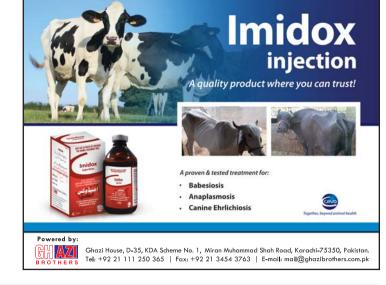


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>> Pakistan seeks Turkish investment ...



>> Stakeholders demand steps to ...



>> An insight on botulism



>> Mycotoxins; Effect on poultry production.



PLANS FOR MEDIUM AND LONG TERM PROJECTS ON AGENDA

PM Imran Khan vows action to uplift agriculture sector

AVN Report

ISLAMABAD - Prime Minister (PM) Imran Khan recently

to review reforms in the agricultural sector. An action plan was called for based on timelines for medium and long-term projects in the agricultural sector to increase production and ensure modernisation in the

PM Imran directed the federal food security ministry and the provinces to gather accurate data regarding agriculture

production, its consumption, : of various commodities, and wastage and exports so that to expedite the process of the government could exactly activating the National Food

presided over a meeting held ! know about the demand and ! Security Dashboard at the



supply of commodities.

"The prime minister directed to collect accurate and reliable data on production estimates

Ministry of Food Security with assistance of the provinces and departments concerned," said an official press release issued by the PM Office.

To increase agricultural production and

addressfood security challenges, the prime minister called for measures for

Continued on Page 13

AFTER KAAVAN, HIMALAYAN BROWN **BEARS FIND NEW HOME ABROAD**

Wildlife department refuses to accept responsibility of zoo inmates

AVN Report

ISLAMABAD - Islamabad Wildlife Management Board (IWMB) Chairman Dr Anisur Rehman recently informed the court that most of the inmates of the zoo had been



relocated to appropriate sanctuaries. Hence, two Himalayan brown bears along with the lone elephant, Kaavan, of Islamabad Marghazar Zoo might be relocated to a foreign country since sanctuaries in Khyber Pakhtunkhwa and Punjab were not ready to

Continued on Page 13

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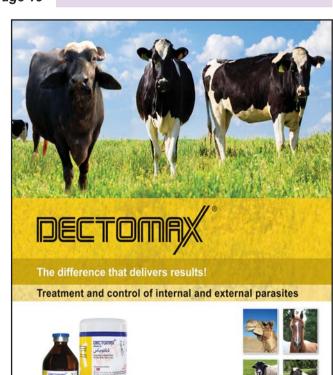
Poultry sector slams electricity supplying companies for overbilling

AVN Report

LAHORE - Pakistan Poultry Association (North Region) Vice Chairman Muhammad Fargham has stated that poultry farmers are facing heavy losses due to increased electricity bills amid COVID-19 pandemic.



At a press briefing held recently, Fargham said it was observed that over the past 18 months, about 55% of electricity bills of the industry, in general, had increased. "For the past few months, electricity supplying companies (Fesco, Gepco, Hesco, Sepco, Lesco, Mepco, Pesco, Qesco and Tesco) have been overcharging the entire poultry sector, which is not justified," he said. Continued on Page 13



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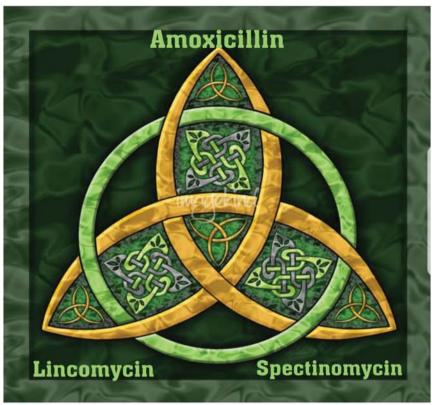
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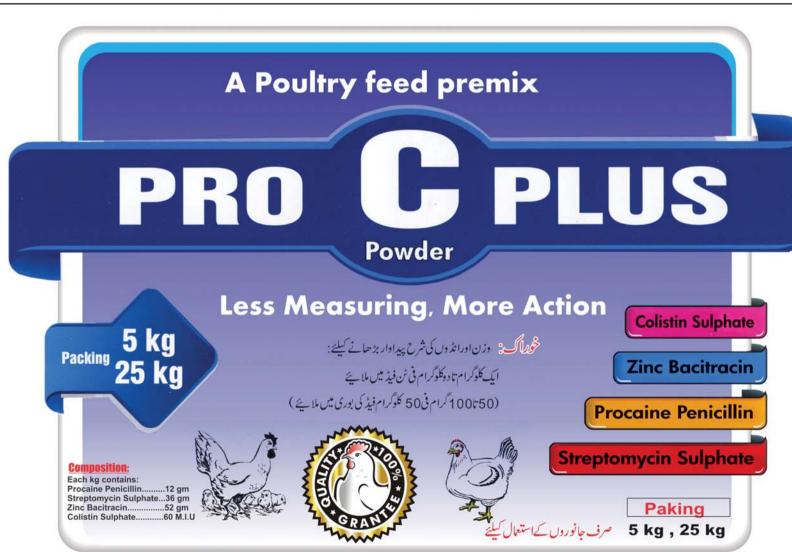




