاکٹر خالد محمود شوق

ڈی وی ایم کے فارغ التحصیل کیریوباشیں سے روزگار پھر رہے ہیں ان کو مناسب نوکریاں نہیں مل رہیں جس کے باعث ان کے لئے سخت معاشی اور سماجی مسائل پیدا ہو گئے، ڈی وی ایم سی میں ڈی وی ایم اے کے فارغ التحصیلوں کی آمدنی بڑھ کر رہا ہے اور یہاں تک کہ ان کی آمدنی کافی حد تک بڑھ چکی ہے۔

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ڈاکٹر خالد محمود شوق کے ساتھ دیگر ویٹرنری افسران اور کیریوباشیں

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WORLD EGG DAY CELEBRATED AT VETERINARY FACULTY, UAF

"World Egg Day" celebrated at Faculty of Veterinary Science, University of Agriculture, Faisalabad. The event was organized by the Art and Literary Society in collaboration with Faisal Chicks. A seminar was conducted on the Nutritive value of Eggs for the students. The seminar was hosted by Mr. Ahmad Umer. The chief guest of the event was the Dean Faculty of Veterinary Science Prof. Dr. Zafar Iqbal Qureshi. Dr. Qureshi, in his address, mentioned that eggs are a very reliable and economical source of protein and we should promote the consumption of eggs in the children. Dr. Kashif Saleemi Member NDCC and Asst. professor at the Department of Pathology, Dr. Sohail Sajid Chairman of the Department of Parasitology, Dr. Ashraf Maqsood, Chairman VMS and Dr. Mishah Ijaz Advisor ALS and other faculty members also participated. Dr. Isaa Khan from National Institute of Food Science and Technology UAF gave a presentation on the nutritive value of eggs and described the students that how



they can use egg as healthier source of nutrition. Dr. Khan also emphasized on consumption of eggs, daily in the breakfast. Egg dishes competition was also arranged by Art and Literary Society among the students. Different students made different dishes using eggs in a very creative way and they also explained the nutritive value of ingredients along with eggs. The judges of the competition were Dr. Tariq Javed Chairman of the Department of Pathology FVS UAF, Dr. Anas Sarwar Qureshi Chairman of the Department of Anatomy FVS UAF and Dr. Farzana Rizvi Associate professor at Department of Pathology FVS UAF. The students from DVM 7th semester, Rimsha, Sundas and Samra, stood first in the Competition; students of DVM 3rd semester Rida and Momina got 2nd position; and students of DVM 9th semester, Ammara, Ghazia, Sabiha and Ammara shad got 3rd position. At the end certificates were presented to the participants of the competition. President ALS Miss Aliza

WORLD FOOD DAY OBSERVED AT UVAS

The Department of Food Science and Human Nutrition and Office of Research Innovation and Commercialization (ORIC) of the University of Veterinary and Animal Sciences (UVAS) Lahore in collaboration with Punjab Food Authority (PFA) observed "World Food Day" with the theme of "Our Actions are our Future: A Zero Hunger World by 2030 is Possible".

Lahore: The Department of Food Science and Human Nutrition and Office of Research Innovation and Commercialization (ORIC) of the University of Veterinary and Animal Sciences (UVAS) Lahore in collaboration with Punjab Food Authority (PFA) observed "World Food Day" with the theme of "Our Actions are our Future: A Zero Hunger World by 2030 is Possible". An awareness seminar and a poster contest featured the day. Director General Punjab Food Authority (PFA) Capt Rtd Muhammad Usman preside over the seminar while Vice-Chancellor Prof Dr Talat Naseer Pasha, Dr Sana Ullah Iqbal and many guest speakers from public private sector organization including Senior Nutritionist from Pakistan Nutritionist and Dietitians Society Ms Ghazala Pervez Zaman, Quality Assurance Manager Metro Cash & Carry Sagar Mahmood, Provincial Manager Food Fortification Programme Dr Amber Elahi and a large number of students from different institutions and faculty members were present. Speaking on the occasion, DG Usman spoke about the role of Punjab Food Authority in ensuring food safety and security in Punjab. He said hygiene and adulteration is the priority of PFA and with the consultancy and help of experts' scientists Punjab Food Authority



working actively to control adulteration in food items on zero tolerance in all over the Punjab. He mentioned about the different types of adulteration and labeling fraud with consumer in various food items in the form of packed milk, energy drinks, cooking oil and tea whitener/ dry powder. He said it is not the aim of PFA to seal the business of peoples rather working for the improving of business for the benefit of consumer to providing them safe and high quality food. He also lauded the role of UVAS for the development of livestock sector and also for the support of minimum pasteurization law. DG Usman lauded the performance of the students for making posters to apply their knowledge in preparing different posters related to nutrition. Addressing the audience, Prof Dr Talat Naseer Pasha said that it is our responsibility to create awareness among peoples about the pure high quality food and adulterated food by utilize our knowledge and skills. He said knowledge and research is the key to curb to control malnutrition issues in Pakistan. In seminar, guest speakers delivered their lecture to participants on different topics, Mr Sager Mahmood spoke about role of food industry in addressing food security and hidden hunger while Ms Ghazala Pervez Zaman delivered her lecture on strategies to combat hidden hunger and malnutrition at household level and Dr Amber Elahi spoke about food fortification programme and its effort to address hidden hunger in Pakistan. At the end of seminar DG Usman along with Prof Pasha distributed cash prizes among the winners of poster contest. In poster contest Hiba Afsar from (UVAS) won the 1st position, Fatima Khalid (UVAS) got 2nd position while Minahil from Kinrard Collage got 3rd position.

PUNJAB ALLOCATED RS.105.6BN SET ASIDE FOR AGRICULTURE

Lahore: Punjab has allocated a sum of over Rs105.63 billion for agriculture and its subsectors, industries, commerce, investment and energy sectors in the budget for financial year 2018-19. A total amount of Rs31.7bn has been appropriated for the farm sector to empower farmers through digital and financial inclusion and crop insurance for small growers. The Rs7bn development outlay focuses on enhancing productivity, efficient irrigation, high-value agriculture through climate smart technologies, targeted cash subsidies, model farms, better supply chain and value-addition.



For irrigation sector, Rs38.35bn have been earmarked and key initiatives in the Rs19.5bn development fund include concrete lining of 500-1m length of water channels, harnessing hill torrents, building Jalapur irrigation system and Greater Thal Canal (phase-II & III), and food protection plan-IV. The livestock, fisheries and wildlife will get a total of Rs13.5bn with Rs2bn for development projects, which include helping to set up a veterinary university at Bahawalpur, latest labs, revamping veterinary hospitals, setting up zoo at Sargodha, afforestation in the province and setting up a biodiversity hatchery at Jhang. Out of Rs5bn allocated for energy sector development, the major portion will go to completion of 1,263MW gas fired Jhang power unit, initiating solarisation of public buildings, setting up energy labs and retrofitting energy-efficient appliances there. For the industries, commerce and investment sector, at least Rs16.68bn have been set aside out of which Rs7.4bn are for development purposes.

Ali shared her views for celebrating these events with the organizing team. She said that the main purpose of celebrating such small events, are to highlight their importance in our everyday life. For instance, we celebrated World Egg Day just to aware the students that they need to make eggs an important part of their protein diet and should increase per capita egg consumption. She also appreciated the student's participation and was thankful to everyone; guests, teachers, participants and members of ALS. Reported by: Ahmad Mohi u Din and Khadija Yameen, DVM students, FVS, UAF

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- زیادہ سے زیادہ پروڈکشن 93-95 فیصد
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WATER SHORTAGE: A THREAT FOR ANIMALS SURVIVAL AND PRODUCTIVITY

Momina Ahsan (DVM student UAF) Rida Asrar
(DVM student UAF) Momna Bilal (pharm-D student GCUF)



Water scarcity is the lack of fresh water resources to meet the demand for the survival in the nature. It affects every continent and was listed in 2015 as the "LARGEST GLOBAL RISK" in terms of potential impact over the next decade by the "WORLD ECONOMIC FORUM". This is affecting not only the human population but also a major threat for the survival and productivity of the animals in the future.

