

NPMC takes notice of increase in prices of chicken, eggs

AVN Report
ISLAMABAD - National Price Monitoring Committee (NPMC) has recently taken the notice of increase in prices of chicken and eggs and directed the provincial governments to take corrective measures and ensure supply of poultry at affordable prices throughout the country. Federal Minister for Finance and Revenue, Dr Abdul Hafeez Shaikh chaired the weekly meeting of the National Price Monitoring Committee (NPMC) that was held at the Finance Division. NPMC reviewed the price

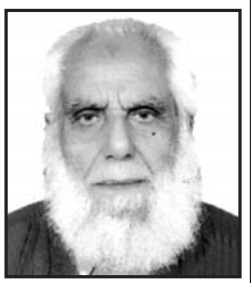
trend of essential commodities especially wheat flour, sugar, vegetable ghee, chicken and eggs during the last week. The weekly SPI recorded a slight increase of 0.55% whereas prices of 08 basic items registered a decline and 18 commodities remained stable during the week under review. The secretary, Ministry of Industries and Production, briefed NPMC about 11 most essential commodities being offered by the Utility Stores Corporation (USC) at subsidised prices across Pakistan. The network of Utility Stores Corporation is playing an important role in

providing essential items at discounted prices to the masses as the prices of USC are significantly low as compared to the prices prevailing in domestic markets, he added. US ends sanctions, visa restrictions against International Criminal Court personnel Minister for Industries & Production Mr. Hammad Azhar updated the Committee that the Ministry is closely monitoring the current price trend of vegetable ghee/cooking oil and taking corrective measures to ensure fair price for the consumers.

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Founder & Chairman of AVN News passed away

With profound grief, we announce the demise of the Founder and Chairman of Agro Veterinary News - AVN News, Ayaz Mahmood recently. The publisher, editor and the entire management of AVN News express their heartfelt condolences on the sad demise of Ayaz Mahmood. We pray to God Almighty Allah to give courage and fortitude to the bereaved family and enough courage to bear this irreparable loss. With prayers that he is granted a place in Heaven (Aameen).



Ayaz Mahmood -The pioneer of medical journalism ...

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Pakistan issues fresh tenders to buy wheat, sugar

AVN Report
HAMBURG - The state-run Trading Corporation of Pakistan (TCP) has issued two new international tenders to purchase and import 300,000 tonnes of wheat and 50,000 tonnes of white sugar, European traders said recently.



The tenders close on March 16. Pakistan has regularly bought wheat and sugar in the global market in past months in moves to improve local supplies and cool prices of these commodities. Fresh tenders had been expected after Pakistan decided on Friday to make no

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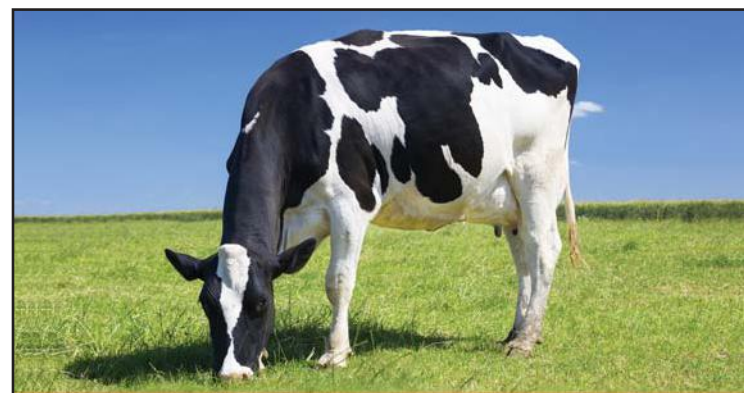
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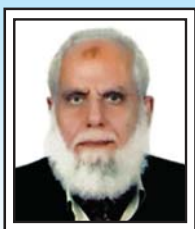
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Ayaz Mahmood – The pioneer of medical journalism is no more

The founder, publisher and managing editor of Medical News breathed his last on March 17th, 2021. He left behind a strong legacy that is difficult to match. A self-made man who started his career in advertising sales and then excelling at establishing a pioneering venture in Pakistan's first medical periodical was published simultaneously from Karachi and Islamabad.

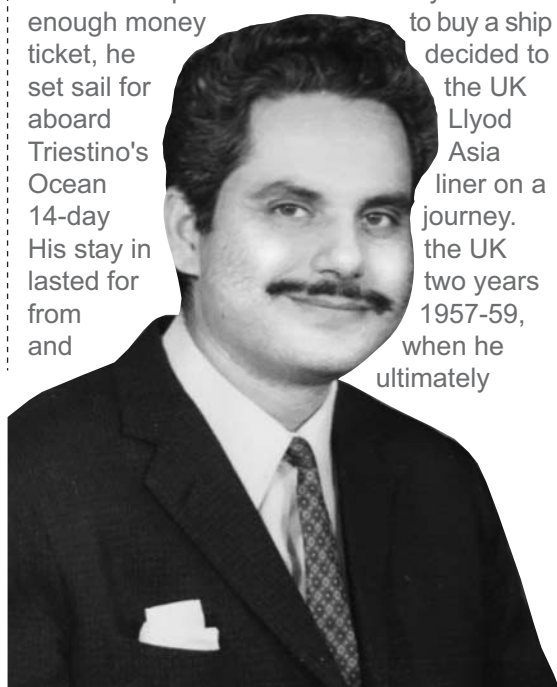
Ayaz Mahmood was born in 1935 and was the youngest of nine siblings. His father, Dr Jalal Uddin Ahmad, was a distinguished dental surgeon with a roaring practice in pre-partition days and was the British Army's official dentist. Dentistry was a family tradition, and some of his older siblings also joined the profession. However, his creative inclinations led him to pursue a different path. He followed the path of creativity and joined advertising sales. He is survived by one son, two daughters and six grandchildren.

Ayaz Mahmood was the founder of Medical News, which heralded the era of medical journalism in Pakistan. The publication made its debut in 1968 and never looked back. He also had the distinction of launching another separate edition from Islamabad, which made the publication unique from Karachi and Islamabad's two simultaneous editions.

He received his initial education from Jamia Millia Islamia, Delhi and later completed his bachelors from the prestigious Government College, Lahore and his master's degree from Punjab University. At Jamia Millia, he had the honour of having Dr Zakir Hussain as the principal, who later became the President of India. He had the good fortune of residing in the hostel next to the Principal's house, which allowed him to frequently interact with the distinguished principal and develop a solid foundational work ethic and a robust roadmap for outshining in life. The highlight of his interaction with Dr Hussain was when he invited his entire class for breakfast.

When Dr Zakir Hussain was going to Lahore, he asked him if he had any relatives there to convey his message. Dr Zakir's towering personality had a very positive impact on his personality during his early childhood years. Like all young boys, he was also keen to learn swimming and eventually learned it the hard way by almost drowning himself twice. After completing his education, Ayaz Sahab moved to Karachi and started his career with Pakistan Textile Journal. He excelled at his work and gained experience in the publishing

business as an advertising executive. Always having an adventurous side, he wanted to explore the world. The day he saved enough money to buy a ship ticket, he decided to set sail for the UK aboard Llyod Asia Ocean liner on a 14-day journey. His stay in the UK lasted for two years from 1957-59, when he ultimately



of the few professions that were ideal for creative people. At JWT, his boss was none other than the illustrious Nusrat A. Bukhari, a good conversationalist with a typical English accent. Bukhari established a branch of J. Walter Thompson on the ground floor of the old Rally Brothers Building on I.I. Chundrigar Road; later moved to Nelson Chambers. Ayaz Sahab always praised his salesmanship and management style and gave him credit for his grooming in advertising sales. At JWT, he handled clients like PTC, who was extensive and very demanding. Television was yet to come, and the dominant medium for advertising was print. With non-existent computers and visuals to be presented in black and white, the creativity knew no bounds. Nusrat Bukhari always insisted that not more than two visuals be taken to the client for approval. Ayaz sb was quick to pick up these tricks of the trade and excelled in whatever he did.

At JWT, he had the privilege of working with some of the advertising world's stalwarts, such as Anwar Rammal, Framroze H. Punthakey and Shaukat Fancy. Ayaz Sahab was a very disciplined person and always emphasized time management and its importance. He soon realized that long unscheduled hours were just not his cup of tea in the advertising industry. The days were spent visiting clients and the evenings in getting their work done with extensive market research - a hallmark of Ayaz Sahab's approach before launching any campaign for his clients.

After making a name for himself in advertising sales and realizing that he prefers a disciplined lifestyle, he decided to venture into his own business. He drew his inspiration from a copy of a London-based medical journal featuring local pharma industry advertising, which led him to see a case for an equal opportunity to create an avenue for pharmaceuticals to advertise in Pakistan. Since Television was yet to become mainstream; the dominant medium at the time for advertising was print.

It was then that the idea of starting a publication crystallized in his mind. His venture was initially named Pakistan Medical Review, which later became Medical News, Pakistan's first medical periodical in 1968. The renowned paediatrician Prof Ghaffar Billo was its first honorary editor, and Mr M.A.Khan was Executive Editor.

This was the birth of Medical News >>>>

<<<< which he launched in 1968, and it soon became a force to reckon with in the healthcare sector. Like any great idea, he faced immediate resistance from the then office bearers of the concerned association. They soon came up with their periodical, which was never able to impact like Medical News.

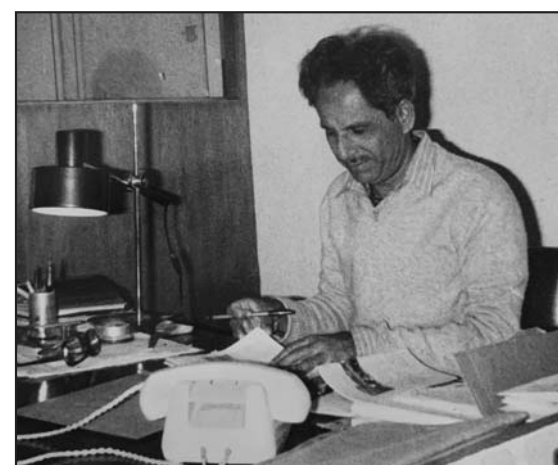
Though Medical News had humble beginnings, much like many start-ups of the time, because of Ayaz sb's perseverance, field acumen, and relentless pursuit of excellence, the periodical quickly became a recognized brand throughout Pakistan and abroad. Never the one to shy away from work, Ayaz sb would, in the business's early days, himself run routes to distribute Medical News to critical clients and large hospitals. Eventually, success bred upon success and allowed the organization to flourish, which grew into a full-strength publication house with an ever-expanding editorial and field staff at its prime.