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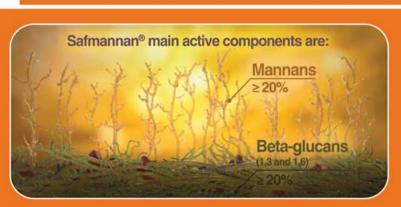
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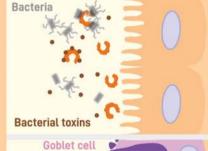


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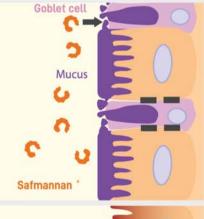
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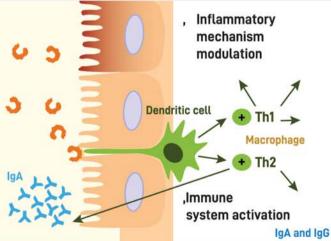
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Pakistan seeks Turkish investment in agriculture, livestock sectors

AVN Report

ISLAMABAD - Minister for National Food Security and Research Syed Fakhar Imam recently invited Turkey for investing in dairy farming, agribusiness and food processing sectors of Pakistan, which would help to further strengthen bilateral trade and investment relations of both the countries.

Talking to Turkish
Ambassador, Ihsan
Mustafa Yurdakul, who
called on him, the minister
said that the longstanding
brotherly relations between
Pakistan and Turkey spans
over centuries. He
appreciated Turkey's efforts
to provide assistance to

Pakistan in various areas and welcome its interest in the development of agriculture and livestock sector development. He said that Pakistan and Turkey had vast potential for collaboration in the field of agriculture and livestock research.

Syed Fakhar Imam also highlighted the significance of the visit of President of Turkey to Pakistan this year and signing of Strategic Framework Agreement (SEF) between the two countries. He mentioned that SEF would go a long way to further strengthen the relations as well as development of agriculture and livestock sector in

Pakistan. He informed we were waiting for the composition of JWG on agriculture and water and meeting dates from the Turkish side. He mentioned that Pakistan side was ready to conduct first meeting of the JWG on Agriculture and Water under the SEF virtually given the current situation of COVID-19. Pakistan and Turkey have signed Strategic Economic Framework (SEF) on February 14, 2020. The Secretary, MNFS&R has been appointed as Focal Person of the Joint Working Group (JWG) on Agriculture and Water under the SEF.

Chicken price rises as wedding season starts

AVN Report

PESHAWAR - The price of chicken has increased by Rs60 per kg in Khyber Pakhtunkhwa during the last week, after the government allowed reopening of wedding halls which were closed due to coronavirus pandemic.

According to poultry dealers, the price has gone up due to an increase in demand;

while on the other hand, poultry production in Khyber Pakhtunkhwa isn't sufficient to fulfil the requirement. Traders said that up to 80pc of chicken is transported from different cities in



Punjab and thus the transportation charges further increase its price.

Despite the provincial livestock department spending millions on domestic poultry in the last two years, it remained unable to meet the poultry demand in the province. Muttahida Poultry Association General Secretary Hazrat Gul told this scribe that the domestic production is hardly 20 per cent of the total consumption of the province. He said that they decide the

poultry rate in the province by adding Rs31 to rates in Chakwal city.

Gul said that if the provincial government takes serious steps to increase poultry production, chicken rate would not be more than Rs120 to Rs150 per kg.