FACTORS THAT INFLUENCE WATER SHORTAGE:

- Fertilizers causing water pollution
- Waterborne diseases
- Proliferation of algae
- Hazardous chemicals

On the other hand, when the animal water demands will be fulfilled, it will increase the weight of the animal. Thus more meat will be produced and more meat will be a leading cause in the increase in the economy of the veterinary field. As healthy animals are demanded everywhere. Another aspect of water scarcity is the water pollution. When the fertilizers are sprayed over the crops, these mixes up with the water and gets absorbed in the soil. Absorption of fertilizers in the soil affects the health of the plants, which when consumed by the animal causes diseases in them. Fertilizers don't easily seep out of the soil, re-

sulting in the water pollution and ultimately water shortage.

This water pollution causes the major water borne diseases faced by the veterinary field. Most important of all are "GUINEA WORM, TYPHOID, DYSENTERY, AMEBIASIS, CHOLERA AND DIARRHOEAL DISEASES". These waterborne diseases are the major hindrance in the health of the animals and causes the mortality rate to increase.



Proliferation of toxic algae also impacts the health of wildlife. When these algae flourish because of nutrient pollution, it produces toxins that poisons the aquatic animals like fish, sea turtles and mammals like sea lions, dolphins etc. Moreover, the hazardous chemicals used for the purification of water can lead to fatal diseases as increase in level of chlorine may cause the respiratory disorders, which can hinder the survival of animals. It is said that: "Happy cows give more milk".

When animal will be having the freedom to take water as much as its body need, it will give more milk. This will add to the productivity. More water intake leads to more milk production, as animals need water to maintain their blood volume and to keep their organs working. Water constitutes about 87% of the milk. The average lactating dairy cow in Illinois may produce up to 8 gallons of milk per day. When there will be the shortage of water, the animal will be unable to meet the demands of the body and this will ultimately cause a reduction in the milk production. While clean and healthy water adds to the productivity of milk in the veterinary field and also make the economy rise up.

Conclusion:
In short, water problem is a major threat for the productivity of animals and is also a risk for their survival in future. So, there is a need to take measures on all those factors that influence their survival and productivity. The usage of fertilizers should be reduced and manure usage should be enhanced in the fields for a healthy environment. Steps should be taken to provide the cows with healthy water for their healthy life. "There is a soul looking forward for healthy water, as they also have a right to live a healthy life".

DON'T LET HIDDEN THIEVES ROB YOUR POULTRY OPERATION

Mycotoxins are often a hidden threat in feed, which can impact the performance and health of poultry.

By Dr Alexandra Weaver, Alltech



Mycotoxins are chemical secondary metabolites produced by moulds as a reaction mechanism in response to an environmental stimulus. Moulds may produce mycotoxins during the growing season, at harvest or during storage of feed materials post-harvest.

Multiple mycotoxins

It is common for feedstuffs to be contaminated with multiple mycotoxins, as one mould can produce several types of mycotoxins or multiple moulds can produce mycotoxins in the same feedstuff. In fact, analysis conducted by the Alltech 37+ Analytical Laboratory shows that multi-mycotoxin contamination is present in 92.3% of 2017-2018 poultry feeds globally. As a result, the presence of mycotoxins is a major issue faced by the poultry industry worldwide.

Poultry that consume high levels of mycotoxins in feed may have obvious clinical signs of mycotoxicosis in relation to specific tissues, organs or performance. However, of more concern, often, is the long-term intake of lower levels of mycotoxins, as symptoms are not noticed daily but still add up to become a long-term problem. In this instance, it is important to watch the birds closely and look for a variety of specific and non-specific symptoms of mycotoxins.

Signs of mycotoxins

A common sign of mycotoxin consumption by poultry at both lower and higher concentrations is the appearance of lesions, which start in the mouth and continue along the gastrointes-

tinal tract. These lesions are often caused by trichothecene mycotoxins such as deoxynivalenol (DON) and T2/H12 toxins, which cause oxidative stress and damage to cells along the intestinal tract.

These lesions along with other side effects in the gastrointestinal tract, such as changes to mucous production, reduced villi length and impacts on gut-level immunity can suppress health and performance and can also expose chickens to increased gut pathogen colonisation. The presence of mycotoxins, such as DON and fumonisins, have been linked to increased colonisation and severity of such pathogens as *Salmonella*, *E. coli* and *Clostridium perfringens*.

Impact of mycotoxins on performance

Considering the many effects that mycotoxin have on poultry health, performance changes are also likely. Research shows that growing birds may have reduced weight gain and poor feed efficiency, while layers and breeders may have reduced egg production, poor egg quality or decreased hatchability. Young birds will typically be more susceptible to the impacts of mycotoxins. Like so many nutritional and health factors, the impacts of mycotoxins on a young bird could alter the ability of the bird to attain its genetic capacity for performance. Using the Alltech Protect Calculator and average risk in 2018 North American poultry feed as analysed by Alltech 37+, breeders may lose about 3.6 g/d in gain and have a 4.8% increase in feed conversion ratio. Likewise, layers may lose about 5.2 eggs over a 60-week egg-laying period. When mycotoxins impact performance, there is likely also a

loss of profitability. Poultry producers should be aware of the costs of mycotoxins in order to better manage the risk.

Understanding risk

Due to the characteristics of mycotoxins, laboratory analysis of a feedstuff or finished feed is the first step in understanding risk. There are a limited number of commercial laboratories in the world capable of analysing multiple mycotoxins from one sample. The Alltech 37+ Analytical Laboratory, located in Kentucky, provides complete analysis for 50 different mycotoxins in a single sample and also considers the total mycotoxin challenge present in each sample, rather than just looking at the individual mycotoxins. As such, the results of the analysis more closely reflect commercial production and the challenges faced by producers. Since all species and life cycles of birds are susceptible to mycotoxins to varying degrees, samples analysed through the 37+ programme are also provided a Risk Equivalent Quantity (REQ), one number that calculates the cumulative effect of mycotoxins and the overall risk to the target animal group associated with the sample.

An understanding of mycotoxicosis in poultry is complicated by the occurrence of several mycotoxins together and their interactions in the animal, as well as their non-specific symptoms. It is clear that multi-mycotoxin contamination is an unavoidable risk and is costly to today's poultry production. It is important, then, to use the right economic assessment methods to evaluate the multiple contaminations and, then, to control mycotoxin risk in the feed mill and at the farm level.

FOOD FOR THOUGHT!

HUZAIMA BUKHARI AND DR IKRAMUL HAQ

IMF, NFC AWARD & PTI

In 2013, Income Support Levy was imposed on net moveable assets which exceeded Rs. 10 million at the rate of just 0.5 percent but 99.9 percent of the parliamentarians, including the incumbent Prime Minister and his predecessor, did not pay it. The rulers do not pay due taxes and then beg for IMF's bailouts-obviously the conditions of IMF hit the poor and not them

According to a Press report, the International Monetary Fund (IMF) has asked the Finance Minister of Pakistan to reduce the share of provinces under the National Finance Commission (NFC) Award, as a condition for new bailout package. Reportedly, Mr. Asad Umar refused to commit anything which is not allowed by the Constitution of Pakistan. In terms of Article 160 (3A), inserted by the 18th Constitutional Amendment in 2010, "the share of the Provinces, in each Award of National Finance Commission shall not be less than the share given in the previous Award". It means that the share of provinces are 57.5 percent, under the seventh NFC Award which cannot be reduced.

The IMF even before giving us a fresh bailout was behaving like a Neo East India Company. But the fault lies with our parliamentarians and men in power. They have policies of appeasement towards tax evaders. They get tax amnesties and immunity for the tainted money under unjust laws like the Protection of Economic Reforms Act, 1992, which has still not been repealed even after empirical data proved that it helped in the flight of money from Pakistan, to almost \$ 250 billion in the last 25 years.