Under Ayaz sb's leadership, the business branched out into adjacent areas within the industry with the launch of Agro Veterinary News - another first for Pakistan - and expanded geographically with presence in all major cities of Pakistan and concurrent publications from Karachi, Lahore and Islamabad. This impressive rise took the industry by storm and notable industry heavyweights started to appreciate the journal's heft and recognized it even more so when it was reported Medical News had reached distribution across both East and West Pakistan and was being distributed via boats in Chittagong (then in East Pakistan). Not long after, Medical News Pakistan caught the attention of its namesake in London. The esteemed London periodical, startled by the dramatic and wide-ranging success of Medical News, decided to pursue legal action against Ayaz Mahmood for possible copyright and intellectual property infringement! By Allah's grace, he successfully defended the business against these unfavourable developments and, in doing so, established Medical News as a worthy international player in medical journalism.

Over the coming decades, he continued to steer the business through multiple ups and downs and changes in competitive and regulatory environment. The Medical News Group of publications marked its 50th anniversary in 2018 under his auspices - a milestone reached by only a select group of companies.

During his illustrious career, Ayaz sb hired and mentored talent from all over Pakistan. and so many notable industry leaders got their start at Medical News including M.A. Khan, Shaukat Jawaid, Qaiser Nishat, and Rahimullah Yousufzai. Those who were drafted as contributors for the periodical are now successful in their fields and settled worldwide. Ayaz sb even convinced his elder brother, Mr Khursheed Ahmed, then managing director of Pakistan Times, to join Medical News.

Ayaz sb's spirit of entrepreneurship did not end with Medical News. When he was confident the publication business was in good stead, he ventured into other initiatives, including launching a dishwashing detergent - another first of its



kind - and named it "Forun", which in Urdu meant "immediately" - presumably touting its fast-acting cleaning power! The entire operation was started from his garage and became very popular in a short period, so much so that it came into the limelight when the leading consumer goods company Reckitt & Coleman wanted to buy the idea and brand off him. Deciding otherwise, he continued to remain independent and achieved distribution in Cash & Carry stores. Ultimately compelling Reckitt to unleash their complete marketing and R&D prowess to reverse-engineer the whole thing and launch a competing brand. Ayaz sb's preference for solid branding was evergreen. He continued a series of product introductions, including coloured paper napkins called "Colourkins" - another bold and creative foray for that time in Pakistan. That spark of inventiveness was also promptly copied by other manufacturers who jumped on the bandwagon as customer demand showed up. Years later, he would fondly recall these "commercial adventures" - as he would call them - and they became a part of his life narrative often told and retold in various settings. They also became exemplars of lifelong teachings for his children - that one is to live life with a sense of adventure and to have an appetite always to take calculated risks. For the rest who knew him, these serve as priceless mementoes to remember him by.

Always a man of unwavering principles, Ayaz sb led a disciplined life governed by our faith's code of ethics and business dealings. He continuously operated his businesses without an ounce of debt and strictly shied away from taking or giving any interest. He would compromise on expense and productivity and tolerate additional worldly burden but never relent on his commitment to the Almighty.

Moreover, as time wore on and into his golden years, he elected to forego continued business leadership and sought a quieter, simpler life, relegating all worldly matters to the attention of others and dedicating all his time to his Deen (religion). He enhanced his philanthropic efforts and support of his local masjid and exclusively focused on all things relating to the Deen.

On a personal level, those who knew him well recall Ayaz sb as being sharp, witty, decisive, and of course, full of humour. He was always the life of the dinner party, telling jokes and stories with as much enthusiasm as if relaying them for the first time. He would thoroughly enjoy sharing stories of his childhood and his time spent with his siblings and cousins. Whenever he reminisced about his time in Lahore, Ayaz sb's most vivid memories were of his experiences. They shared stories from his father's life and dental practice during the time of his (Ayaz sb's) childhood and teenage years. In this, his audience was always guaranteed a rich, first-hand detailed recount of the time, the place-setting, the events, and the dialogues, which he would crisply relay without skipping a beat or being hazy on the minutest of details. In this regard, his impressive recall lasted right up until the last few months of his life.

He was an avid painter and calligrapher, having taken up these creative outlets since a young age. While growing up and managing to support these hobbies within meagre means he never let up on his passion for painting, often using the back of patient dental records - conveniently sourced from his father's practice - to paint the most illustrious landscapes.

In his later years, he preferred to call his birthplace - Lahore - his home. Having lived across all major cities in Pakistan, he found Lahore's charm second to none. This is where he breathed his last after a hale and hearty 86 years, succumbing to a fast-progressing pancreatic cancer.

He is survived by one son and two daughters, a loving group of and six grandchildren who adored their 'dada' and 'nana/tutu', and host of nieces and nephews spread out across the globe, who saw their uncle as the one-and-only link between their shared golden past and the present. As Ayaz Mahmood's surviving legacy, we all pray that Allah Almighty grants him a place in Jannat ul Firdous and pray that we as his children are a source of jaza in his afterlife. (Aameen).

Acknowledgements:

We gratefully acknowledge the condolences received from all over the world, including the honourable President of Pakistan, Dr Arif Alvi and his wife Samina Alvi, Dr Tipu Sultan/ Dr Mirza Ali Azhar (PMA), Dr Inayatullah (JPDA), Dr Ayyaz (IADSR) and many distinguished parliamentarians and healthcare



Governor Sindh inaugurates livestock expo

AVN Report

KARACHI - Sindh Governor Imran Ismail recently inaugurated three-day Dairy Agriculture Livestock Farmers Association (DALFA) Cattle Show 2021 at the Expo Centre. The expo is aimed at highlighting investment opportunities in the dairy, livestock and agriculture sectors in Pakistan. The show, which is a joint venture of the DALFA and Badr Expo Solutions is featuring high-breed cattle, birds and domestic animals. The expo also includes a variety of events and features, including a cattle beauty contest, flower show, pet contest, ostrich farm and a variety of fish. Addressing the inaugural ceremony, the governor said such shows encouraged the animal breeders to produce the best

quality animals. He asked people at the ceremony to play their role in meeting growing nutritional requirements of the country. Ismail maintained that the global economy was under pressure due to the coronavirus and every industry was facing challenges, but the demand for good and healthy food had increased significantly. DALFA Chief Patron Haris Ali Mithani said more than 200 companies had set up stalls at the show, including those related to dairy, poultry, fisheries, technology, food, medicine and livestock sectors. He explained that financial institutions were also taking part in the show to provide farmers information on government schemes and banking products for raising funds.

Chief Minister Sindh stresses need to invest in livestock sector for food security

AVN Report

KARACHI - Sindh Chief Minister Syed Murad Ali Shah recently said that Pakistan harbors huge livestock nevertheless deficient in milk and depend on the import of huge quantities of dry milk powder.



While talking to the media just after inaugurating 'Sindh Institute of Animal Health' Korangi established by the Livestock department, Murad Ali Shah said, the need of the hour is to invest in the livestock sector for food security and poverty alleviation. He was accompanied by Minister Livestock & Fisheries Bari Pitrafi, PPP Senator Jam Mehtab Dahar.



The chief minister said that there was a big opportunity for Pakistan and especially access to Hallal Market with huge export potential. However, due to prevalent Foot Mouth Disease (FMD) has put bans on export of meat and milk to most of the developed countries. "Therefore, there is a need to control FMD through vaccination by establishing an FMD vaccine manufacturing plant in the Sindh," he said. Earlier, the minister Livestock and Fisheries Bari Pitafi delivered his welcome speech and briefed the chief minister about the measures taken by his department for ensuring animal health. The chief minister formally inaugurates Sindh Institute of Animal Health and a vaccination lab. The Director General of the department, Dr Nazir Kalhoro also spoke on the occasion and briefed the chief minister about different units of the institute, including poultry section and egg hatchery. Talking to media on the occasion, Syed Murad Ali Shah said that he had held a meeting with the Pakistan Cricket board to rehabilitate Niaz Stadium, Hyderabad. "I am still of the opinion that the PSL and international

Continued on Page 22

UVAS working on antibiotics alternatives in poultry, says VC

AVN Report

LAHORE - The Department of Poultry Production of the University of Veterinary and Animal Sciences, Lahore, arranged a seminar on "Use of

over the seminar. Addressing the inaugural session of the seminar, Prof Dr Nasim Ahmad said that UVAS was working on antimicrobial resistance with the objective to find out

microorganisms. This problems, he said, needs to be addressed by finding out alternatives that can replace the antibiotics without affecting health and efficiency of the birds. He



Antibiotics Alternative in Poultry Industry: Current and Future Prospects" at its Ravi Campus, Pattoki recently. Vice-Chancellor Prof Dr Nasim Ahmad presided

alternatives replacing the use of antibiotics in poultry. He said that injudicious use of antibiotics in humans and livestock was creating the problem of antibiotic resistance in

said that the university was working hand in hand with the poultry industry, which is currently the second largest industry after textile in Pakistan.

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Miyawaki urban forest inaugurated at Governor House

AVN Report

KARACHI - Sindh Governor Imran Ismail and Prime Minister's Special Assistant on Climate Change Malik Amin Aslam inaugurated a Miyawaki urban forest, spread over one acre, at a ceremony held in Governor House on Sunday in connection with World Forest Day.



Speaking to journalists, Governor Ismail said that the forest had been planned under PM's '10 billion trees tsunami programme'.

He said that in all, 30 different trees had been planted in the urban forest at Governor House out of which 12 trees were of fruits and 18 of other species.

He said that the Miyawaki method was a new technology through which many trees could be planted within a small area.

The governor lauded Malik Amin's efforts in this regard and said that his contribution was being acclaimed at

Continued on Page 22



KU to organize seminar on use of poultry

AVN Report

KARACHI - A seminar titled "Poultry and its Meat Consumption" organized by the Department of Food Science and Technology University of Karachi and the World Poultry Science Association would be held recently. According to the statement released here on Wednesday by the university, it would be held at the United King Hall of the KU's Department of Food Science and Technology.

KU Vice Chancellor Professor Dr Khalid Mahmmod Iraqi would preside over the seminar, which would be attended by representatives of Pakistan Poultry Association, Sindh Food Authority, poultry feed, and vaccine companies as well as representatives of various industries, nutritionists and doctors, and students.

MORE ATTENTION THAN USUAL Impact of COVID-19 on animals

by Dr Nazim Hussain, Zulqarnain Baqar

Centre For Applied Molecular Biology CAMB, Punjab University, Lahore.



The current coronavirus pandemic (COVID-19) represents a major international challenge because of lack of existing innate immunity or effective vaccine availability (Wang et al., 2020). The novelty of the virus and its clinical appearance have inspired a previously unparalleled speed of research and publication. Although most of this research focuses primarily on human management (World Health Organization, 2020) and the probable origin of the virus (Rothan and Byrareddy, 2020), there are rapidly emerging other areas of research importance, including the economic and ecological effects of that global pandemic. The necessary implementation of social distancing measures to reduce infection rates in populations has already had unintended consequences on animal management and welfare. Understanding the current impact of this crisis on animal management and welfare, at local and global levels, is essential to reflect on the success of approaches implemented to protect animal welfare.