"The livestock department claims to have spent millions of rupees on domestic poultry scheme of Prime Minister Imran Khan. If

KP government had spent such a high amount on new poultry farms, poultry production in the province would have increased to keep the prices under control," Gul said.
Chaudhry

poultry supplier from Punjab, said that the prices of white chicken in KP was already high while its demand increased further due to wedding season, resulting in an even greater price hike. He said that one of the reasons behind high prices is the increase in prices of chicken feed. Poultry rates in Peshawar was Rs131 per kg a week ago, but after the provincial government allowed the opening of

Continued on Page 19

Dr Taj assumes charge as Director General Balochistan Livestock

AVN Report

QUETTA - Dr Ghulam Rasool Taj recently assumed the charge as Director General (DG) Balochistan Livestock. DG Livestock, Dr Ghulam



Rasool Taj said that he would take all possible measures to enhance the capacity of the Livestock Department with contribution of employees. He said that measures would be taken to address problems of staff according to merit so that performance of the Livestock could be enhanced in the province.

Taj said provincial government under leadership of Chief Minister Balochistan Mir Jam Kamal was paying special attention on development of the Livestock because 60 percent people of Balochistan relied on the Livestock and Agriculture Department.

Livestock farmers demand increase in milk price

AVN Report

PESHAWAR - Livestock Farmers Association Khyber Pakhtunkhwa have demanded increase in official rate of milk in proportion with hike in prices

of essential commodities. Addressing a press conference at Peshawar Press Club, President Livestock Farmers Association, Asif Awan and other office



bearers said in the prevailing circumstance when prices of everything were increasing, it has become impossible for them to sell milk on official rate of Rs.80 per kg.

They said animal food including fodder and grass has registered a 100 increase in price while the price of milk is the same which is impossible for them to maintain.

*Continued on Page 19**

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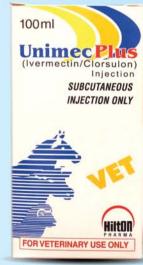
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Stakeholders demand steps to enhance export of halal meat

AVN Report

LAHORE - Meat processors and exporters have urged the government to identify potential markets and take appropriate steps for enhancing export of halal meat to these destinations. According to the stakeholders, Pakistan has huge potential to cater the needs of countries with huge population and higher meat consumption

"Institutions working for trade and export development should focus on those markets which have large population and higher meat consumption rates to enhance halal meat exports from Pakistan. China, Turkey, Malaysia, Indonesia, Central Asian States and other such countries, which have large population and considered as heavy importers of meat and meat products from around the world, should be targeted instead of focusing only Arab countries", said Nasib Ahmad Saifi, chairman All Pakistan Meat Processors & Exporters Association (APMPEA). He suggested giving annual targets of growing exports to commercial officers posted in these countries and supporting meat exporters and processors to participate in exhibitions and fairs. Saifi, a leading halal meat exporter, said that Pakistan as an Islamic country has all the potential to

become a leader in this sector with



special emphasis on halal and processed meat

Despite all these facts, he said, meat exporters of Pakistan are facing furious competition from their counterparts like India, Brazil and African countries.

"Governmental support for meat export sector is scarce. Even the procedures to handle meat exports are troublesome", he lamented. He said that the government should pay attention to these hiccups besides arranging repatriation of money of livestock exporters stuck abroad due to default of certain buyers.

Giving proposals to make room in the trillions of dollars halal products market, Saifi said that that practice of allocating Live Animal Export special quotas should be abolished and only value-added products of

livestock should be allowed to export

A ban on slaughtering of female animals should be imposed and a mechanism should also be placed for its effective implementation, he proposed. He said to fetch lucrative international markets meat processors require an ample quantity of livestock at a suitable price to process. Growing population of the country has already exhausted the livestock supplies, over and above animal smuggling has deepened the crises. This issue can only be resolved through stoppage of livestock smuggling which is one of the important causes of hike in

He also proposed setting up halal zones (Animal Free Zones) in Cholistan and actual owners of

slaughterhouses should be allotted land for livestock farming. Advocating a better coordination between slaughterhouses and the department, he suggested issuance of quarantine certificate online and linking both the stakeholders for animal health data sharing to know the reasons for animal rejection. He was of the view that it may help identify the onset of an animal disease outbreak

Halal Meat Export industry is potentially very productive even in its current stage of infancy. Almost all the stakeholders have invested their lifetime investments in this sector of producing export quality product for the world. Pakistani exporters are directly competing with the global giants by employing state of the art equipment along with quality world class services. Infant but competitive and productive industry of Pakistan should be given due priority and privileges such as zero-rated taxation, facilitation and relaxations in various phases of production, transportations and export to make enable them to compete in global economy with more courage and confidence. The halal meat industry has a potential of expanding the export in this sector four folds in no time, provided patronage by the government to this extremely neglected industry as well, he said.