We kept on urging the IMF and others, but never try to put our own house in order, beggars cannot be the choosers. IMF did not invite us for another bailout. During the Decade of Democracy (2008-18), both the Pakistan People Party (PPP) and Pakistan Muslim League-Nawaz (PML-N) helped the rich industrialists to avoid paying enhanced contributions to the Workers' Welfare Fund by making amendments in the law through a Money Bill rather than taking the proposed legislation to both the Houses. Even after the verdict of the Supreme Court of Pakistan on this issue, no corrective measure has been taken. In 2009, the representatives of the provinces and the federal government showed 'satisfaction', rather 'jubilation' over the 7th NFC Award. In fact, our ruling classes failed to comprehend the real issue faced by the federation. It was, and is, how to empower the provinces so that they are autonomous in fiscal and administrative matters. The issue is not merely devolving a formula for the distribution of the net proceeds of the taxes, but the revisiting of Articles 142 and 160 of the Constitution vis-à-vis bringing the less privileged and the underdeveloped areas at par with big sprawling cities; where the mass influx of people is playing havoc, resulting in the creation of ghettos.

According to a Press report, the International Monetary Fund (IMF) has asked the Finance Minister of Pakistan to reduce the share of provinces under the National Finance Commission (NFC) Award, as a condition for new bailout package. Reportedly, Mr. Asad Umar refused to commit anything which is not allowed by the Constitution of Pakistan. The Centre, at present, is transgressing on the constitutional right of provinces by levying income tax on gross value of many ser-

VICES and then out of the divisible pool giving funds that otherwise exclusively belong to them. Moreover, depriving the provinces of the right to levy sales tax on goods is the fundamental flaw of our Constitution. It was available to them before independence. The Constituent Assembly took away the right of levying sales tax on goods from provinces with the promise to give it back as soon as the financial position of the Centre improved-a promise that never unfilled and in the 1956 Constitution, "tax on sales and purchases" appeared at Serial No. 26 of the Federal Legislative List making it for the first time a federal subject.

The federal government, even after usurping the right of provinces of "tax on sales and purchases of goods" has failed to tap the real revenue potential if about Rs. 8 trillion. The failure of FBR on this account adversely affects provinces as they are dependent on what the Centre collects and transfers to them from the divisible pool. Since the size of the cake is small, the provinces lack sufficient resources for the welfare of their people. In this scenario, the real victims are the masses.

The taxation rights under the prevalent constitutional scheme need reconsideration allowing provinces to raise adequate resources that will also help in overcoming overall fiscal deficit faced by the Centre. For example, Balochistan should get 'net proceeds' on natural gas and Khyber Pakhtunkhwa on electricity, as envisaged in Article 161(1)(a) and (b) of the Constitution. Their present share in sales

tax from the divisible pool is as low as 9 percent and 14 percent respectively. They have rich natural resources and a wealth of oil, gas and electricity, but due to the low population rate, they get a small share for the goods they produce. The same is the case with Sindh. Punjab is the only beneficiary of the existing distribution of taxes under Article 160-it gets the lion's share of 53 percent (for 2017-18 it was Rs. 1.2 trillion).

The performance of provinces in collecting agricultural income tax is extremely appalling. This is a common issue both at federal and provincial level arising from the absence of a political will to collect income tax from the rich-meagre collection of agricultural income tax-less than Rs. 2 billion by all provinces and Centre in fiscal year 2017-18 is lamentable. It is imperative that the right to levy a tax on income, including agricultural income, should be given to the Centre. In return, the Centre should hand over sales tax on goods to the provinces. This will help FBR to collect income tax of Rs. 5 trillion. It will also reduce the fiscal deficit of the Centre.

This is the only way to achieve a fiscal stabilisation in Pakistan without disturbing the 18th Constitutional Amendment.

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INSECTS AS A TOOL AGAINST FOWL TYPHOID DISEASE

Small amounts of Black soldier fly larvae meal can boost the immune system of broiler chickens and drastically increase their survival rate during fowl typhoid disease.

DR ANDREAS EBERTZ, Royal Holloway, University of London

Black soldier fly larvae (BSFL) meal gains more and more attention as protein-rich soy and fishmeal substitute in animal feed. In the diet of broiler chickens, BSFL can replace a substantial amount of soy without detrimental effects on the animal's performance. However, BSFL has an even wider impact on broiler chicken performance, which could be quite significant in commercial farming settings.

Studying the immune response

In a recent study by Lee et al. (2018) the effects of BSFL meal inclusion on the immune response of broiler chickens to *Salmonella enterica* serovar Gallinarum (*S. Gallinarum*) was investigated. *S. Gallinarum*, a Gram negative bacterium, causes fowl typhoid that often leads to anaemia, diarrhoea, dehydration, but also anaemia, hepatosplenomegaly (enlarged liver and spleen) and bleeding of the intestinal tract of chicken, and high mortality rates in flocks (Shivaprasad, 2000; Lee et al., 2007). Overall, fowl typhoid represents a major problem for the poultry industry in Asian countries, such as Korea and India (Barbour et al., 2015). The inclusion of BSFL meal even in relatively small amounts in the diet resulted in enhanced immune responses in broiler chickens, as well as reduced mortality and improved pathogen clearance when broiler chickens were challenged with *S. Gallinarum*. This was, furthermore, accompanied by increased gain in body weight. Even though *S. Gallinarum* is extinct in most European countries and North America, the results of this study suggest overall



prophylactic properties and a stimulation of the non-specific immune response in broiler chicken when BSFL meal is included in their diet. This, in turn, could have beneficial effects on the productivity of poultry industries in general.

BSFL increases immune system markers

During the experiment, broiler chicken received feed with 1%, 2% or 3% BSFL meal inclusion (per day one. At day 20, the spleens of the chickens were extracted, and isolated spleen cells were investigated for the ratio of the T lymphocyte subpopulations CD3+ and CD4+. Both cell markers are highly effective markers for immune system activation (Fair et al., 2008; Abdulkalykova et al., 2008). The amount of CD3+ and CD4+ cells was significantly higher in chicken fed with BSFL meal compared with the control group that was not fed BSFL meal. Notably, the amount of CD3+ and CD4+ cells increased in a dose dependent manner. With 2% BSFL inclusion, P<0.05, and with 3% inclusion, P<0.01, these results indicate that the inclusion of 2% and 3% BSFL meal aid immune function in broiler chicken, furthermore, the proliferation of spleen lymphocytes was also significantly

increased in a dose dependent manner in BSFL fed broiler chicken, with 2% BSFL inclusion, P<0.05, and with 3% inclusion, P<0.01. These results imply that the inclusion of 2% and 3% BSFL meal enhance mitogenicity of lymphocytes in broiler chicken.

Higher lysozyme activity

In conjunction with these results, the lysozyme activity in the blood serum of broiler chicken that were fed the 2% and 3% BSFL inclusion diet was also higher. With 2% BSFL inclusion, P<0.05, and with 3% inclusion, P<0.01. Lysozyme is an enzyme that degrades bacterial cell walls and is associated with increased effectiveness of phagocytes such as macrophages (white blood cells that clear microorganisms and other foreign substances), and granulocytes (also a type of white blood cells that act against bacteria, fungi and parasites); these results indicate that 2% and 3% BSFL meal inclusion in the feed enhances the destructive effect of phagocytes in broiler chicken.

BSFL significantly mitigates fowl typhoid disease

In a subsequent infection assay to determine the immunomodulation effects of BSFL meal inclusion, 18 days old healthy broiler chickens were challenged

with *S. Gallinarum* (oral infection with 5 x 10¹⁰ cfu, which represents a high artificial concentration that is commonly not encountered in natural oral infection). Overall, the chicken fed with BSFL diet showed delayed mortality by 2 to 3 days compared to the control group that started to die at day 3 post infection. But even more crucial, at day 15 the final survival rate in the BSFL diet group was significantly higher than in the control diet group, again, in a dose dependent manner: control group with 50% survival rate, 1% BSFL inclusion with 67%, and 2% with 75%. The inclusion of 3% BSFL resulted in especially high survival rate with 85%. In the literature, mortality rates of up to 100% have been reported, and 2 to 3 weeks old animals seem to be particularly affected and susceptible (CFSPH, 2009; Shivaprasad, 2000; Barrow and Neto, 2011). These results show that even relatively low amounts of BSFL meal in the diet leads to increased survivability of broiler chicken that are artificially infected by *S. Gallinarum*.

Clearance of the pathogens

The amount of viable *S. Gallinarum* in liver, spleen, bursa of Fabricius (an organ in birds that is essential for the development of B cell, which are part of the immune system), and caecum (beginning of the large intestine) of challenged broiler chicken were significantly decreased in the 2% and 3% BSFL diet group in a dose dependent manner compared to animals in the control diet group at 16 days post infection (significantly in liver, spleen and caecum for 2% (P<0.05) and 3%

(P<0.01), and significantly in bursa for 3% (P<0.01)). These results suggest a BSFL-mediated enhanced clearance of *S. Gallinarum* upon infection.