Some coronaviruses that infect animals can be spread to people and then spread between people, but this is rare. This is what happened with SARS-CoV-2, which likely originated in bats. The first reported infections were linked to a live animal market, but the virus is now spreading from person to person. SARS-CoV-2 spreads mainly from person to person through respiratory droplets from coughing, sneezing, and talking. At this time, there is no evidence that animals play a significant role in spreading the virus that

causes COVID-19. Based on the limited information available to date, the risk of animals spreading COVID-19 to people is considered to be low. More studies are needed to understand if and how different animals could be affected by COVID-19. Experiences and research over the last year have identified some animal species with varying susceptibility to infection with COVID-19.

Mustelids, such as mink, appear most susceptible and infection can result in severe clinical symptoms and death, as evidenced by outbreaks on mink farms in a number of countries including Canada. The mink outbreaks have resulted in infection in several people, which is the only documented evidence of animal-to-human transmission of the virus.

Felines, such as house cats and tigers, are also susceptible to infection; most seem to be asymptomatic although cases of comparatively mild clinical symptoms have been identified. The virus will transmit among feline populations but is not known to spread from cats to humans. Infection in dogs, while not as frequent as in cats, is not uncommon in households where at least one person has COVID-19 but there is no evidence of spread between animals. Except in the situation involving mink, it is considered very unlikely that an animal would be a source of infection for humans. Most cases of reports of animals becoming infected with SARS-CoV-2 are believed to be cases of human-to-animal transmission, usually from an infected owner to their pet dog or cat. If any person has COVID-19 symptoms or is self-isolating due to contact with a COVID-19 case, they should

follow similar recommendations around their animals, as they would around people in these circumstances:

- Avoid close contact (petting, snuggling, being kissed or licked, sharing food) with their animals during their illness.
- Practice good handwashing and avoid coughing and sneezing on animals.
- If possible, have another member of their household care for their animals.
- If this is not possible, they should always wash their hands before and after touching their animals, their food and supplies.
- Restrict their animal's contact with other people and animals outside the household until their illness is resolved or they are no longer required by public health to self-isolate (approximately 14 days).
- Cats should remain indoors at all times.
- Dogs should be kept on a leash or within a private fenced area when taken outside for elimination activities, and kept away from other animals and people.

An additional risk to animals is what will happen to them if their owners become ill and are unable to take care of them. You can help reduce these concerns by planning for your pet's care in advance. This includes identifying a family member or friend who will care for your animals if you become ill or are hospitalized. Animal owners should also keep crates, food, and extra supplies on hand in case you are required to stay home for an extended period of time. As always, help protect your animals by making sure all their vaccinations are up to date and that pets have a collar and

Continued on Page 22

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COVID-19

Economic outcomes in Pakistan

by Dr Maria Jamil

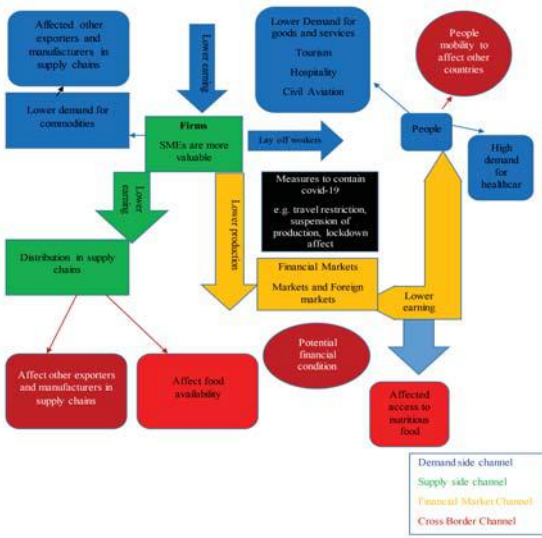
Department of Pathology, Faculty of Veterinary Science,
University of Agriculture, Faisalabad.

Muhammad Samiullah

Department Lyallpur Business School, Faculty of Economics and
Management Sciences, Government College University, Faisalabad

Initially, COVID-19 cases in Pakistan were fewer, while now the cases are rising, and we are not ready for this condition like Spain or Italy. In all developing countries, it has spread, and their healthcare procedures are not able to handle this disaster. Several such countries may not have pre-existing infectious diseases such as Dengue and Polio as in Pakistan. In Pakistan, health spending per head is 1: 200th the level of the USA. The government requested to wear masks to prevent social contact, but rarely any SOPs are detected. The virus is transmitted, and an effective vaccine is anticipated in 12-18 months. According to data analysis, 30-60% of the population will be infected without strict measures. In Pakistan, health workers and doctors still lacking the proper equipment. Health Ministry that collected the data reveals that up till now, 21 medical professionals have died due to COVID-19, 1904 medical practitioners were tested positive that comprises of 1035 doctors, 299 nurses, and 570 other healthcare staff. It has an alarming condition for Pakistan, where 38 physicians for 10000 peoples and insufficient 120 beds per 10000. Coronavirus local spread level is 92% according to special assistant to pm on health. The stress of staying housebound is also taking its toll on the mental health of families. More than one hundred coronavirus vaccines under research and scientist are confident that at least one will be successful. Still, if the vaccine is developed, then its common accessibility is not an easy task. Ease in lockdown and opening of shops and markets have enhanced the transmission up to 10 fold. According to pandemic experts, there

Channels of COVID-19 impacts on the Economy



is an opportunity that COVID-19 will keep on transmitting for the next 18-24 months until 60-70% of the population has been infected. With hospitals overloaded and many cases and deaths, Pakistan's fragile health system is restorative for an improbable shock. COVID-19 has an excellent effect on Pakistan economy. The nation is currently facing numerous difficulties that are twisted with each other, including a medical crisis and economic uncertainty and uneven commodity prices. In 2020 World Economic position expected global growth to fall to 3%. From January 2020, there has been a marked decline of 6.3% point. Due to the COVID-19 outbreak and lockdown, Pakistan has lost 1/3rd of its income, and exports declined by 50%. In Pakistan, economists inform to downturn among virus lockdown. Likewise, the World Bank also reports that Pakistan could fall into a downturn. Due to the current disaster produced through the COVID-19 pandemic, Pakistan's GDP growth in FY20 is estimated to diminish by 1.3% as the global and national action go-slow sharply during the last few months of the financial year.

In Pakistan magnitude of domestic and external shock in 2019-2020 and 2020-2021		
	2019-2020	2020-2021
Domestic		
Reduce in the accessibility of domestically produced Goods	-10	-5
Reduce in the accessibility of imported Goods	-15	-5
External		
Volume of World Trade	-30	-15
Unit \$ Value of Import	-30	-20
Unit \$ Value of Export	-20	-10
Remittances	-15	-10
From March-June 2020		

In Pakistan projected growth rate (%) in 2020 and 2021		
year	Pakistan Economy	World Economy
2020	-4.8	-3.0
2021	2.6	5.8

IMF, UNDP Macroeconomic Model

4 pillar policy frame work to combat COVID-19 impacts

Pillar 1 Motivating the economy and employment <ul style="list-style-type: none">Active financial policyAccommodative monetary policyLending and financial support to specific sectors, having the health sector	Pillar 2 Supporting enterprises, jobs and incomes <ul style="list-style-type: none">Enhanced social defense for allImplement employment retention measuresOffer financial/tax and other relief for enterprises
Pillar 3 Protect workers in the workplace <ul style="list-style-type: none">Strengthen OSH measuresAdjust work arrangement e.g. teleworkingAvoid discrimination and exclusionOffer health access for allIncrease access to paid leave	Pillar 4 Depend on social negotiation for solution <ul style="list-style-type: none">Strengthen the capability and elasticity of employers and workers organizationsStrengthen the capability of governmentsStrengthen social negotiation, collective bargaining and labor relation institution and processes

Conclusion:

According to the 2017-2018 Pakistan labour force survey, 5.8% unemployment rate in the country. While due to the current disaster and lockdown, the frequency of jobless people is suspected to be enhanced up to 8.1% during financial 2020-2021. The above debate shows that Pakistan will suffer extensively. The effects of coronavirus on Pakistan, as well as the global economy, will leave deep scars. It is tremendously essential to evaluate the impact of the COVID-19 outbreak on micro, small, medium-sized enterprises (MSMEs) to support policymakers and practitioners in streamlining their strategies to assist these businesses in surviving the current disaster.

In-Vitro antimicrobial resistance pattern of E. Coli and Salmonella in Cholistani cattle calves suffering from Enteritis

by Naqash Mumtaz,
M.Phil. Scholar

Department of Veterinary Medicine, University
of Veterinary & Animal Sciences, Lahore

Cholistani is the desert area near Bahawalpur and a diversified area covering Bahawalpur, Rahim Yar Khan and Bahawalnagar. Cholistani cattle is a native breed of Pakistan; it is mainly used for milk purpose. People of Cholistani raised Cholistani cattle for milk production, and Cholistani cattle are a source of livelihood. Due to poor hygienic condition, scarcity of water, and lack of other natural resources, Cholistani cattle calves suffer from different diseases. A significant issue in Cholistani cattle calves is

diarrhoea at a young age. Neonatal Calf Diarrhoea (NCD) is one of the most critical problems in young calves due to diarrhoea enteritis, dehydration, loss of electrolytes and calf death can occur. There are different causes of diarrhoea such as bacterial, viral, protozoal and nutritional. In bacterial diarrhoea, *E. coli* and *Salmonella* are significant causes. NCD is one of the significant problems in the livestock industry, including the dairy and meat sector. Diarrhoea is caused by different infectious agents like bacteria, virus and protozoa and non-infectious agents. Most of the bacterial pathogens that cause diarrhoea are ordinarily present in the calf's digestive tract and can cause

disease when they get a chance to invade. *E. coli* and *Salmonella* is thought to be the most common bacterial cause of enteritis and diarrhoea in the calf. *E. coli* and *Salmonella* are present in the animal's gastrointestinal tract, and when they get a chance, they invade in cell and cause diarrhoea. *E. coli* and *Salmonella* are one of the significant important cause of bacterial diarrhoea in calves at a very young age, just before weaning. A study was conducted to check the antimicrobial resistance pattern of *E. coli* and *Salmonella* in Cholistani cattle calves suffering from enteritis under a supervisory committee of Dr M. Avais, Associate Professor, Department of veterinary medicine,