Dutch all set to invest in Pakistan's dairy farming sector

AVN Report

ISLAMABAD - Pakistan and the Netherlands can cooperate in the field of floriculture, said Federal Minister for National Food Security and Research Syed Fakhar

In a meeting with Netherlands **Ambassador Wouter** Plomp, Imam highlighted that both the countries could collaborate in trade of fresh cut plants, flowers and bulbs. He appreciated the Netherlands' efforts to provide technical assistance and training agriculture and



in Pakistan. The minister: stressed that Pakistan and the Netherlands had vast potential for collaboration in the field of research on food security including

Discussing the potential of livestock sector, he underlined the need for value addition in animal products such as meat, dairy, etc. He also

Continued on Page 19

Commissioner directs action against illegal cattle markets

AVN Report

BAHAWALPUR - Commissioner Asif Igbal Chaudhry recently directed action against illegal cattle markets in the division.

While presiding over a meeting of board of Governors of Cattle Market Management Company Bahawalpur at his office. he said that necessary action must be taken against illegal cattle markets operating in Bahawalpur Division. The commissioner was briefed about illegal cattle



markets and action taken against them. The meeting also approved the recruitment of essential staff for the company. The meeting was attended by Deputy Commissioner Bahawalpur Muzaffar Khan Sial, Secretary Cattle Market Management Company Bahawalpur Waqar Jaffar, Director Livestock Dr Aamir Bukhari and members of Board of Governor of the company.

Understanding meat industry in Pakistan

by Tauseef Ahmad Noor University Of Veterinary and Animal Sciences (UVAS), Lahore

ivestock is taken into account as the main component of Pakistan's agriculture sector, as it employs quite 8 Million families. It has an 11.6 % part in G.D.P, a 13 % share in foreign exchange generation, 1172 Billion gross value addition, and an 8.5% share in export. Meat and meat products have a central role in meeting dietary requirements i.e., living source protein, minerals, and vitamins. This article will give you a look at the meat industry of Pakistan, techniques of processing used in this sector, and the effect of urbanization on this sector.

Pakistan is a diversified and ethnic country and a country known for the Muslim majority, housing almost 191 Million population. The livestock portion in Pakistan plays an essential role in the agriculture sector and has nearly 56.8 % share. Cows, buffaloes, goats, sheep, poultry, and camel mainly comprise the livestock sector. Meat is the animal-sourced item taken as food. Humans have killed animals for food for a long time. Core provides protein, lipids, and vitamins as well. It is edible in raw form but mainly eaten after it has been cooked or processed. Meat consumption includes eating meat and meat products as part of the diet, mostly influenced by culture, religious norms, and economic state. Religion plays a pivotal role in the selection of the nature of meat to consume. Income status also affects as there is more consumption of meat in developed countries as compared to developing countries. Red meat is the most desired meat due to its flavor, juiciness, and taste. The vast area, atmosphere, and pasture availability enable Pakistan for cattle and goat farming. The demand for meat has been increased due to urbanization, economic growth, industrialization, changing eating patterns, and awareness regarding protein need.

Halal meat concept

As discussed earlier, religion plays a vital role in meat selection. Halal food is a special requirement for the Muslims and is according to the Holy Quran's laws and instructions. The animal should be in good health. All blood should be drained during the slaughtering; a Muslim has to recite specific 'Kalmaat.' Halal meat is gaining popularity even in non-Muslim countries due to its delicious taste, hygiene, and outstanding quality. The Pakistani meat sector is famous globally due to its Halal specifications. The government of Pakistan is trying to increase meat and meat products by getting Halal certification. There is an estimate that the total value of Halal meat's export will be 0.478 trillion \$.

YEAR	EXPORT (MILLION \$)		
2014	229.9		
2015	243.5		

Meat processing

After slaughtering, stunning, bleeding, skinning, cleaning, removal of vital organs, and other by-products, the carcass is divided into four parts, which are then processed. Meat is

correctly, which involves different methods including freezing, cold storage, vacuum packaging, canning, smoking, drying, fermenting, use of sodium nitrite, and use of radiations. Some other chemicals like red, phosphate, ascorbates, spices, MSG, binders, fillers, and extenders are also used in processing. The tenderness of meat depends mainly on its way of processing. Some meat processing techniques used nowadays are "application of electric field, stretching, shaping, and high pressure, which cause rigor mortis to occur earlier and make the meat tastier and increases its tenderness.