Improved broiler chicken growth

Previous studies already suggested that immune response stimulating agents could improve broiler chicken growth due to an improved health status (Landy et al., 2011; Faluy et al., 2015). This hypothesis was confirmed in the present study by Lee et al. (2018). The BSFL-fed broiler chicken showed enhanced weight gain and reached the target body weight of 1.3kg 2 days earlier than the broiler chicken fed with the control diet (30 days instead of 32 days).

Conclusion

In conclusion, the results of the immunological markers and infection assay could imply that components in BSFL act as non-specific immune response stimulating agents and enhance immunity in broiler chicken against bacterial pathogens in general. It could be argued that small amounts of BSFL can be added in the chicken feed as an agent with prophylactic properties against diseases in the commercial farming sector. After all, the significantly increased survival rates in the experimental infection assay is a compelling economical reason, and BSFL are more sustainable than the use of other agents such as antibiotics. However, the components in BSFL that are responsible for the observed immune system enhancing effect are still unknown and future studies could aim at investigating them. References are available on request.

UVAS OBSERVED INTERNATIONAL DAY FOR NATURAL DISASTER REDUCTION

Lahore: The Department of Environmental Sciences of the University of Veterinary and Animal Sciences Lahore observed "International Day for Natural Disaster Reduction" here on Tuesday in City Campus Lahore.

The Society for Conservation of Environment and Nature (SCEN) arranged walk and seminar to mark the day to create awareness regarding the measures to



be taken in order to cope up with natural disasters issues.

Nasir Pasha led the walk while UVAS Senior Tutor Prof. Dr. Kamran Ashraf and UVAS Vice-Chancellor Meritorious Prof. Dr. Talat

put in the walk.

Later a seminar held, in which eminent speakers from different public sector organizations including Muhammad Riaz Chief Meteorologist Flood Forecasting Division Lahore, Dr. Inam Ur Rehman, Ms. Laila Shahzad and Dr. Yasir Qayyum Gill delivered awareness lectures to UVAS students. They spoke about the introduction of natural disasters, their different categories

WORLD EGG DAY OBSERVED AT RAVI CAMPUS PATTOKI IN BEFITTING MANNER



Lahore: The Department of Poultry Production of the University of Veterinary and Animal Sciences Lahore in collaboration with the Pakistan Poultry Association (PPA) observed "World Egg Day" in a befitting manner at Prof. Dr. Akram Educational Complex Ravi Campus Pattoki on Friday.

On the occasion, a video featured to paid rich tribute to (Late) Prof. Dr. Muhammad Akram in recognition of his services for the development of Ravi Campus while various activities, including a seminar, a walk, egg nutrition documentary of PPA, skit and egg-eating, egg dishes cooking, posters and egg shell models contests and answer/question session regarding knowledge of egg were featured to create awareness among public about the nutritional value of egg and its importance for the growth of human body.

PPA North Zone Chairman Choudhary Muhammad Nusrat Tahir presided over the seminar while Dean Faculty of Animal Production and Technology Prof. Dr. Anjum Khalique, Chairman Department of Poultry Production Prof. Dr. Athar Mahmood, Managing Director Alitech Pakistan Dr. Shahzad Naveed Jadoon and a number of poultry industry representatives from public & private sectors, UVAS and Govt Girls Community Model School Pattoki, Government College for Women Pattoki faculty members and students attended.

In his address, Choudhary Muhammad Nusrat Tahir said that in livestock sector poultry is the developed sector in Pakistan and more than fifteen lakh peoples are working in poultry industries and have major shares in national economy of Pakistan. He advised students to work hard with full of dedication and after getting education, join poultry industry for jobs in practical life to contribute your role for its development. He said egg is the unique and affordable source for getting protein which is the basic need for the growth of human body. He said in future with the help of Government of Punjab, PPA agreed to start school meal programme by providing an egg and drum stick to school going children regularly in their class rooms to curb malnutrition/stunting issues in Pakistan. He also thanked UVAS leadership for arranging World Egg Day in befitting manner at Ravi campus. He also shared his past memories.

Dr. Abdul Kareem Bhatti emphasized UVAS students by utilizing their knowledge and skills to start a effectively awareness campaign for masses to clarify myths and controversies associated with eggs and nutritional quality of poultry meat in Pakistan.

Prof. Dr. Anjum Khalique said that this is the unique opportunity to raise awareness about the benefits of egg and its important role in life. Prof. Dr. Athar Mahmood presented the vote of thanks while Assistant Prof. Dr. Shahid Mahmood gave presentations on importance of egg for a healthy nation and the importance of protein in human diet.

Earlier, Choudhary Muhammad Nusrat Tahir along with PPA representatives led the walk which started from lecture halls A block and culminate at Akram Complex after took a round of A block Ravi campus.

Earlier, in egg dishes cooking contest, Amna Choudhary won first position. In Egg shell model making, competition Neelam Amjad won first position. In egg eating contest Seyed Mehdi Bakhari won first position. Choudhary Muhammad Nusrat Tahir along with PPA representatives and UVAS faculty members distributed cash prizes among egg shell model, egg dishes and egg eating contest winners.

GOVT PLEDGES TO MAKE PAKISTAN 'ZERO HUNGER' COUNTRY

BY AMIN AHMED & AAMIR YASIN

Islamabad: The PTI government on Tuesday pledged to make Pakistan a "zero hunger" country, as self-sufficiency in food has been achieved and the Sustainable Development Goals (SDG) have set a target for a "zero hunger" world by 2030.

At an event to observe World Food Day at the National Agricultural Research Centre (NARC), Minister for National Food Security and Research Sahibzada Mohammad Mehboob Sultan said he hoped that zero hunger would be possible by 2030 with political will, public participation and the right combination of policies and technical and financial support to farming communities, to increase productivity, minimize losses and improve small holders' well-being.

An integrated approach and the transformation of food systems is needed to achieve the vision of a world free from hunger, malnutrition and rural poverty, he said, and the government faces enormous challenges to realise this. These five challenges are continued population growth, degradation of natural resources water being the most important, climate change, resource conflicts and increasing urbanisation.

"Food is in our basket and we have to make it available to all as per the theme of food day, which is 'Our Actions are Our Future A Zero-Hunger World by 2030 is Possible', he said.

Mina Dowlatabadi, a representative of the United Nations' Food and Agriculture Organisation (FAO), said at the event that all stakeholders have to continue to play their roles to achieve zero hunger in Pakistan. She added that it was encouraging to see Pakistan taking steps in the right direction to reach this goal.

The first National Food Security Policy and the water policy provide a framework for action, putting emphasis on agriculture diversification and value addition, resilient climate smart agriculture and water management, improved livelihoods of smallholder farmers and tenants, safe drinking water and a national zero hunger programme.

When contacted, a senior food security and research ministry official told Dawn the ministry is finalising an action plan in coordination with the provinces to implement the national food security policy approved by the last government. National Food Security and Research Secretary Hashim Popalzai said agriculture researchers should increase their efforts to cope with the emerging challenges of our time, such as climate change.

Climate change adaptation and mitigation has significant importance for poverty reduction.

World Food Programme Country Director Finbar Curran warned that despite improvements in many areas, Pakistan still faces significant challenges.

Between 2004 and 2016, undernourishment fell from 23.3pc to 19.9pc, but in the same period the number of undernourished people rose from 35.7 to 37.6 million.

One of the major challenges faced by Pakistan is not the lack of food, but rather the lack of nutritious food. Pakistan is a large producer of rice and wheat, but this alone cannot guarantee a nutritious diet for citizens, he said.

University marks World Food Day At a seminar held in connection with World Food Day, speakers emphasised the production, equal distribution and management of food by curtailing food waste.

They said Pakistan is self-sufficient in food production, but efforts are required for equal distribution and fair management. The seminar was held at the Pir Mehr Ali Shah Arid Agriculture University Rawalpindi.