UVAS Lahore, Dr Sajid Hameed Chairman Department of Anatomy and Histology UCV&AS IUB Bahawalpur, Dr M. Zahid Iqbal Lecturer Department of veterinary medicine, UVAS Lahore, Dr Aijaz Ali Channa Assistant Professor Department of Theriogenology, UVAS Lahore. One hundred samples were taken from the calves having a history of diarrhoea and enteritis. Rectal swabs were used for sample collection and place in an icebox container. Samples were dispatched to the Animal research lab, department of veterinary medicine, UVAS Lahore, for the isolation of causative bacteria, especially *E. coli* and *Salmonella* by using the specific medium. The

Continued on Page 22

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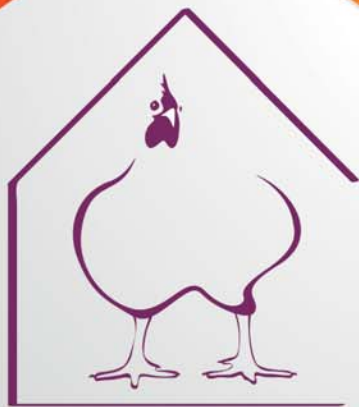


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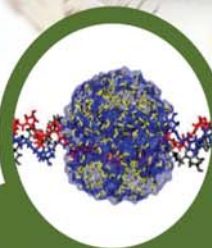
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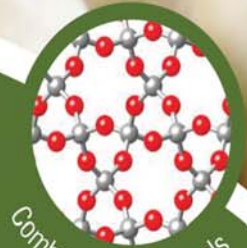
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Snake bite problem in Pakistan

By Inam Ullah Yasir, Muhammad Ilyas,
Kamran Sajid

University of Veterinary and Animal Sciences,
Lahore (Sub-campus CVAS Jhang)

Asia is the world's most affected region for snakes bite. Pakistan is an agricultural country where 80% of the population lives in the Indus Valley and is considered the main grain-producing area. Nearly all the people living in this area are engaged in some agri-related activity, and several virulent species are found in the area where they work, so there is a great risk of being bitten. Snakes had been a very common neighbour of humans in recorded history. No other animal is surrounded by so many myths and mysteries like them. The fear arises from the deadly poison known as venom. Snakes bite are a common injury in endemic areas of Pakistan. Over three thousands species of snake are recorded on the earth. Of these, about sixty-five pose serious health hazards to man. Snake bites remain a public health problem in many countries, even though it is difficult to be precise about the actual number of cases. The true global incidence of envenomation and its severity remain largely misunderstood. Hospital-based data about snakebite is likely to underestimate the case-fatality ratio, incidence and overall worldwide mortality and morbidity because it has been seen most of the victims goes to traditional healers before going to the hospital. According to WHO, 80% of the snakebite victims approaches conventional healers in developing countries before consulting healthcare professionals. These victims may die at home, and their deaths remain unrecorded. However, it is estimated that in the world, about 500,000 venomous snakes bite is reported annually. Snakebite is an occupational injury inflicted in the feet and ankles of herders, hunters and agricultural workers who unknowingly step on a snake. Snakebite also reported among those people who sleep in the open and bare ground in rural areas. In farming communities, snakebite is common. Many ecological conditions such as weather, temperature & socioeconomic factors such as widespread agricultural activities in rural areas, high population density, lack of available snake bite control program and numerous venomous snake species are major causes for the increased incidence of snakebite in Pakistan. Snakebite is a common medical emergency in Pakistan. The clinical manifestation of envenomation following snakebite depends on the patient's age and health status, the bite's location, type and size of the snake, and its management.



According to FAO, in Pakistan, the mortality rate is 1.9 per 100,000 population due to snakebite. The proportion of snakebite is higher among males because physically, they are more active



and work in the fields. The incidence of snakebite in Pakistan shows a distinct seasonal pattern with a peak in rainy and warm months. It is not always possible to identify the type of snakebite because it is usually not brought for identification in the health facilities. Sometimes the snakes are not trapped and killed and, at times, not even seen. Snakebite in millions of people annually creates 'one of the tropics' neglected health problems due to a lack of anti-venom. In developing countries, the snakebite mortality rate is one hundred fold higher than in developed countries because developing countries lack transportation, hospital equipment, deficiencies in management complications, and public knowledge of appropriate first aid. Snakebite is a neglected and widely distributed condition in developing countries. Men are the primary victim of snakebite, and upper limbs are the most common snake bite site. The severity of the bite depends upon the size and species of snake, degree and amount of toxicity, the timing of treatment, location of the bite and first aid measure. Regarding snakebite cases, multiple studies have been done in different regions of Pakistan. Anti-venom is the only specific antidote to snake venom, and its timely administration completely reverses all systemic manifestations of envenoming.

In rural areas, in the case of snakebite, most people do

They make bands around the biting site; it can cause swelling, pain, and congestion, suggesting local envenomation. They instil juices from irritant plants into the eyes, which can cause conjunctivitis. They forcefully inject oils into the respiratory tract, which can cause aspiration pneumonia, rupturing of eardrums, bronchospasm and pneumothorax. They do cauterization, incisions, immersion in scalding liquid, and sometimes heat over a fire, which can cause devastating injuries.

The common poisonous snake found in Pakistan

Includes (Elapidae) cobras, Krait, Lavantine Piped (Viperidae), Russell's viper and saw-scaled viper, Sea Snakes (Atractaspididae and hydrophidae)

Clinical signs/ symptoms in case of a snake bite:

It has been seen that in the case of snakebite, quite striking symptoms and symbols can be developed in some people even when no venom has been injected, it happens due to an understandable fear from a real venom bite, and these people may over-breathe, can develop stiffness of their feet and dizziness, pins and needles of extremities. Other people may become highly irrational and agitated, which can lead to various misleading symptoms. They may be trembling and sweating, pulse rate and blood pressure can

also be increased.

Early signs and symptoms: It has been seen that in the case of a snake bite, when venom is injected, local swelling and pain increase at the site of the bite that gradually extends proximally up the bitten limb and tender, painful enlargement of the regional lymph nodes draining the location of the bite (in the groin-femoral or inguinal, following bites in the lower limb; at the elbow - epitrochlear - or in the axilla following bites in the upper limb). However, bites by Kraits and sea snakes are usually pain-free and cause minimal local swelling. It is possible if someone who is sleeping may not even wake up when bitten by a krait, and there may be no noticeable fang marks. According to the species of snakes, signs and symptoms related to bite varies.

Generalized (systemic) signs and symptoms:

General: vomiting, Nausea, abdominal pain, weakness, malaise, prostration, drowsiness Cardiovascular (Viperidae): Faintness, collapse, shock, dizziness, visual disturbances, hypotension, pulmonary oedema, conjunctival oedema, cardiac arrhythmias.

The systemic effects in the case of Elapidae and Hydrophidae bites are mainly due to neurotoxin and cardiotoxin. Early signs are paralysis of the tongue, ptosis, glossopharyngeal paralysis, myasthenia, respiratory distress leading to shock. In many cases, death occurs due to respiratory paralysis. The common presenting symptoms were fang marks, swelling and bleeding from the bite and bleeding diathesis site. In the deficiency of trustworthy snake identification, clinicians are duty-bound to use polyvalent anti-venom.

How to prevent yourself from snake bite?

All snakes are carnivores; none of them is vegetarian, although some eat eggs. They have adapted various range of prey species and habitats. The simple way to reduce the chance of bites and encounters is to understand something about snakes' habits. One must know the local snakes, the time of the year and time of day or night, the sorts of places where they prefer to live and hide and the kind of weather when they are most likely to be active to be out and about. Many species like krait are night hunters & others are day-time hunters. Snakebite chances become greater at harvest time, after rains, during flooding at night, so adopt some precautionary measures to prevent snake bite during such conditions. Sometimes snakes enter the house for food like a rat. Control the rat population in the home. Use rat-proof containers to store food. Fill the cracks and cavities in mud and straw walls and seal the spaces beneath the floorboards because Snake can hide there. Do not sleep on the ground. It is recommended to use an insecticide-impregnated mosquito net if someone has to sleep on the ground. Clear the hiding places of snakes in the garden, compound and farmyard. Clear heaps of rubbish, termite mounds and building materials etc., when you walk outside the house at night, use light (torch, flashlight or lamp) and watch where you step. Never put hands into nests, any hidden places or holes where snakes might

Continued on Page 22



PER DOSE CONCENTRATION

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Infectious bronchitis virus (KM91 strain)..... ≥ 106.1 EID50
Newcastle disease virus (LaSota strain)..... ≥ 108.4 EID50
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Choong Ang Vaccine Laboratories (CAVAC) is the first Korean winner of this award. The firm's victory highlights innovation among one of the region's mid-sized players and strong growth in the Asian vaccine market.

Founded in 1968, CAVAC has developed and manufactures over 80 animal vaccines. The company said it saw robust sales growth of 9% to \$33 million in 2020, with "significantly improving" exports. The firm said it outperformed the other small and medium-sized veterinary vaccine manufacturers in South Korea during 2020.

The company's domestic and export businesses were challenged by the impact of the coronavirus outbreak and the lingering ramifications of African swine fever (ASF) in Asia. Nevertheless, CAVAC's growth was fueled by strong export sales (+19%). In fact, the firm has reported a compound annual growth rate of 27% for its export revenues over the last 10 years.

In 2020, the company renovated its veterinary vaccine manufacturing facility in Daejeon under WHO-GMP and local standards. Additionally, CAVAC began constructing a new headquarters.

The firm pointed out its need to internationalize its business, due to the small size of the Korean market and the high competition with foreign players. CAVAC is also attempting to meet increasing demand for avian influenza and foot-and-mouth disease vaccines in Asia. The company has been aggressively pursuing a strategy of increased exportation (it now sells its products to over 20 countries) and product diversification.

CAVAC has also set up a wide R&D network with universities in Korea, the US and Thailand, as well as national institutions. These partnerships have been focused on preventing ASF and porcine reproductive and respiratory syndrome.

-Advertorial

Role of minerals in the growth and maintenance of animals

by **Dr Abdul Mateen and Dewan Saeed**

College of Veterinary and Animal Sciences, Jhang

Minerals can be defined as naturally occurring, inorganic chemical compounds having a definite chemical composition and an ordered atomic arrangement.

Essential for metabolic processes of an animal body.

Only about 4 % of an animal - total body weight comprises mineral matter.

Minerals are classified into two main groups based on the amounts required by the body.

Macro Minerals: Macrominerals occur in appreciable amounts in the animal body and account for most of the body's mineral content. These are majorly involved in:

- Acid-base balance, structural integrity, nerve conduction, osmotic pressure maintenance, trans-membrane activity and muscle contraction.
- Body requirement for these is expressed in grams/kilograms of animal diet.
- Macro minerals are further classified into electrolytes and non-electrolytes.
- Non-electrolytes include Calcium, Phosphorus, Magnesium and Sulphur.
- Electrolytes include Sodium, Potassium, Chloride.