Consumer demand

The demand for meat products depends on many factors. However, the main things affecting consumer inclination for meat products are quality, taste, and safety. During festival seasons like Eid, there is a high demand for meat products as Pakistan is a country having traditions and religious festivity. As this industry is growing in Pakistan and education is enforcing the meat industry and regulating agencies to check the quality of meat, ensure safety, animal health, welfare, and traceability. Pakistani people eat red meat, mutton, poultry, and fish, based mainly on the Halal certification concept. People prefer poultry meat as it is cheap, easy to process, and availability. In Pakistan, per capita consumption in 2000 was about 11.7 Kg, which became 13.8 Kg in 2006, which is expected to become 47 Kg at the end

Meat production (in Tonns) in Pakistan (Economic survey of Pakistan 2016)

YEAR	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
MEAT TYPE										
BEEF	1498	1549	1601	1655	1711	1769	1829	1887	1951	2017
MUTTON	566	578	590	603	616	629	643	657	671	686
POULTRY	554	601	652	707	767	834	907	987	1074	1177
FISH	6111	570	586	584	593	594	612	623	624	652
TOTAL	3229	3298	3429	3549	3687	3826	3991	4154	4320	4532

Market tendency and business

More than fourteen Pakistani companies are exporting Halal meat in global markets. Some of them are listed as Everfresh Meat known with Shafi Group, M?nSalwa by Quick Food Industries Ltd., K&Ns. PK food, Quick Food Industries, Anis Associates, Zenith company, Sufi Group, Al-Shaheer Corporation and The Organic Meat Company, Lahore Meat Company, Fauji Limited, and Big Birds, Sabroso. Eighty percent of Pakistan's Halal meat is exported to Qatar, Saudia Arabia, Bahrain, Kuwait, Gulf countries, Oman, and UAE .. Pakistan is on target urge momentum in Thailand, Iran, Iraq, and Vietnam. A variety of meat products including Shami kabab, koftas, chicken samosas, nuggets, patties, and tender pops, etc are being produced by the Pakistan meat industry nowadays.

Target set by government to produce meat (Million Tonns) in 2018-19 and growth rate achieved

YEAR	MEAT PRODUCTION	BEEF	MUTTON	GROWTH RATE
2018-19	4.420	2.303	0.7	1.3%

The demand for meat and meat products is increased as compared to the last 20 years. Innovation is flavored meat products. Currently, seven hundred billion dollar meat is demanded in the form of Halal Food.