The university's vice chancellor, Prof. Dr. Sarwat N. Mirza, was invited as the chief guest. Other participants included Islamic Food and Nutrition Council of America Country Director Prof. Dr. Javaid Aziz Awan, former Pakistan Council of Scientific and Industrial Research member Dr. Sakhatw Ali, National Institute of Food Science and Technology, University of Agriculture, Faisalabad, Director General Prof. Dr. Tahir Zohoor, District Food Controller Ejaz Sial, Rawalpindi Additional Deputy Commissioner Saima Younas and deans, directors and students from the university.

Speakers said the per capita availability of water has declined significantly since 1951, and would reach 860 cubic meters by 2025 if sound actions are not taken. This would take Pakistan from a water stressed country to a water scarce one. They also discussed various interventions regarding the zero hunger theme for this year's World Food Day that would help save the lives of 3.1m children annually, increase the GDP of developing countries by 16.4pc and build a safe and more prosperous world.

Dr. Mirza said Pakistan is an agricultural country producing enough food for the nation, but faces situations such as hunger, water shortage and malnutrition.

UVAS BUSINESS SCHOOL GOT 3RD POSITION IN DICE MEGA EVENT HELD AT SUKKAR IBA



Lahore: The University of Veterinary and Animal Sciences (UVAS) Lahore team of BBA (Hons) stood 3rd position in DICE Mega Event of Innovation and Entrepreneurship 2018, held at Sukkar IBA. Over 65 Universities (from public and private sector) participated in this contest with more than 200 projects

WORLD FOOD DAY 'EMPOWER SMALL FARMERS TO MEET FOOD SHORTAGE'

BY SAJJAD ABBAS NAZI

Sargodha: The Institute of Food Science and Nutrition, University of Sargodha (UoS), organised a seminar and an awareness walk on "Optimal Nutrition" on Tuesday.

The seminar and the awareness walk were held to raise awareness among the public about the approaches that could ensure the possibility of "Zero Hunger World by 2030".

Amid several hunger emergencies which natural and manmade the United Nations World Food Programme (WFP) is marking the World Food Day on Oct 16 by highlighting both challenges around the world and the real progress being made towards zero hunger.

UoS Vice-Chancellor Dr. Talat Naseer Pasha lauded the performance of UVAS students and congratulated them for their achievement.

students to play their due part in raising awareness, producing and publishing quality research aimed at achieving maximum sustainable output from local food products so that young generations would not face food shortage.

He called for widespread land and agriculture sector reforms to empower small farmers who could in return ensure food security in the country.

"The time is ripe to adopt modern techniques in crop cultivation and utilizing scientific measures to produce healthy crops to meet the food requirements of the growing population," he maintained.

Food technologist Tariq Sarwar Awan said around 3.1 million children die every year of purely malnutrition as vitamin-A deficiency affects 140 million children while 20 million children are born mentally impaired because their mothers has an iodine deficiency during pregnancy.

"Up to 50% of the hungry people globally are from farming families; 2.4 billion people don't have adequate sanitation while 663 million people lack access to clean water. The world has only 3% of drinking water," he added.

Mr. Awan said some 1.3 billion tonnes of food amounting to \$1 trillion is wasted or lost every year, one quarter of which could feed 795 million undernourished and starved people around the world.

Former Pakistan Industrial Development Corporation director Iftikhar Ahmed Sindhu said: "Every year, we witness hunger's devastating effects on families, communities and whole economies. We should have to ensure that people have access to enough high-quality food to lead active and healthy lives."

Institute of Food Science and Nutrition Chairperson Dr. Anjum Murtaza spoke on the impacts of shortage of food on human life.

He said society could be saved from mental and physical disabilities by using food ingredients having vitamin D, calcium and others.

The World Food Day Programme activities featured skits under various themes, cultural presentations, commercial and agricultural displays and other activities promoting food and nutrition security.

WORLD EGG DAY CELEBRATED AT VETERINARY COLLEGE, IUB



University College of Veterinary and Animal Science, the Islamia University of Bahawalpur celebrated World Egg Day to create awareness and importance of egg in daily life.

Faculty members and students of veterinary college attended the event. Prof. Dr. Maqbool Ahmad Doger, Principal veterinary college was the chief guest. Dr. Doger shared the nutritional benefits of eggs. He said that Eggs are an excellent source of high quality protein, rich in amino acids, calcium, sodium, iodine, selenium, choline and vitamins A, B, D & E; described by nutritionists, as a large vitamin pill a mineral cocktail, they contain all the essential vitamins and minerals required for a healthy diet. Eggs are packed full of goodness; from vitamin A, which is needed for the healthy development of the body's cells, helping to maintain healthy skin and eye tissue and assisting in night vision, vitamin B12, which is necessary for the formation of red blood cells, important for the immune system to function properly, and helps protect against heart disease, right through to choline, vital for nerves and muscles to function correctly, and proven to lower the risk of heart disease.

Students presented different stalls on this event. At the end boil eggs were distributed among teachers and students. A short walk was also arranged. The organizer of the event was Dr. Saima.

GVS CELEBRATED "WORLD EGG DAY" AT GOMAL UNIVERSITY



Gomalian Vet Society celebrated "World Egg Day" at Faculty of Veterinary and Animal Sciences, Gomal University, D. I. Khan.

Activity started an Awareness walk and included at a seminar. Dr. Kamal Shah, Chairman Dept. of Clinical Sciences, Dr. Shakir Ullah and Dr. Rehan highlighted the importance of poultry industry in Pakistan. They also added valuable comments regarding the nutritional value of egg.

Coordinator city campus Prof. Dr. Salah-Ud-Din and S.H.O. Police station Cantt Mr. Imran Ullah khattak specially graced the occasion.

Faculty members appreciated the work of society and encouraged the students to engage such events.

BALOCHISTAN TO ESTABLISH LIVESTOCK MARKETS AT DIVISIONAL LEVEL

Islamabad - Balochistan government has finalized a plan to establish livestock markets at divisional level of the province to increase animals, meat productivity to boost economy of the province, said Balochistan Livestock and Dairy Development Director General (DG) Dr. Ghulam Hussain Jaffar. Talking to APP on Tuesday, he said that the government has already approved the plan of establishing livestock markets on divisional level to help improving standard of marketing of huge livestock sector, having potential to change the lot of the farmers. He said the main intention of establishing the livestock markets was to eliminate the role of brokers and facilitate the livestock keepers directly. Lack of proper marketing of livestock and dairy development was the main issue and for this purpose, the department has approved a project to establish livestock markets across the province. He said the main aim of approving the plan was to increase livestock production in Balochistan and boost the vital sector as per directives of Prime Minister.

Expressing best wishes for the livestock sector, he said that the province has the potential to export domestic animals to Gulf countries to earn precious foreign exchange.

Replying to a question, he said Balochistan is environmentally different from other provinces of the country and businessmen are being encouraged to promote livestock farming in Naseer Abad Division.

The DG said the livestock markets will have the facility of veterinary dispensary, vaccination, proper treatment to the ailing animals.

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UVAS RANKED 3RD AMONG PUBLIC SECTOR UNIVERSITIES BY HEC IN NATIONAL SPORTS RANKING

Lahore: The Higher Education Commission (HEC) has ranked the University of Veterinary and Animal Sciences (UVAS) Lahore on 3rd position in national sport ranking of public sector universities of the country for the year 2016-17.

The HEC ranked the universities on the basis of overall results of interuniversity sports championships for 2016-17 in 33 categories of sports.

The UVAS got 782 points among public sector universities. The UVAS has already been ranked by the HEC among top 10 universities of Pakistan in overall ranking of universities. VC Prof. Dr. Talat Naseer Pasha congratulated the faculty, staff and students on this achievement. He hoped that the university will continue its journey of progress and development in future as well.