1. Calcium

- Principal inorganic component of bones.
- Almost 99 % of body Calcium is found in the skeleton; the remaining 1 % is distributed throughout extra-cellular and intra-cellular fluids.

Functions

- Calcium in bones provides structural integrity to the skeleton.
- Maintains proper blood-Calcium levels through ongoing resorption and deposition of Calcium.
- Circulating calcium plays a role in nerve-impulse-transmission, smooth, skeletal and cardiac muscle contractions, blood coagulation, activation of specific enzyme systems.
- Circulating calcium maintains normal cell-membrane-permeability

Sources • Eggs, green vegetables, bones.

Deficiency - abnormalities

a) Osteomalacia

- Characterized by softening of bones.
- Demineralization of bones along the whole length.
- The disease of adult animals, more common in female animals.

Symptoms • Pain in bones. • Paraesthesia: the feeling of pins and needles.

- Muscular spasms. • Usual fractures.

b) Rickets

- Characterized by bowing of long bones.
- Demineralization of bones at epiphyseal plate.
- It is the disease of young growing animals.

Symptoms • Pain and tenderness in bones.

- Stunted growth. • Short stature.
- Locomotory disturbances.

c) Eclampsia

- Disease of bitches and queens.
- Common in small toy breeds of dogs and uncommon in queens.
- Occurs 2-3 weeks after parturition.

Etiology Eclampsia refers to failure of homeostatic mechanisms for blood Calcium

Rickets in Dog



Rickets in Kitten



maintenance.

- Symptoms** • Tremors • Muscular spasms • Panting • Nervousness

d) Milk fever

- Hypocalcemia after parturition.
- Etiology refers to failure of homeostatic mechanisms responsible for blood calcium maintenance.
- Highly milk producing cattle, buff, sheep, goats are more susceptible.

Symptoms • Hypothermia. • Muscular atonicity

Milk fever in cattle



e) Nutritional secondary hyperparathyroidism

- Occurs in pups, kittens.
- Occurs when Ca deficient food (muscle / organ meat) is fed.

f) Excess - abnormalities

- Impaired skeletal development .
- Contributed to other mineral deficiencies especially Phosphorus.

2. Phosphorus

- Phosphorus is second most important component of animal skeleton.
- Almost 85 % of body- total Phosphorus is found in inorganic combination with Calcium, termed as hydroxyapatite in bones and teeth.
- Most of remaining 15 % of phosphorus is found in combination with organic substances in soft tissues.

Functions

- Phosphorus in skeleton provides structural support along with Calcium.
- Phosphorus in bloodstream maintains homeostatic mechanisms.
- Phosphorus in soft tissues is involved in almost all of the metabolic processes of body.
- It is the constituent of deoxyribonucleic acid (DNA) and ribonucleic acid (RNA), several B vitamins, coenzymes, cell membrane-phospholipids.
- It plays role in the oxidative pathways of phosphorylation reactions during metabolism of non-structural carbohydrates.
- It is also component of high energy molecules i-e ATP.

Sources • It is widely distributed in foods.

- Dairy products, eggs, legumes, vegetables.
- Fish, poultry and organ meats are rich in phosphorus but deficient in Calcium.

Deficiency - abnormalities

- Rickets (bowing of long bones).
- Osteomalacia (softening of bones).

Excess - abnormalities

- Calcium deficiency.

Bio-availability of Calcium and Phosphorus

- Bioavailability of both these minerals relates with their ratio in the animal diet.
- Relatively excess dietary Calcium forms an insoluble complex with phosphorus resulting in decreased Phosphorus absorption.
- Similarly high levels of dietary Phosphorus / phytate forms an insoluble complex with Calcium resulting in decreased Calcium absorption.
- The recommended ratio of Calcium to phosphorus in pets-diet is 1.2:1 to 1.4 :1
- The recommended ratio of Calcium to phosphorus in ruminant-diet is 2:1
- These ratios show maximum absorption of both

Calcium and Phosphorus.

• Calcium and Phosphorus in plant sources (cereal grains) show decreased bioavailability than minerals from animal sources. Reason is that Plant sources are in phytates. Phytates of plant sources makes insoluble-complexes with other minerals including Calcium, leading to decreased bioavailability.

Homeostatic mechanisms for maintenance of circulating plasma Calcium and Phosphorus

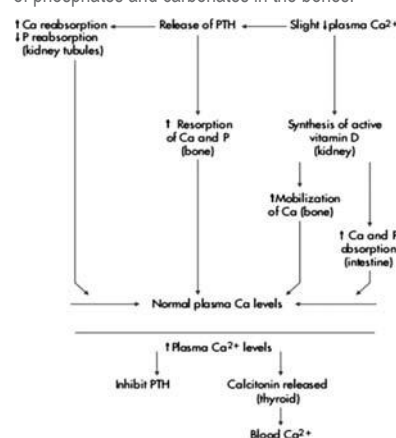
- Calcium and Phosphorus are discussed together because their metabolism and homeostatic mechanisms controlling their level are inter-linked.
- The level of circulating plasma Calcium is strictly controlled through homeostatic mechanisms and is independent of animal-dietary intake of Calcium.
- Mechanism-controllers are parathyroid hormone (PTH), calcitonin hormone and active vitamin D (calcitriol).
- PTH is secreted from the parathyroid glands behind thyroid gland in the neck.
- It is secreted in response to decreased serum conc. of Calcium and increased serum conc. of Phosphorus.
- PTH actually stimulates active vitamin D formation from kidneys.
- Net effect of PTH is to increase the serum conc. of Calcium and decrease the serum conc. of Phosphorus.
- Net effect of vitamin D is to increase the serum conc. of both Calcium and of Phosphorus.

Calcitonin hormone

- It is produced by the para-follicular cells of thyroid gland.
- It is secreted in response to increased serum conc. of Calcium.
- Its net effect is to decrease the serum conc. of Calcium by promoting Calcium deposition in bones.

3. Magnesium

- Although Magnesium is macro-mineral, however its amount in body is much lower than Calcium and Phosphorus.
- About 70% of body - total Mg exists in the form of phosphates and carbonates in the bones.



- Remaining 30% is found in intra cellular fluid.
- Negligible amount of Mg is found in extra cellular fluid.

Functions • It provides structural support to skeleton.

- It plays role in most of metabolic reactions, Mg-ATP complex is used as substrate in these reactions.
- As a cation of ICF, regulates metabolism of carbohydrates and proteins.
- As a cation of ECF, along with Ca, Na, K, allows muscle contractions and transmission of nerve impulses.

Sources • Widespread in food sources. •

Abundant in whole grains, legumes, vegetables, dairy products.

Deficiency - abnormalities

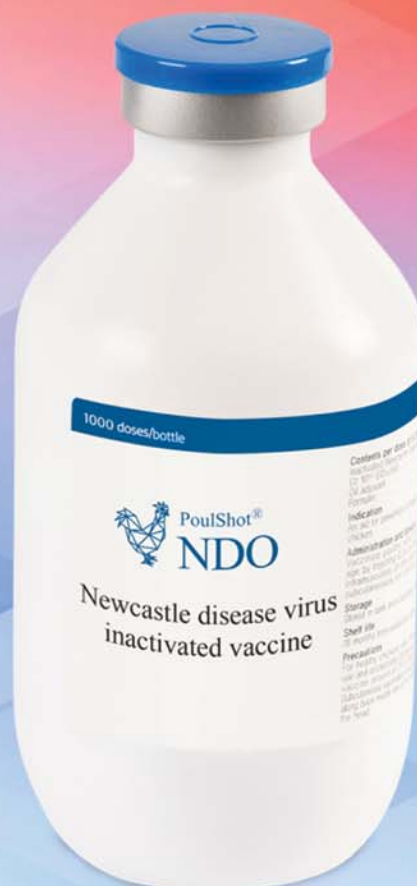
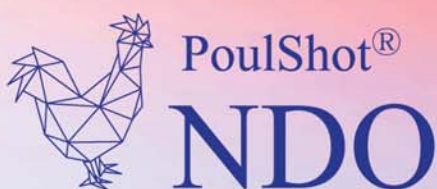
- Soft tissue calcification

Continued on Page 20



MAXIMUM PROTECTION NDV LOG₁₀⁹ EID₅₀

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MEDICINAL PLANTS

Its immunomodulatory action to control mycotoxins

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Mycotoxins adulteration is of great concern for food safety and security globally. Several studies have revealed that every year 60-80% of world crops are contaminated due to mycotoxins. Mycotoxins cause significant economic losses in livestock by the decreased growth rate, immunity and fertility, reduced products such as milk, meat, and egg, and high mortality. Mycotoxins' health effects are excessive, as they have mutagenic, teratogenic, hepatotoxic, carcinogenic, nephrotoxic, and immunosuppressive effects. Certain mycotoxins that gained critical importance in health status include aflatoxins, Ochratoxins, trichothecenes, fumonisins, deoxynivalenol, and zearalenone. It is essential to form a unique plan to alleviate the economic losses and health effects linked with mycotoxins impurity of feed ingredients without any side effects on public health status and feed quality. Several schemes have been implemented to alleviate the mycotoxins adulteration but frequently fall. One of the most proficient methods is synergistically using bioactive plant metabolites with mycotoxins absorbing component to reduce the exposure of mycotoxins and related adverse health impacts. Botanicals are usually observed as environment-friendly and safe substitutes of biological agents to prevent mycotoxins in food and feed ingredients. They are cheap, inexpensive, and reasonable compared to other materials used



for the prevention of mycotoxins. They offer the synergistic methodology as protectants of mycotoxins adulteration and another stimulation pathway that provoke the natural defence mechanism in plant tissues. In folk medicines, plants have been extensively used since ancient times to cure and prevent several disorders from one generation to another. According to WHO, nearly 80% of the world population for primary healthcare still depends on traditional medicine. Current studies have renewed concern in the use of botanical and their compounds as a nutraceutical. A significant number of medicines have been manufactured from plants based on their usage in traditional medicine. Against pathogenic microorganisms, insects, and adverse environmental circumstances, plants stimulate the secondary metabolites as a defensive mechanism. These metabolites are well known as phytochemicals. However, they may protect animals and humans against several infections due to microorganisms and toxins through antimicrobial and antioxidant activities. Several major groups of phytochemicals have been discovered according to their chemical structure. These main groups are polyphenols (tannins, Punicalagin, Ellagic acid, gallic acids), flavonoids, carotenoids,

tools, terpenoids, phytosterols, alkaloids, saponins, aromatic acids, carotenoids, essential oils, chlorophyll, organic acids, and proteases inhibitors. These compounds directly or indirectly protect against pathogens as they have anti-mutagenic, antimicrobial, anti-genotoxic, anti-proliferative, anti-carcinogenic, anthelmintic, anti-inflammatory, and antioxidant activities. **Antifungal impacts of plants extracts:** Plants are having anticarcinogens, antimutagens, antioxidants that are capable of combating the toxic effects of mycotoxins. Antioxidants protect macromolecules and cell

membranes by scavenging free radicals. Moreover, phytochemicals prompt the cytotoxicity in fungi by disturbing the function and permeability of cell membrane, inhibit the mitochondrial and cytoplasmic enzymes, inhibit the enzyme involved in the synthesis of the cell wall, alter the compartment of the cell, redox and osmotic balance. Plant extract and its compounds also act by stimulating the xenobiotic, biotransformation, and detoxification pathways. Phytochemicals can also inhibit the enzymes that initiate phase I carcinogens and promote phase II detoxification. In plants, bioactive compounds have been used as feed