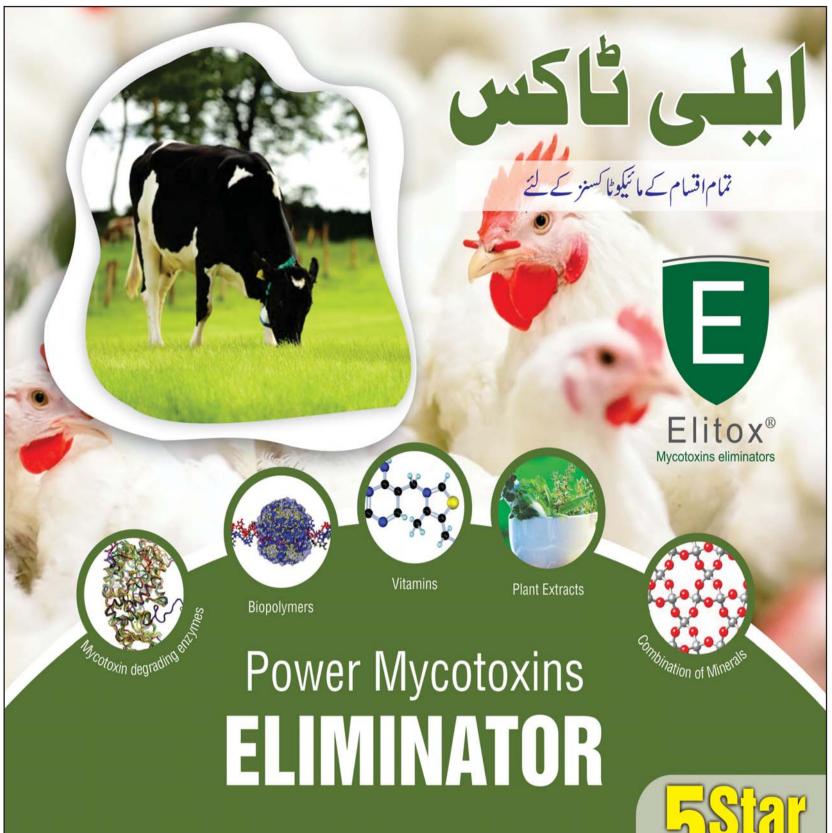
International market

The World Muslim population is 2 billion, with an average growth rate of about 1.80% per annum. The global Halal products market is estimated at \$2.3 trillion; excluding Islamic banking, current meat production is almost 320.7 million tons. During the last decade, there has been a drastic increase in international meat production and its consumption. There is an increase in global meat production, but there is no same consumption rate in different countries and at different seasons. The developed countries consume more quantity of meat than developing countries as they have low economic status. Developed countries constitute 15% of the world population but consume 37% of meat production globally. The poultry sector grew nine times than it was in 1960. Globally, beef production is rising at a rate of 1% per year. Global meat production has reached 320.7 million tons, an increase of 13 % is projected in 2028. Globally, Halal red meat is a high demanding exporting product. Two factors directly affect the export value of Pakistani Halal meat. Firstly, Pakistan is an agricultural country having vast pastures, and the Other one is its geographical location, which makes Pakistan export and import meat from its neighbor countries. Pakistan has more value than Brazil in exporting as it has a safe and Halal certified meat industry.

Problems faced by Pakistan regarding meat industry

No specific beef production system is being practiced in Pakistan. Mostly the animals are kept for milk, so there is no trend in fattening farms. Another major problem is the addition of water in the whole carcass. Wrong field practices are the reasons for the meat contamination with antibiotics residue. Old slaughterhouses have improper sanitation causing environmental hazards and bad smell. There is a lack of technical guidance, processing, and packing facilities. There are heavy transportation losses while exporting the meat, and marketing channels aren't even organized. Wastage of valuable by-products, unhygienic processing, and shortage of value addition of meat products are some other hurdles. Another issue of the meat industry is the shortage of proper supply chain systems.

Continued on Page 15



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by Dr Ghulam Raza Shah

Shaheed Benazir Bhutto University of Veterinary Animal Science (SBBUVAS), Sakrand

otulism is one of the most severe chicken diseases there is, as the symptoms progress very quickly, and the death rate is very high.

It's caused by contamination of food or water

by rotting meat and most commonly occurs in summer and fall. when temperatures are warm enough for the bacteria to thrive. This illness is not passed on from bird to

bird but can affect an entire flock if they all share the same food and water source.

Symptoms of botulism

- Weakness and nervousness
- Tremors or shaking
- Feathers are easy to pull out.
- Paralysis of the legs, which progresses to the wings and neck before a chicken, then
- · If the disease is caught early enough, it can be treated with an antitoxin by a vet. However, a home remedy of 1 teaspoon of Epsom salts mixed with 1 oz of warm water daily with a dropper can also work.

Diagnosis of botulism

Botulism may be suspected when there is a sudden onset of flaccid paralysis in one or

more birds in search a potential toxin in the birds can botulism, the appears normal

A post-mortem

An insight

on botulism examination. Laboratory confirmation of botulism is difficult and not routinely done. However, laboratory submission of sick or recently deceased birds is encouraged to rule out other illnesses.

a group. A careful

should be done for

area where the

roam. With

source of the

Treatment of botulism

There is no specific treatment for botulism. Most affected birds will die. Death occurs due to paralysis of the muscles needed for breathing.

Birds that have ingested only a small amount of toxin may survive, but they need careful nursing until they wear off.

The birds cannot swallow, so do not try to give them food or water. Putting food or water in the mouth, such as a syringe, may cause pneumonia because it will end up in the lungs. Please wait until the birds can lift their heads and make clucking sounds before offering

Protect the birds from the sun and from other birds or animals that might attack them. Provide birds with soft bedding.

> improvement in 24-48 hours, the birds are unlikely to survive.

If there is

Prevention of botulism

To reduce the risk of botulism, it is essential to prevent birds from having access to possible.

Sources of the toxin. Feed only fresh food. Do not discard old or wet food where birds can peck at it.

- Check the area where birds can roam and remove any rotten food scraps or carcasses regularly.
- Clean water containers daily, and prevent the birds from drinking or swimming in water where there is rotting vegetation.
- · If birds start to show signs of weakness or flaccid paralysis, the flock remains in a clean area until a diagnosis has been made, and the range has been thoroughly checked.