پاکستان ویٹرنری ایسوسی ایشن کی جانب سے منعقد کیے جانے والے عالمی دن شاعرانہ طریقے سے منایا گیا۔ اس موقع پر مختلف شاعریوں اور نثری کلام کی تلاوت کی گئی۔

اس موقع پر پاکستان ویٹرنری ایسوسی ایشن کے صدر نے خطاب کیا اور انہوں نے کہا کہ ویٹرنری ایک ایسی پیشہ ورانہ ہے جس کی مدد سے جانوروں کی صحت کو برقرار رکھا جاسکتا ہے اور انہیں اپنی زندگی میں بہتر معاشی حالت میں گزارنے میں مدد ملتی ہے۔

اس موقع پر مختلف شاعریوں اور نثری کلام کی تلاوت کی گئی۔ اس موقع پر پاکستان ویٹرنری ایسوسی ایشن کے صدر نے خطاب کیا اور انہوں نے کہا کہ ویٹرنری ایک ایسی پیشہ ورانہ ہے جس کی مدد سے جانوروں کی صحت کو برقرار رکھا جاسکتا ہے اور انہیں اپنی زندگی میں بہتر معاشی حالت میں گزارنے میں مدد ملتی ہے۔

زرعی ویٹرنری فیصل آباد میں خواتین میں جراثیمی کلسر سے بچاؤ کیلئے آگاہی داک اور مطروحاتی سیمینار کا انعقاد



پاکستان ویٹرنری ایسوسی ایشن نے فیصل آباد میں خواتین میں جراثیمی کلسر سے بچاؤ کیلئے آگاہی داک اور مطروحاتی سیمینار کا انعقاد کیا۔ اس موقع پر خواتین کو جراثیمی کلسر کی علامات اور اس سے بچاؤ کے طریقے بتائے گئے۔

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زرعی شعبہ کی پائیدار زرعی میں خواتین کا کردار قابل ستائش

پاکستان ویٹرنری ایسوسی ایشن نے خواتین کی زرعی شعبہ میں کردار کو قابل ستائش قرار دیا۔ اس موقع پر خواتین کی زرعی شعبہ میں کردار کو قابل ستائش قرار دیا۔

انگریز نگرانی میں زرعی شعبہ کی پائیدار زرعی میں خواتین کا کردار قابل ستائش

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زرعی ویٹرنری فیصل آباد میں شفافیت، میرٹ اور بہترین مینجمنٹ کیلئے مشاورت فوڈ بینک اور اشتراک عمل کے فلسفہ کو رواج دینے ہوئے ویٹرنری فیصل آباد میں پورٹل قائم کیا جا رہا ہے



پاکستان ویٹرنری ایسوسی ایشن نے خواتین کی زرعی شعبہ میں کردار کو قابل ستائش قرار دیا۔ اس موقع پر خواتین کی زرعی شعبہ میں کردار کو قابل ستائش قرار دیا۔

زرعی ویٹرنری فیصل آباد میں ذراعت و لائونگ سٹاک کی ماڈل فارمنگ کروانچ دیا جائے گا



پاکستان ویٹرنری ایسوسی ایشن نے خواتین کی زرعی شعبہ میں کردار کو قابل ستائش قرار دیا۔ اس موقع پر خواتین کی زرعی شعبہ میں کردار کو قابل ستائش قرار دیا۔

زرعی ویٹرنری فیصل آباد میں خواتین میں جراثیمی کلسر سے بچاؤ کیلئے آگاہی داک اور مطروحاتی سیمینار کا انعقاد

پاکستان ویٹرنری ایسوسی ایشن نے خواتین کی زرعی شعبہ میں کردار کو قابل ستائش قرار دیا۔ اس موقع پر خواتین کی زرعی شعبہ میں کردار کو قابل ستائش قرار دیا۔

انگریز نگرانی میں زرعی شعبہ کی پائیدار زرعی میں خواتین کا کردار قابل ستائش

پاکستان ویٹرنری ایسوسی ایشن نے خواتین کی زرعی شعبہ میں کردار کو قابل ستائش قرار دیا۔ اس موقع پر خواتین کی زرعی شعبہ میں کردار کو قابل ستائش قرار دیا۔

زرعی ویٹرنری فیصل آباد میں شفافیت، میرٹ اور بہترین مینجمنٹ کیلئے مشاورت فوڈ بینک اور اشتراک عمل کے فلسفہ کو رواج دینے ہوئے ویٹرنری فیصل آباد میں پورٹل قائم کیا جا رہا ہے



پاکستان ویٹرنری ایسوسی ایشن نے خواتین کی زرعی شعبہ میں کردار کو قابل ستائش قرار دیا۔ اس موقع پر خواتین کی زرعی شعبہ میں کردار کو قابل ستائش قرار دیا۔

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پاکستان ویٹرنری ایسوسی ایشن کی جانب سے منعقد کیے جانے والے عالمی دن شاعرانہ طریقے سے منایا گیا۔

ویٹرنری نیوز اینڈ ویوز

پبلشر: ڈاکٹر محمد شفیق
ایڈیٹر: ڈاکٹر محمد شفیق
فیسل آباد

جلد: 13، نمبر: 16، تاریخ: 23 اکتوبر 2018ء، قیمت: 12 روپے، 47 روپے ماہانہ، ABC سے تصدیق شدہ

اڈوں کا استعمال صحت مند جسم کا نشان، بیاریوں کی روک تھام میں خاص اہمیت کا حامل ہے۔ ڈاکٹر سمیرا اختر نقی کی آف ویٹرنری سائنسز ہمارا فخر، پولٹری صنعت کی ترقی میں اہم کردار ادا کر رہی ہے ڈاکٹر طاہرہ امین



ڈاکٹر سمیرا اختر نقی نے کہا کہ اڈوں کا استعمال صحت مند جسم کا نشان ہے اور بیاریوں کی روک تھام میں خاص اہمیت کا حامل ہے۔ انہوں نے کہا کہ پولٹری صنعت کی ترقی میں اہم کردار ادا کر رہی ہے۔

ڈاکٹر طاہرہ امین نے کہا کہ اڈوں کا استعمال صحت مند جسم کا نشان ہے اور بیاریوں کی روک تھام میں خاص اہمیت کا حامل ہے۔ انہوں نے کہا کہ پولٹری صنعت کی ترقی میں اہم کردار ادا کر رہی ہے۔

زرعی ویٹرنری فیصل آباد میں خراب اور ضرورت مند خواتین میں سایہ چال نسلی 30 کا نیا نیا تقسیم



زرعی ویٹرنری فیصل آباد میں پرنٹیشن، ایجوکیشن ڈاؤن لین کے تعاون سے 17 طلبہ و طالبات میں تعلیمی اخراجات کا فرسٹ بینک، ایس ایس ایمرٹ ونڈی میڈیکل کالج پر پروگرام میں 74 طلبہ میں ڈیٹس کا رڈ تقسیم کیے گئے



پاکستان ویٹرنری ایسوسی ایشن نے خواتین کی زرعی شعبہ میں کردار کو قابل ستائش قرار دیا۔ اس موقع پر خواتین کی زرعی شعبہ میں کردار کو قابل ستائش قرار دیا۔

ڈی وی ایم کے نئے جدید نصاب کے مجوزہ مسودے کی منظوری دیدی گئی

ایف ایس ای ایگری کچھر کیمپلیٹ ریگسٹرڈ ولارڈری یونیورسٹی فیصل آباد کے گورنر ایف ایف ایف نے پورے پورے نئے مسودے کی منظوری دیدی گئی۔ ایف ایف ایف نے ڈی وی ایم کے نئے مسودے کی منظوری دیدی گئی۔ ایف ایف ایف نے ڈی وی ایم کے نئے مسودے کی منظوری دیدی گئی۔



ایف ایف ایف نے ڈی وی ایم کے نئے مسودے کی منظوری دیدی گئی۔ ایف ایف ایف نے ڈی وی ایم کے نئے مسودے کی منظوری دیدی گئی۔ ایف ایف ایف نے ڈی وی ایم کے نئے مسودے کی منظوری دیدی گئی۔

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ویٹرنری یونیورسٹی میں نان پیچنگ سٹاف ایسوسی ایشن کے نئے منتخب عہدیداران کی تقریب حلقہ برداری

لاہور (نامہ نگار خصوصی) ویٹرنری یونیورسٹی آف پاکستان (ایف ایف ایف) میں نان پیچنگ سٹاف ایسوسی ایشن کے نئے منتخب عہدیداران کی تقریب حلقہ برداری منعقد ہوئی۔

یاد رہ جاتی ہے ایام گزر جانے کے بعد !!!