Antifungal effects of plant extracts and their compound against mycotoxigenic fungi

Plant Source	Protective agent	Affective against fungal species	Reference
<i>Punica granatum</i> (Pomegranate)	Tannins	<i>Alternaria alternaria</i> , <i>A. niger</i> , <i>F. oxysporum</i> , <i>F. graminearum</i> , <i>F.</i>	Zhu et al., 2019
<i>Curcuma Amada</i> (Ginger)	6-gingerol, 6-shogaol, α zingiberene, geranail	<i>A. Parasiticus</i> , <i>A. flavus</i> , <i>F. verticillioides</i>	Kavitha et al., 2020
	Chitosan	<i>A. ochraceous</i>	Meng et al., 2016
<i>Piper nigrum L.</i> (Pepper)	Limonene, β -caryophyllene, sabinene	<i>F. oxysporum</i> , <i>A. niger</i>	Castellanoos et al., 2020
<i>Solanum lycopersicum</i> (tomatoes)	Lycopene	<i>C. albicans</i>	Choi and Lee et al., 2015
<i>Curcuma londa L.</i> (Turmeric)	Curcumin	<i>A. parasiticus</i> , <i>A. flavus</i> , <i>C. albicans</i> , <i>F. solani</i>	Sharma et al., 2020
<i>Syzygium aromaticum</i> (Clove)	Eugenol, β caryophyllene, Eugenyl acetate	<i>A. flavus</i> , <i>A. niger</i>	Oliveira et al., 2020
<i>Camellia Sinensis L.</i> (green tea)	Epigallocatechin 3-o-gallate	<i>Candida species</i>	Behbehani et al., 2019
<i>Rosmarinus officinalis L.</i> (essential oil)	Camphor, apinene, eucalyptol	<i>A. flavus</i>	Da Silva Bomfim et al., 2019
<i>Hippophae rhamnoides</i> (sea buckthorn)	Phenolics	<i>A. ochraceous</i>	Luksa et al., 2020; Ramasamy et al., 2010

additives to avoid fungal growth and aflatoxin adulteration in food and feed. Thus preventing the risk of carcinogenicity and mutagenicity of mycotoxins, i.e. aflatoxins. **Conclusion:** For food security development of alternative strategies for mycotoxins, destruction is of keen interest. Through literature, it has been observed that botanical extracts and their phytochemicals detoxify the mycotoxins having no side effects. Botanical bioactive compounds in agriculture are environmentally friendly fungicides, highly efficient at a low rate having strong antifungal and mycotoxins inhibitory properties. Plant bioactive compounds play a significant role in nutraceutical and pharmacological functions as bio fungicides and detoxifying agent in alleviating the marked effects of mycotoxins.

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Role of minerals in the ...
Continued from page 16

• (Mg naturally prevents up-regulation of some Osteoblastic genes that potentially drive calcification in soft tissues)
• Neuromuscular irritability.
Excess - abnormalities • It is risk factor for struvite urolithiasis in felines.
4. Sulphur
• Within the animal body, Sulphur exists entirely s a component of organic compounds.
• The largest proportion of body-Sulfur is found in the proteins as a component of Sulphur containing amino acids, cystine and methionine.

Functions
• Plays role in synthesis of Sulphur containing organic compounds especially cystine, methionine, insulin Hormone, heparin (anti-coagulant), chondroitin sulfate, muco-polysaccharide of cartilages.
• Sulphur is the major component of B vitamins : thymine (B1) and biotin (B7)
• It plays role in the transport of amino acids across cell membrane.

Sources • Sulphur containing amino acids; methionine and cystine.
• Inorganic dietary sulfates poorly absorbed.
Deficiency - abnormalities: • Not reported.
Excess - abnormalities:
• Not reported

Electrolytes
1. Potassium
• Potassium is the major electrolyte (Cation) in the extracellular fluid.
• Approximately 1/3rd of intracellular K is bound to proteins and rest is found in the ionized form within the cell.

Functions
• Intracellular Ionized Potassium provides osmotic force to maintain fluid volume.
• Intracellular Potassium plays role in numerous enzymatic reactions.
• Negligible amount of extracellular potassium is responsible for muscle contractions and transmission of nerve impulses.
Sources • Meats; poultry, fish, whole grain cereals, most vegetables are rich source of K.
Deficiency - abnormalities
• Not reported due to abundance of K in different eatables, however electrolyte imbalance may occur.
Excess - abnormalities

Electrolyte imbalance in cat by Potassium –deficiency



• Not reported.
2. Sodium
• Ionized Sodium is the major cation in the extracellular fluid, providing primary osmotic force to maintain aqueous environment of ECF.
Functions • It plays role in the transmission of nerve impulses and contraction of muscles.
• Maintains permeability of cell membrane.
• Sodium pump controls electrolyte balance between extracellular and intracellular environment.
Sources • Table salt is the chief source. • Dairy -products, egg-white, meat, poultry, fish are naturally rich in Sodium.

Deficiency - abnormalities • Not reported due to abundance of Sodium in feeds.
Excess - abnormalities • Not reported because all animal species including pets have physiological

Electrolyte imbalance in cat by Sodium - deficiency



adaptation to wide variations in Sodium intake.
• However, it is risk factor for hypertension in some human populations.

3. Chloride
Chloride ions account for the 2/3rd of total anions in ECF.
Functions • It maintains normal osmotic pressure, acid -base balance, water balance in the body.
• It is necessary for the hydrochloric acid production in the stomach of canines, felines, equines and in the abomasum of bovines, caprines and ovines.
Sources • Chief Source is table salt.

Deficiency - abnormalities
• Not reported in animals due to abundance of this ion in different foods.
Excess - abnormalities
• Not reported.
Micro-Minerals
• Also called trace elements.
• They act as catalysts at cellular level regulating many functions including uptake of macro-minerals.
• The body- requirement for these is expressed in from micrograms to miligrams / kilograms of animal diet .
• Examples include Iron, Copper, Cobalt, Manganese , Iodine , Zinc, Fluoride ,Selenium.

1. Iron
It is found in all body cells but largest proportion is found as a component of proteins , hemoglobin (>65%) , and myoglobin (4%), which binds with O2 for immediate use by muscle cell.
Functions • Plays role in the transport of O2 from lungs to body cells in form of hemoglobin and myoglobin.
• It is component of Cytochrome enzymes responsible for H+ ion transport during cellular respiration.

Factors affecting Iron absorption
• Dietary Fe might be inorganic (Fe2+ or Fe3+) or organic (bound to heme group).
• Fe2+ state Iron is more absorbable than Fe3+ state, so acidic (Reducing) environment of intestine promotes Iron absorption.
• Organic heme- Fe (myoglobin, hemoglobin in the form of animal foods) is more absorbable than inorganic Fe from plant sources.
• Absorption is increased during increased metabolic activities like gestation, growth.
• Dietary intake of Fe along with phytates, phosphates, oxalates, excessive Calcium, Zn retards Iron absorption.
• Chief storage sites of Iron in the body include bone marrow, spleen and liver.

Sources
• Organ meats (liver, kidney) are richest source of Ferrus.
• Egg yolk, fish, legumes ,green vegetables , whole grains provide adequate amounts of Iron.
Deficiency - abnormalities
• Unusual due to Hb- recycling after catabolism of RBCs.
• However , due to parturition, major surgery, injury, severe parasitic infestations, GIT diseases, Fe deficiency may lead to hpochromic microcytic anemia clinically expressed as fatigue, depression.
Excess - abnormalities

Anemia in canines by Ferrus deficiency



• Iron toxicity.
2. Copper
• Metabolism and functions of copper are closely tied to Iron.
Functions
• Responsible for normal absorption and transport of dietary Iron.
• Along with iron, responsible for the synthesis of Hb.

• Copper carrier protein in the blood is ceruplasmin which is also responsible for Iron mobilization from the liver.
• Copper is the converter of amino acid, tyrosine into melanin pigment.
• Involves in ATP production during cytochrome oxidase reactions.
• Superoxide dismutase (copper metalloenzyme) protects cells from oxidative damage by superoxide radicals.
• Responsible for normal Osteoblast activity during skeletal development.
• Storage site for Copper In the animal body is the liver.

Sources
• Liver, whole grains.
Deficiency- diseases
• Hypochromic microcytic anemia.
• Depigmentation of animals-colored hair coat.
• Impaired skeletal growth in young animals.

Excess - abnormalities
• Not reported, however
• Inherited disorder of Copper metabolism in several dog breeds may lead to liver toxicosis then hepatitis.

3. Zinc
• This trace mineral is widely distributed in many tissues of the body.

Functions
• It plays central role in the metabolism of carbohydrates, proteins, lipids, nucleic acids.
• Zinc allows Vitamin A to travel from liver to retina and skin to produce melanin which protects conjunctiva of eye and skin from UV - radiation.
• It is component of many metallo-enzymes, like carbonic anhydrase, lactic dehydrogenase, alkaline phosphatase, carboxypeptidase, aminopeptidases.
• It is cofactor in the protein synthesis and DNA, RNA synthesis.
• Responsible for cellular immunity.
• Responsible for Reproductive physiology.

Absorption- factors
• Animal sources of Zinc (meat, eggs) are more readily absorbed than plant sources.
• Dietary excessive intake of Calcium, Iron, Copper, fiber, Phytates retards Zn absorption.
Sources • Beef liver, poultry, egg - yolk, legumes, milk.

Deficiency - abnormalities
• Growth retardation in young animals.
• Testicular atrophy
• Impaired reproductive performance.
• Immune system dysfunction
• Conjunctivitis
• Dermatitis (A general term for any skin defect/lesion),
• Hperkeratinization (Abnormal rapid shedding of skin cells)
• Parakeratosis (Retention of nuclei in stratum corneum abnormally, showing inflammatory or neoplastic lesions)
• Hair depigmentation (hair discoloration due to Melanin deficiency) • In pets, skin and hair-coat change is the 1st clinical sign of Zn deficiency.