Determination of diagnostic marker and serological studies in canine diarrhoea

by Dr M Bilal Anwar and Dr Hafiza Qamar un Nisa

Department of Pathology, University of Veterinary and Animal Sciences (UVAS), Lahore

dog is ranked as the first animal to be domesticated by man. According to the latest genetic related studies, dogs are decent from the wolf. The intense emotional and social compatibility make the dog as one of the most desired and compatible pets in the world. Including small, medium and large breeds more than 300 species are present worldwide make dogs the most preferred pet. Irrespective of social status, a dog is kept worldwide as a companion animal. Just like other countries, a more or less similar trend has been noted in Pakistan as well. Most popular pet breeds are German shepherd, Labrador retriever, Rottweiler, Belgium shepherd, husky, beagles, bulldog and boxers. Majority of peoples are not much interested in keeping a record of genetically tested pedigree animals; however, pet owners are a little bit more interested in purebred genetic pets. Through awareness and proper vaccination, medication and by taking precautionary health measure, we can control zoonotic | City Campus Lahore and to



diseases. Gastrointestinal disorder in dogs is considered as one of the most concerning issues. Most of the gastrointestinal problem leads to Diarrhoea results in anorexia, emaciation, dehydration, vomiting, electrolyte disturbance and anaemia in case of bloody diarrhoea. Diarrhoea (acute and chronic) most commonly reported in the small pet. Multiple diseases and etiological agents are involved in causing diarrhoea. Worldwide. in dog's Canine coronavirus (CCoV) and Canine Parvovirus (CPV) are considered as the most common enteric viral pathogen. In this regard, a study has been conducted at Department of Pathology, the University of Veterinary and Animals Sciences,

determine the effects of Diarrhoea on Serum CRP, blood profile and Serum electrolytes. This study was supervised by Dr Qamar un Nisa. Prof. Dr Asim Aslam and Prof. Dr Asim Khalid. For this purpose, 30 dog blood samples were collected, having a history of diarrhoea and further subdivided into two groups of 15, 15 samples into an acute and chronic group based on history, respectively. Such blood samples were processed for complete blood count, Serum electrolyte analysis and serum C - reactive protein. On examination, we found that 22 out of 30 samples shows higher CRP level as compared to average reference values, which provide evidence that CRP is a sensitive marker for enteritis and diarrhoea in dogs.

CRP is a sensitive marker for inflammation, so it also helps us to differentiate between inflammatory and non-



inflammatory diarrhoea. A higher level of CRP in patients with acute diarrhoea was due to its short halflife that why CRP provide better information even at the initial stage of inflammation or infection as compared to CBC. However, no significant changes were observed between acute and chronic group both show higher values. Similarly, chronic group show a significant decrease in PCV% and Hb as compared to average values and acute group, which shows anaemia and blood loss. The chronic group have a substantial increase in WBC count as compared to acute group hyponatremia, hypokalaemia, hypochloraemia in the chronic group as correspond to acute, respectively, which indicate severe electrolytes losses due to anorexia, fluid losses, lack of nutrient absorption and vomiting for an extended period while the mild level of electrolyte losses are observed in the acute diarrheic patient.

Plans for medium and ... Continued from front page

processing of agricultural commodities.

A detailed briefing on the situation, progress on the Prime Minister's Agriculture Emergency Programme and increasing production of various commodities was given to the meeting.

Prime Minister Khan stressed the need for robust and integrated system of coordination among all stakeholders, including research institutes, universities and related institutions.

He emphasised on using the experience of China to ensure full utilisation of its expertise and cooperation. The prime minister also directed the authorities to reorganise the agro-ecological zones. He affirmed support to commodities such as olives and pulses, which needed imports to meet their domestic need

Pakistan Citizens Portal At a separate meeting, the prime minister directed his office's Delivery Unit (PMDU) to link all complaint cells of the federal government departments with the Pakistan Citizen Portal (PCP).

He asked the PMDU to complete the process within 60 days to determine modalities in consultation with organisations concerned and chalk out integration plans. Presently, a number of complaint

cells are operational, both manual and based on information and communication technology, under the federal government's organisations.

The Pakistan Citizens Portal is the most vibrant complaint resolution system in the country which is working under the PMDU since October 2018. During the last two years, 28 million people have registered 115,000 complaints per month on the system with 2.3 million complaints lodged.

The meeting was told that an

impressive raft of public complaints, i.e., 2.2 million, had been resolved with 40 per cent confirmed satisfaction.

The purpose of the process is to achieve the government's goal of promoting social accountability, empowering the citizens and improving service delivery.

The new system will avoid confusion on part of the citizens due to multiple complaint cells.

Instead, all complaints will be processed in real time and in a uniform manner.

The PMDU, including the PCP, is managed by the Prime Minister's Office (public). All com-plaint handling processes under the PCP are backed by a user's guidelines manual for complaint and suggestions handling.