پاکستان میں ویٹرنری پروفیشن کے سب سے بزرگ ایلیوینیائی کیپٹن (ر) ڈاکٹر محمد اشفاق انتقال کر گئے۔



ڈاکٹر محمد طارق اشفاق

زرعی یونیورسٹی فیصل آباد اور ونٹ فنڈ سیکرٹریٹ کی ٹیکنیکل ایڈوائزری کمیٹی کا اجلاس

اجلاس میں یونیورسٹی آف پاکستان اور ونٹ فنڈ سیکرٹریٹ کی ٹیکنیکل ایڈوائزری کمیٹی کا اجلاس منعقد ہوا۔

مختلف محکموں سے تمام گلگشری گاڑیاں فوری واپس منگوائی جا رہی ہیں، بشارت راجہ

بشارت راجہ نے کہا ہے کہ تمام گلگشری گاڑیاں فوری واپس منگوائی جا رہی ہیں۔

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زرعی یونیورسٹی فیصل آباد کو ملنے کی بہترین ریسرچ یونیورسٹی کا اعزاز حاصل ہو گیا

زرعی یونیورسٹی فیصل آباد کو ملنے کی بہترین ریسرچ یونیورسٹی کا اعزاز حاصل ہو گیا۔

Advertisement for MILLAT CHICKS, featuring a chicken logo and text about quality and health.

ECTOPARASITES OF CAMEL; INTRODUCTION, DIAGNOSIS, CONTROL AND TREATMENT

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Introduction

Camel is a large sized precious animal in the world. Population of camel in Pakistan has gone up one million which constitutes about 5.1% of the 17.44 millions of worldwide population it is increasing at the rate of 1.62% per year. Genus of camel is Camelus, having even toes and fatty deposits called as humps on its back. In Arabia and other parts of Middle East, one humped camel (Dromedary) is found while two humped camel (Bactrian) is found in Central Asia. These species are used as source of milk, meat and transport. Camels have adapted their humps according to their environment. They have clear eyelid and two layers of eye lashes to protect eyes from blowing sand. Sand storm cannot harm their nose because they shut it. Camels have also been used as means of transport for thousands of years. According to National Geographic, they can carry 375 to 600 lbs (170 to 270 kg) on backs that is why they are also known as ships of the desert. Camels have weight and size above humans. A Bactrian camel is of 6 feet in height, 10 feet in length. Weight of fully grown camel is 1,320 to 2,200 lbs. Dromedary camels 6.5 feet tall and 880 to 1,325 lbs pond in weight. Camels are herbivores; eats thorny plants with their thick lips. Water is most important thing to survive on the earth. They fill their body with 113 liters of water in 13 minutes. Camels have ability to rehydrate faster than other mammal. Camels are able to survive without water and food condition. They use their humps in starvation.



Mange Mites

Sarcoptic mange mite is the most serious diseases of camel. Extremely itchy and infectious condition is caused by sarcoptic mites. Circular parasite is one of the five forms of *S. scabiei*. This disease is recognized by veterinary therapy when it is available. Camel mange infection is occurred on thighs, neck and flank region. Occurrence of this disease is due to poor management or malnutrition. Sarcoptes are burrowing mite which penetrates beneath the skin in infected camel. This feeding causes intense itching with the feeling of early inflammatory reaction and injury. In scabies attack exudate formation occur on hairless areas. Production of milk and meat may stop or fall due to intense pruritus infection. The camel rubs and bites on affected areas to reduce the itching when irritation increases. The skin becomes more damaged due to hair loss and forming more scabs and revealing red surface. The lesion of mites becomes extend and moves towards healthy tissue of the body. Skin looks rigid and thickened chalk like covering due to excess keratinization and proliferation of connective tissues. *S. scabiei* var. camelis have same life cycle as sarcoptic mites. Females lay their eggs in keratinous tunnel under the layers of skin one

then it is changed into male mite or pubescent female. After mating, it can be able to lay eggs. **Ticks** Ticks have two families on the base of scutum, one is ixodidae; have scutum on dorsal surface and second one is argasidae; have not scutum. Both of these will attack and harm the camel. Ticks can transmit disease mechanically as anthrax, it acts as vector which is not important in camel as in other domestic animals. *Trypanosoma evansi* could be part of life cycle of soft tick *Ornithodoros tholozani* had also reported. All ticks cause anaemia through blood sucking in camels and other animals. Developing stages of *Hyalomma* spp. nymphs and adult is to cause severe infestation till death of camel. Ticks suck blood 1-3ml during their complete life cycle on animal. Major losses of production and distraction are due to irritation caused by attachment of tick. Tick bite causes traumatic injuries, which seems like small injuries attracts flies leading to myiasis or bacterial infections. Number of infected camels may increase due to change in climate. It is very difficult to survive eggs and immature stages in hot, arid and desert condition. In winter season ticks hide themselves under long hairs of camels and they develop and not show clinical signs

humidity condition. These larvae rapidly climb and attach from one animal to other animal for the purpose of vegetation. **Biting and Nuisance flies** These flies are important to transmit disease to human as vector. Biting and nuisance flies distract from naturally feeding because of irritation and leads to productivity loss. Biting flies are mechanical vectors of *Leishmania* caused trypanosomiasis is major risk for camel of endemic areas. Two species of tabanidae family, *Tabanus* sp. and *Haematopota* sp. are also important vectors of *T. evansi*. *Tabanus* is also vector of anthrax and bacterial species. *Tabanids* attacks virtually on the body as ventral abdomen, legs and inguinal region are their predilection sites. Camels try to remove these biting flies but they easily fly from one animal to another animal to complete their food requirement. This movement of flies is diagnostic factor in disease transmission. Camels are attacked by large number of *Tabanids*; becomes more flustered and disturb then body temperature goes to rise to struggle for trying to remove parasites. Female of these flies lays



hundreds of egg in muddy and moist places. After four to seven days larvae are formed and feed on mud. Larvae change into pupa after several instars and then it form adult in warm weather. **Diagnosis** All skin infections are mostly similar so, it is difficult to diagnose. For diagnosis we should keep some

Demodex mites which are present on hair follicle. These parasites are present deeply, so mite can be collected from deep layer by crushing the skin. According to a survey which is conducted in summer, counting of mites are 50% higher in hot season. Capillary bleeding is observed when blade is applied on the hair follicle

Cheyletiella, Demodex, Sarcoptes. For taking fine results we should do the microscopic observation of ectoparasites with dim light and with the condenser down and magnification value range 40x-100x. **Control** There are many principles of tick control for camel same as recommended for cattle for many reasons such as usage of different type of acaricides and sprays. Ticks do not cause serious disease on camels due to which the owner do not undertake routine serious precautionary measures against this infested camels. These synthetic pyrethroids have wide safety margin as it can be used on animal, over wide surface, to internal and external structural surface in the form of mist and ultra-low volume spray. According to Gamatox, Wellcome HCH is very effective

and ear mites in many countries. It also has been shown to be effective against cheyletiellosis. Use it every 2 weeks for 3 treatments. Acaricidal is used for tick control. Insecticide is mixed with ointment compounds and acaricidal grease such as 19% HCH powder with petroleum jelly in 25/75 ratio when tick's attack is very severe. Ivermectin is useful to reduce sand mite's population that cause infestation in desert's camel. Flies are mostly present in watery places and camp sites. These places should be avoided by insecticide to inhibit trypanosomiasis breed in surra season. It can be prevented by burning dung heaps and smoke fires to deter flies or as flies deterrent. Insecticide could be used on sedentary camels or farmed camels in urban areas. These chemicals seems to be beneficial product but these are not applied on infested camels. These synthetic pyrethroids have wide safety margin as it can be used on animal, over wide surface, to internal and external structural surface in the form of mist and ultra-low volume spray. According to Gamatox, Wellcome HCH is very effective



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which is covered with mineral oil in the direction of hair growth. While collecting Demodex scraping, it's very important to compute and to check the scraping sites and numbers of different stages of insects such as eggs, larvae and adult per L.P.F. In successive survey, analysis of result of therapy depends upon the comparison of numbers of insect's stages. On monitoring demodex cases, we repeat scraping on same sites monthly. **Trichograms-** Positive hair may help to remove unnecessary skin scraping in that area which are difficult to scrape such as muzzle, feet, periorcular area and eyelids. It is difficult to remove hairs with help of forceps from completely and partially balded area. These hairs are then study under microscope by using mineral oil on cover slip to prevent hair from blowing. Skin scraping is not revealed, when Demodex mites are hanged on hairs and around the eyes where it causes painful lesions. However, for diagnosis, positive results are required and skin scrapings may cause negative result. **Tape preparation-** Direct impression technique is used to gather debris from skin with the help of sticky tape. This tape is applied on the skin by pressing several times. Then sticky side is put on the slide. This transparent tape is served as cover slip and is evaluated under microscope with drop of oil immersion on it. This method is applied on

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spray of chemicals at regular intervals. These acaricides are affected for that ticks that attack on anal and inguinal sites. Then sticky side is put on the slide. This transparent tape is served as cover slip and is evaluated under microscope with drop of oil immersion on it. This method is applied on

for control of flea. It is used in 200-250g per camel in 70-78 animal in one hour. HCH and diazinon are used for control of mange mites. It is applied through a brush which is dipped in diluted acaricides on soft scabies to keratinized tissue. Sometimes this application is repeated with interval of 8-10 days for effective results.