Excess - abnormalities
Canine conjunctivitis by Zn deficiency



• Causes Calcium and Copper deficiency.
4. Manganese
• Acts as component of several cell enzymes catalyzing metabolic reactions.
Functions
• Activates a number of metal enzymes (pyruvate carboxylase, superoxide dismutase) in mitochondria regulating nutrient metabolism.
• Plays role in normal bone development.

• Plays role in reproductive physiology.
Sources • Plant based (legumes , whole grain cereals) • Animal based ingredients (liver, kidneys) are poor source of Manganese.
Deficiency - abnormalities • Not reported in dogs and cats. • Reported in other animal spp.
• Characterized by retarded growth, impaired reproduction.

Excess - abnormalities • Not reported.
5. Selenium
• Plays role as anti - oxidant in the cellular environment.

Functions • As a component of glutathione peroxidase, protects cell membrane from oxidative damage.
• Glutathione peroxidase deactivates lipid- peroxides involved in oxidation of cell membrane- lipids.
• Vitamin E and Sulphur containing amino acids, methionine and cystine are closely related in this process.
• Vitamin E protects PUFA's in cell membrane from oxidative damage, thus preventing release of lipid peroxides.
• By reducing lipid -peroxides, vitamin E spares cellular use of Selenium.
• Sulphur containing amino acids are also major constituents of glutathione peroxidase, so are important in Selenium- metabolism.

Sources • Fish, meat, cereal grains.
Deficiency - abnormalities • Skeletal and cardiac myopathies (unusual).

Excess - abnormalities • Toxic hepatitis, nephritis.
6. Iodine
• Iodine is required by the body for the synthesis of thyroxin and tri-iodothyronin hormones by thyroid gland.
Functions • Inform of thyroxin, stimulates cellular oxidative processes and regulates basal metabolic rates.

Sources • Fish, beef, liver.
Deficiency - abnormalities
• Decreased Iodine leads to decreased production of thyroid gland, as a result , thyroid gland increases in size, becomes overactive to compensate decreased secretion .This condition is called goiter characterized by hyperthyroidism .
• Cretinism; a syndrome characterized by Growth failure, CNS dysfunctions, multiple skeletal deformities in young animals.

Excess - abnormalities
• Excess Iodine can also lead to decreased production of thyroid gland, as a result , thyroid gland increases in size, becomes overactive to compensate decreased secretion .Condition is called goiter characterized by hyperthyroidism.

7. Cobalt
• It is constituent of Vitamin B 12.
Functions • Currently no any function of Cobalt identified.
Sources • Fish, dairy products.
Deficiency - abnormalities • Vitamin B12 - deficiency, anemia.
• Neuromuscular disorders.

Excess - abnormalities • Not reported.

Hind quarter paralysis in dog by Cobalt –deficiency



Other micro-minerals
These are of minor importance in animal growth and maintenance.
These include
• Chromium • Molybdenum • Tin • Flourine
• Nickel • Silicon • Vanadium • Arsenic
Minerals can be termed as regulators of animal physiology. The feeding of animals with balanced level of mineral- content, not only maintains physiology of all body systems, but also saves from the life-threatening risks of metabolic diseases like Milk fever, Grass-tetany, Rickets etc. Moreover, production from the animals can be achieved at the peak level.



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Chief Minister Sindh ...

Continued from page 06

cricket matches must be organized in Hyderabad and we are working on it," he said and added due to COVID situation the implementation of the proposal has become delayed.

The chief minister said that the Contribution of Agriculture sector to the national GDP was 19.3 percent, whereas Livestock contributed 60.6 percent to Agriculture and 11.7 percent to GDP. "The Agriculture including livestock, is the mainstay of the masses in rural and rural economy cannot be lifted without interventions in livestock, which will ultimately result in development of allied sectors and direct employment in rural and remote areas," he said.

The CM directed Livestock and Fisheries dept to introduce a scheme to install refrigeration systems in the storage tanks of the boats fishing in the deep sea.

"This will help to keep the entire catch safe and healthy," he said and added otherwise a large stock of the fishermen went into trash when returning from fishing trips.

He said that it was evident from the fact that only two industries have survived in a sustainable manner in Pakistan - it is either technology or agro-based industry.

He said, "population growth, increase in per capita income and the potential for export are fuelling the demand of livestock and livestock products. The rise in production cost has increased the retailers and consumers' price index for milk, yoghurt, meat, fish, eggs, and other items." He added that after the promulgation of 18th Constitutional amendment, it was now the prime duty of provinces to take efforts for food security and quality food production.

Syed Murad Ali Shah said that the Livestock and Fisheries of Sindh dealt with three major production subsectors-Livestock, Poultry and Fisheries responsible to provide milk, meat, fish and eggs as a unique source of quality food and animal protein in which we were already deficient in the face of ever increasing population.

The CM Sindh said that the livestock sector required special initiatives to bring food security in the province and make sure the public health was safeguarded.

"It is assumed that more than 70 percent of infections human being is facing today have been contracted from animals and about 60 percent emerging infectious diseases are transmitted from animals to humans," he said and added therefore, the world was working on 'One-Health' concept that was health of humans was dependent upon health of plants and animals.

The chief minister said that the Vaccine Production, timely diagnosis of Diseases and control of zoonotic diseases was of prime importance in this sense.

"Sindh Institute of Animal Health Karachi established in 2018 is involved to carry out such tasks," he said and added the Sindh Government has invested through Development schemes to develop the capacity of the province for vaccine production, zoonotic disease and public health.

He emphasized on the need to invest smartly and largely in the livestock sector, which returned in manifold what was invested.

Miyawaki urban forest ...

Continued from page 08

international level. He also appreciated Sindh forest department for its cooperation.

Mr Ismail said that mangroves plantation had been increased in Sindh and Balochistan. Prime Minister Imran Khan had a vision and dream to turn Karachi into a green city, he added.

The governor said the PIA, Port Qasim and other institutions had been asked to provide small spaces for tree plantation. Such a request was being made to the provincial government as well, he said.

He believed that Miyawaki urban forest would play a vital role in checking flooding in the city. Malik Amin said that the metropolis needed urban forest to deal with heatwaves. "Miyawaki urban forest grows 10 per cent faster and stores more carbon dioxide; it plays an important role in biodiversity," he said.

The PM's aide informed the audience that 30,000 mangrove trees had already been planted in the country out of one billion, which were being planted additionally over 100,000 acres of land.

He said Karachi, Hyderabad and Sukkur had been chosen for the urban forest sites.

He said that when the prime minister talked about promoting dairy and poultry farming in the country, it was criticised and some people made fun of it. However, he added, PM's vision was in line with the importance of the livestock and poultry sector around the world, the development of which could bring about great economic opportunities for Pakistan.

Impact of COVID-19 on animals

Continued from page 08

identification tag. This will help ensure your pet is returned home safely, should it need to be moved from your home because you are unable to care for it yourself. Livestock and poultry producers have similar concerns about caring for their animals if they or their staff become ill. Producers should be having discussions with their families and employees about who can help care for the animals should someone become ill. Producers should also arrange alternatives for animal care when employees are sick or required to self-isolate for a period of time. Planning should include identifying the minimum level of care that is necessary to maintain the health and welfare of the animals, and making arrangements in advance with friends, family or neighbors for getting a "helping hand" when needed.

In-Vitro antimicrobial ...

Continued from page 10

nutrient broth was prepared, and rectal swabs were inoculated. Results were obtained after 24 hours of incubation. A distinct and differential press was used for isolation and identification of bacteria. EMB and SS agar was used for isolation of *E. coli* and Salmonella, respectively. Microscopy was done, gram staining was performed, and gram-negative rod shaped bacteria were observed under a microscope. A Biochemical test was applied for the bacteriological conformation. API kit was used for the biochemical characterization of isolated bacterial colonies from EMB agar and SS agar. Other tests were used for biochemical confirmation catalase test, oxidase test, and methyl red test.

After isolation and biochemical confirmation,

colonies from EMB and SS agar were taken for DNA isolation by using the kit method. After DNA isolation, polymerase chain reaction (PCR) was performed on isolated DNA for *E. coli* 16S RNA, *E. coli* K99, Salmonella specie and Salmonella invA gene. After running PCR, agarose gel was made. The PCR product was loaded on the gel and run against electrophoresis. After the given time, the gel was observed in UV rays, and gene sequencing was applied. Using the Kirby-Bauer method of disc diffusion method colonies, the antimicrobial resistance pattern was observed. PCR confirmed was used for this method. An antibiotic sensitivity test was performed by using different antibiotics. It was observed that *E. coli* was showing sensitivity against ciprofloxacin, and Salmonella was showing no resistance against Cephradine.

Snake bite problem in Pakistan

Continued from page 14

rest. Beware when handling dead snakes; even an accident scratch from the fang may inject venom. Rain can flush snakes from their burrows, and rain can also wash snakes into the gutter at the edge of the road. So, it is important to take precautionary measures while walking on the road after rain and dark. Do not touch snakes caught in fishing nets and on lines. Drivers and cyclists should not run over a snake on the road. The snake may not be instantly killed and may lie injured and pose a risk to pedestrians. There is a risk of bites to bathers and those washing clothes in the muddy water of estuaries, river mouths and some coastlines. Keep young children away from areas known to be snake-infested. In occupations that carry a snake-bite risk, such as rice farming and fish farming, employers might be held responsible for providing protective clothing (boots) to cover them specifically against snake-bite- implementing preventive strategies for community education.

Snakebite in Livestock:

Snakebite is a common and significant cause of death in countryside areas. Exact data on snakebite in livestock is also not acquirable. We should adopt some preventive measures to control the snake population near animals shed. One of the most effective methods to control the snake population is to lower their food (rodents) and shelter. Moreover, the snake population could be controlled by searching their hides and killing them by clubbing or shooting. We can use different chemicals such as nicotine sulphate, calcium cyanide and strychnine to kill snakes. These chemicals can affect human, and other animals both, so take preventive measures while using these chemicals. All the substances used as a repellent to snakes can cause a threat to the life of animals and humans both. So, use snakes repellent with care. The use of tourniquets should be discouraged in the case of envenomations from (Viperidae). Venom from the Viperidae family cause necrosis, and cytolysis and tourniquets increase their action. Pressure immobilization is recommended for bites by neurotoxic Elapidae snakes. Although snakebite mortality is estimated to be one-tenth that of malaria, no equivalent global snakebite control program exists. An international effort is necessary to focus global attention on this neglected and treatable condition.

NPMC takes notice of ...

Continued from front page

Speaking on the occasion, the Minister for Industries & Production directed the provinces to expedite provision of estimates regarding sugar stock needed during the current year. The USC has already made an arrangement for import of 50,000 ton of sugar to ensure its availability at a discounted price, he stated.