Ectoparasite

External parasites are also affects the camel which cause irritation, injury and debilitate. Sarcoptic mange causes most serious damage that affects camel, besides it ticks, fleas, flies, lice and nasal bot damage both directly and indirectly its health and production. Blood sucking flies acts as vector and transmits trypanosomiasis, anthrax and other diseases, these flies are known as arthropod vectors. Zoonotic implications can occur in intimate relationship between men and domestic animals such as camel.

or two at a time three to five each day. They can lay eggs maximum 40-50 in tunnels. After egg laying process six legged larvae emerge within two to four days. Eight-legged nymph is appeared after two to three days and



of irritation and debility. Some species have different infestation sites such as perineal, inguinal, axillary regions and in between toes, eyes, ears and lips. Tick's life cycle has four developing stages from egg to adult.



HOT WEATHER SLOWS DOWN GLOBAL MILK

According to the report, the combined year-on-year milk supply growth across the Big 7 exporters (EU, US, New Zealand, Australia, Brazil, Argentina and Uruguay) slowed during Q3 of this year. This is mainly due to the hot and dry weather in Australia and Europe. But also expensive feed is having a greater impact than before, as seen in Argentina for example. **Dairy herd numbers shrinking** The impact of more expensive feed costs and tighter margins for milk producers globally are now evident and will continue into 2019. National dairy herd numbers are shrinking in Australia, Europe and the US, as a result of producers scrambling to manage costs. While Rabobank expects combined global milk supply to grow, production will only lift very modestly over the next 12 months, well in line with consumption trends. **Highlights per regional dairy market:** **EU** EU milk growth continued a 17-month trend into July despite the dry weather. The weather effect on feed availability will play out from Q4 2018 onwards. **US** Milk prices in Q3 2018 have improved after an initial drop in dairy commodity prices, as key trading partners implement tariffs on selected dairy products. **New Zealand** Favourable weather has provided outstanding conditions for the 2018/19 season so far. But new feed regulations may prove challenging for milk flows at the back end of the season. **China** China's import growth is anticipated to remain buoyant in the second half of this year. But trade war uncertainties cast a shadow across 2019. **South America**

High local grain prices are impacting farmers' margins and will curb milk production growth. Meanwhile, local demand remains fragile, and Brazil awaits continued general elections in October. **Australia** A shortage of feed and fodder has gripped the sector and wiped out any change of a sustained recovery in milk production in the 2018/19 season. **What to watch in Q4 and Q1 2019** Rabobank also reports on what to watch in the near future. One of them is the trade war between the US and China. Further escalation of the trade tension is likely. Considering that the US is the third-largest dairy exporter to China, the full extent of the trade war is still uncertain. **Q1 2019** Rabobank also reports on what to watch in the near future. One of them is the trade war between the US and China. Further escalation of the trade tension is likely. Considering that the US is the third-largest dairy exporter to China, the full extent of the trade war is still uncertain. **Q1 2019** Rabobank also reports on what to watch in the near future. One of them is the trade war between the US and China. Further escalation of the trade tension is likely. Considering that the US is the third-largest dairy exporter to China, the full extent of the trade war is still uncertain. **Q1 2019** Rabobank also reports on what to watch in the near future. One of them is the trade war between the US and China. Further escalation of the trade tension is likely. Considering that the US is the third-largest dairy exporter to China, the full extent of the trade war is still uncertain.

the US dollar over the course of the year. Rabobank expects the US dollar to remain well supported moving into 2019, and expensive inputs for farm cost structures look set to continue. The market is also watching the New Zealand milk output. With near-perfect weather across winter and spring (so far), it is not yet known how high the production numbers will bounce this year. Lastly, the NAFTA, the US and Mexico have completed negotiations, but an agreement between Canada and the US remains elusive. Any opening of the Canadian market could be a bonus for US dairy exporters. It is unclear, however, as to whether the US can move forward with a revamped NAFTA with only Mexico. Some lawmakers say they won't go along with a deal that leaves Canada out.

PREVENTION OF FMD OUTBREAK AT FARM

Dr. Muhammad Salman, Dr. Rao Zahid Abbas, Dr. Muhammad Rashid Fayyaz, Dr. Arslan, Dr. Muhammad Faiq Said

There are various diseases of animals which are prevalent in Pakistan. Of all these diseases, FMD is the major disease which causes huge economic loss to the economy of Pakistan. Foot and Mouth Disease (FMD) is a viral disease of almost all cloven-hooved animals. The causative agent of this disease is Aphthovirus. There are various strains of this virus which exist in different parts of the world. Clinically, we observe vesicles on tongue, mouth and feet of the animals. There is off-feed, unwilling to move and hence there is decreased production. There may be some mortality in the young animals also. The virus spreads through direct and

indirect contact, the virus is spread through milk and semen also. So, prevention is based on control of spread of the virus. Prevention is the best policy. There are various measures which can be adopted to prevent or reduce the outbreak of FMD according to sources of spread of the virus at your farm. These may be: **Adopt strict biosecurity measures.** Implement these measures for people, animals, vehicles and even for the equipment. Allow only specific persons to enter the farm after adopting biosecurity protocol. Restrict the movement of vehicles to a specific area. Do not allow your animals to come into contact with the outside or neighbor animals. Sanitize the equipment before and after use. **Avoid stress to the animals.** Provide clean and dry environment to the animals. Vaccinate the animals. The vaccination is done twice a year. Buy semen from the well-reputed companies. **If, somehow, FMD occurs at your farm, you can still take some actions to control further deterioration of the situation.** Isolate the infected animals, cut-off their contact with other animals and destroy the bedding material.

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120 ml per 1000 heads

Ruminants
0.15-0.35 ml per kg body weight

Calves and Lambs
0.10-0.25 ml per kg body weight

1 ml per 2 litres of drinking water for (3-5 days)



COMPOSITION
Lysozyme, Vitamin D3
Vitamin C, Vitamin A
Vitamin E, Oil Extract

Nazi's House B-08-100, Eden Lane Villas
Raiwind Road, Lahore-Pakistan
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ehrofeed

قارئین آگاہ رہیں کہ اخبار کی اعزازی تقسیم مکمل طور پر بند کر دی گئی ہے

ممبر شپ فارم

ہفت روزہ ویٹرنری نیوز اینڈ ویٹریا قاعدگی سے حاصل کرنے کیلئے درج ذیل فارم ہڈ کر کے ارسال کریں۔
زر سالانہ ہڈریج پاکستان پوسٹ-50000 روپے ہڈریج می آر ڈی یا بنک ڈرافٹ ارسال کریں۔

نام _____
ایڈریس _____
فون نمبر _____
ای میل _____
موبائل _____
پیشہ آپ کون سے کاروبار سے منسلک ہیں تفصیل لکھیں۔ _____

مئی 2017ء کو پیش ہفت روزہ ویٹرنری نیوز اینڈ ویٹریا-392-سمن آباد فیصل آباد

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“The Forgotten Nutrient”



- Optimizes water & gut pH
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- Improves Average Daily Gain (ADG), feed intake & nutrient absorption
- Reduces enteritis, diarrhea & wet litter issues
- Supports digestive functions & provides instant energy

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