Secretary, Ministry of NFS&R, apprised NPMC about the sufficient stock of wheat across the country. The NPMC noted price disparity in prices of wheat flour among provinces and directed the secretary food to coordinate with representatives of the provincial governments to ensure smooth supply of wheat at fair prices across the board.

The NPMC also directed Member, PBS to give detailed briefing to the chief secretaries about the methodology of data collection across different markets in respective Provinces. The underlying rationale is to work out a national average of prices of basic commodities which reflects the situation on ground accurately. The representatives of the Punjab and Sindh governments informed the NPMC about the increase in prices of chicken and eggs due to seasonal factors. It is worth

mentioning here that price of chicken is continuously increasing in the country. Chicken price is around Rs230 per kg in different parts of the country. Similarly, eggs prices are also on the higher side. The NPMC has directed the provincial governments to take corrective measures and ensure supply of poultry at affordable prices throughout the country.

The finance minister reiterated the firm commitment of the government to ensure provision of essential commodities at affordable prices across the board. He urged the provincial governments and departments concerned to make coordinated efforts to keep prices of basic commodities in check, he concluded.

Federal Minister for National Food Security & Research Syed Fakhar Imam, Federal Minister for Industries & Production Hammad Azhar, SAPM on Revenue Dr Waqar Masood, Member CCP, Member PBS, MD PASSCO, MD USC, representatives of the provincial governments and senior officials of the Finance Division also participated in the meeting.

Pakistan issues fresh ...

Continued from front page

purchases in its previous tenders because of high prices offered. The TCP is seeking wheat for five

shipment periods in April, May, June, July and August 2021.

"I think they will select the lowest prices offered in these months, which could involve a wide spread of shipment periods, but still buy only around 300,000 tonnes," one trader said.

The TMO reserves the right to buy 5 per cent more or less than the tender volume. Price offers must be for a minimum 100,000 tonnes.

The sugar is sought from worldwide origins packed in bags transported in containers or bulk carriers.

Rapid shipment is sought starting in two weeks plus voyage time after contract award for 10,000 tonnes in containers and/or 25,000 tonnes in bulk, with phased deliveries afterwards.

Pakistan had in July 2020 approved sugar imports to meet a shortage as production fell below consumption levels.

Meanwhile, Pakistani importers have in recent weeks purchased an estimated 594,000 tonnes of soybeans to be sourced optionally from Brazil or the United States for 2022 shipment as strong domestic demand for animal feed continues, European traders said.

Pakistan is currently buying 200,000 to 250,000 tonnes of soybeans monthly due to strong demand for soybean for poultry, one trader said. The purchases comprise three

consignments each of 66,000 tonnes for February 2022 shipment, four each of 66,000 tonnes for March 2022 shipment and two each of 66,000 tonnes for April 2022 shipment.

"Crush profit margins have come down but buyers in Pakistan are willing to book forward to ensure that they get the soybeans, the trader said.

UVAS working on ...

Continued from page 06

Prof Nasim said that UVAS has recently been ranked among 351-400 universities in the world by Times Higher Education (THE) Emerging Economies Ranking and is also among top 10 universities of Pakistan because of its quality education, research and services. Delegates from Punjab University, Arid Agriculture University Rawalpindi and Kinnaird College Lahore, World Poultry Science Association- Pakistan branch, poultry farmers, UVAS faculty members and students attended the seminar.

At the end of the seminar Prof Dr Nasim Ahmad distributed shields among the guest speakers and gave away certificates to the delegates. Two technical sessions were conducted during the seminar, in which poultry experts/ professionals.

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نصوصیات

لنکاسپر ایڈ-ڈی پاؤڈر وسیع الاثر انتہائی بائیو کنکس کا مرکب ہے جو ای کوئی، مونیا، مائیکروپلازما، سی آر ڈی، گردوں کی سوش، جوڑوں کے درد اور نظام تنفس کے جراثیموں کے خلاف نہایت موثر ہے۔



پاکستان کا پہلا آزاد وٹرنری رسالہ

اے. وی. این

ایگزیکٹو وٹرنری نیوز

کپاس کی کاشت میں کمی وجہ سے ملک کو اس وقت کٹن کی تاریخی قلت کا سامنا

کوچا بنے کہ وہ بھی حکومت کی طرح فارمز کے لئے اقدامات اٹھائیں، ان کی ٹریڈنگ کا اہتمام کیا جائے، کپاس کے نئے بیج اور لبرس رچ سے فارمز کو آگاہ کیا جائے تو اس سے بھی ہماری مجموعی پیداوار میں اضافہ ہو سکتا ہے، عام حیات بھندارا کہتے ہیں حکومت کی زرعی شعبے میں سنجیدگی کا اندازہ اس بات سے لگایا جاسکتا ہے ابھی جو اکتانک ایڈوانزری کونسل تشکیل دی گئی ہے اس میں کوئی ایک فارم شامل نہیں ہے۔

ہے۔ سب سے بڑا مسئلہ بیج کا ہے۔ اس کے علاوہ حکومت نے سفید کھجی کے تدارک کے لئے سبسڈی کا اعلان کیا ہے لیکن وہ سبسڈی کس زہر پر دی جائیگی کیونکہ مارکیٹ میں مختلف مالیت کی زہریں دستیاب ہیں۔ ہمارے یہاں کپاس کے بیج پر موثر تحقیق ہی نہیں کی گئی ہے جس کی وجہ سے ہماری پیداوار ایک مخصوص حد سے آگے نہیں بڑھ سکی ہے۔ اس کے علاوہ فارمز اور ٹیکسٹائل ملز مالکان کا آپس میں رابطہ نہیں ہے۔ ٹیکسٹائل انڈسٹری



مصنوعات کی پیداوار کے لیے ریکارڈ کٹن بیرون ملک سے درآمد کرنے پڑ رہی ہے۔ عام حیات بھندارا کہتے ہیں بد قسمتی سے ہمارے یہاں جو بیج میسر ہے وہ غیر معیاری

سے خصوصی اہمیت حاصل ہے کیونکہ مجموعی پیداوار کا قریباً 80 فیصد پنجاب میں پیدا ہوتا ہے۔ اس سال کپاس کی فصل قریباً 40 لاکھ ایکڑ پر کاشت کی جارہی ہے جس سے 17 من فی ایکڑ سے زائد اوسط پیداوار متوقع ہوگی۔ حکومت پنجاب کپاس کے کاشتکاروں کو دو لاکھ ایکڑ سے زائد رقبے کے لئے 1 ہزار روپے فی ایکڑ منظور شدہ اقسام کے بیج اور سفید کھجی سے بچاؤ کیلئے 4.4 ارب روپے کی سبسڈی پر فراہم کر رہی ہے۔ کاشتکار کپاس کی منظور شدہ بی بی اقسام آئی پو بی 13، ایم این ایچ 886، بی ایس 15، نیاب 878 اور ایف ایچ 142 ہیں جبکہ مخصوص اضلاع کیلئے دیگر منظور شدہ اقسام کا انتخاب مقامی زرعی ماہرین کے مشورہ سے کریں۔ ڈاکٹر انجم علی کا کہنا ہے منظور شدہ اور غیر قانونی بیج کے استعمال سے کپاس کی پیداوار میں نمایاں کمی ہو جاتی ہے۔ وزیر زراعت پنجاب سید حسین جہانیاں گرد و بزی کی ہدایت پر آئندہ سیزن میں کپاس کی کاشت سے قبل بیج کو دوانی لگانے کیلئے خصوصی مہم کا آغاز کیا گیا ہے تاکہ فصل نقصان دہ کیڑوں اور بیماریوں سے محفوظ رہے۔

لاہور: ملک میں گزشتہ سال کے مقابلے میں کپاس کی پیداوار میں 34 فیصد کمی آئی ہے جس کی وجہ سے اس وقت کٹن کی تاریخی قلت کا سامنا ہے۔

پنجاب اور سندھ میں کٹن کی پیداوار میں بالترتیب 34 اور 38 فیصد کمی دیکھنے میں آئی ہے۔ گزشتہ سال 85 لاکھ گانٹیں حاصل ہوئی تھیں تاہم اس سال فروری تک صرف 56 لاکھ گانٹیں حاصل کی جاسکی ہیں۔ پنجاب کے مختلف اضلاع میں کپاس کی کاشت شروع ہو گئی ہے۔ پنجاب حکومت کا ہدف ہے کہ اس سال پنجاب میں تقریباً 40 لاکھ ایکڑ رقبے پر کپاس کاشت کیے جانے کا ہدف ہے۔ پنجاب حکومت کی طرف سے کپاس کے کاشتکاروں کے لئے بیج، کھاد اور وائٹ فلافٹی کی تلفی کے لئے زہروں میں سبسڈی کا اعلان کیا ہے۔

مقامی کاشتکار چوہدری محمد خالد نے ٹریبون سے بات کرتے ہوئے کہا وہ پہلے 25 ایکڑ رقبے پر کپاس کاشت کرتے تھے تاہم اس سال 150 ایکڑ رقبے پر کپاس کاشت کر رہے ہیں۔ انہوں نے کہا حکومت نے کپاس کی کاشت پر جو سبسڈی کا اعلان کیا ہے اگر وہ مل جاتی ہے تو وہ آئندہ سال سے کپاس کی کاشت کا رقبہ مزید بڑھا دیں گے اور دوسری فصلیں کم کر دیں گے۔ محمد خالد کے مطابق ماضی میں کپاس کے شعبے کو نظر انداز کیا گیا جس کی وجہ سے انہوں نے کپاس کاشت کرنا انتہائی کم کر دی تھی۔ ان کے مطابق غیر معیاری بیج، مہنگی کھاد اور زرعی ادویات اور پھر موسمیاتی تبدیلیوں نے کپاس کی پیداوار کو کم کیا ہے۔

ایک اور کاشتکار محمد فاروق کا کہنا ہے حکومت اگر کاشتکاروں کو کھاد، بیج، زرعی ادویات، زرعی مشینری پر سبسڈی اور دیگر سہولتیں فراہم کرے تو ہمیں بھارت سے کپاس اپورٹ نہیں کرنا پڑے گی۔ بھارت میں کسانوں کو بجلی پر سبسڈی دی جاتی ہے، ان کے لاگت ہمارے مقابلے میں کم ہے جبکہ بیج کی کوالٹی بہتر ہونے کی وجہ سے فی ایکڑ پیداوار بھی زیادہ ہے، اگر پاکستانی کسانوں کو یہ سہولتیں دی جائیں تو ہم کپاس سمیت دیگر اجناس کی پیداوار میں خود کفیل ہو سکتے ہیں ڈائریکٹر جنرل (توسیع) محکمہ زراعت پنجاب ڈاکٹر انجم علی کے مطابق دنیا بھر میں کپاس پیدا کرنے والے ممالک میں پاکستان چوتھے نمبر پر ہے۔ پنجاب کو اس لحاظ



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