Diplomatic outreach chairing another meeting, Prime Minister Khan decided to constitute an economic outreach apex committee, to be headed by his special assistant Dr Moeed Yousaf as focal person, to further promote economic diplomacy.

For coordination among various federal ministries, provincial departments and other institutions and for achievement of targets, it was also decided to constitute an economic outreach coordination group, the PM Office's media wing said in a press release.

During the meeting, a roadmap of local potential with respect to promotion of economic diplomacy, existing challenges and steps to overcome those issues was also submitted before the prime minister. The prime minister underlined the need to promote economic diplomacy and said it was need of the hour, because through it, Pakistan could further strengthen bilateral ties with different countries and fully explore its potential in the economic field

He directed the Pakistani embassies and missions abroad to focus on

the promotion of this initiative. The prime minister also directed the Board of Investment to provide all

possible facilities to foreign investors who were keen to invest in different sectors of the country.

After Kaavan, Himalayan ... Continued from front page

accommodate them

He said the two Himalayan brown bears were not being accepted by the wildlife departments of Punjab and KP. The counsel for the management of Balkasar bear sanctuary informed the court that his client would accept the responsibility if so directed by the court.

Dr Anis ur Rehman told this during the hearing of a case related to shifting of Kaavan to a sanctuary in Cambodia by IHC Chief Justice Athar Minallah.

He, however, pointed out that the behavioural, social and physiological needs of the Himalayan bears cannot be met because high altitude open vallevs and pastures were their natural hahitat

It was stated that Kaavan, the lonely and 'ill-treated elephant' was in good health.

An internationally renowned organisation, Four Paws, has sent a team of experts and veterinarians for finalising the arrangements to shift 'Kaavan' to a sanctuary in Cambodia.

The IWMB chairman informed the court that Dr Amir Khalil of Four Paws had developed a relationship with 'Kaavan' and was taking care of all other species. He said the Ministry of Climate Change had also extended its support.

The court observed that life is the most superior form of creation of the Creator.

Humans are gifted with superior faculties and attributes and, therefore, it is their duty to protect life in every form.

A society which does not acknowledge this fundamental principle inevitably ends up in chaos and anarchy.

The lack of respect for 'life' is the source of heinous crimes in a society, particularly against the vulnerable segments such as children and women.

There would have been no crime nor terrorism in the world if humans had respect for 'life' and the will to protect the vulnerable living creatures such as animal species, Justice Minallah observed.

The manner in which living beings have been treated at the Islamabad zoo in the past may be a tip of the iceberg.

It is ironic that food meant for the helpless inmates of the zoo was also reported to be stolen, the court noted

"It reflects a mind-set, which does not have empathy for vulnerable living creatures caged in deplorable conditions."

An application has been filed by voung citizens who have struggled to draw the attention of the authorities to the suffering and torture of animal species caged in the zoo.

The Friends of Islamabad Zoo and many young citizens have demonstrated their will to protect nature and those vulnerable living beings who are at the mercy of humans.

"Such young committed and public spirited citizens are the true representatives and image of Pakistan," the court order said. The counsel for Friends of Islamabad Zoo was asked whether Dr Amir Khalil would be willing to assist the court in ascertaining the status of Kaavan and the two brown bears

The reply given to the court was in the affirmative. Further hearing of the matter was adjourned to September 28.

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Poultry sector slams ... Continued from front page

He added that poultry farmers were already facing acute problems and overcharging of electricity bills would cause further difficulties for them. He requested high officials of the entity concerned to recover all its bad debts from electricity thieves instead of consumers.

Fargham claimed that the poultry sector supplied prime-quality protein food in the form of poultry meat and eggs at very affordable prices.

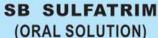
"Poultry industry has annual turnover of over Rs1,000 billion, gives employment to over 1.5 million people directly and indirectly," he added

"Poultry farmers are facing heavy losses because of coronavirus. Due to less consumption of chicken meat, overall poultry business has collapsed," he said.



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The impact of climate change on human health

By Mohammad Munawar
University of Veterinary and Animal Sciences (UVAS), Narowal

ver the ages, human societies have degraded local the ecosystem and modified regional climates. Without precedent, the aggregate social impact now has attained a global scale, reflecting the recent rapid increase in population size and energy-intensive. The world population is encountering unfamiliar

and bridges, disrupting access to hospitals, and interrupting communication, utility, and health care services. Changes in temperature, precipitation, and extreme events increase the geographic range of diseases spread by vectors like Lyme disease.

The Intergovernmental Panel on Climate Change found that global climate change will affect human health in many ways.

past quarter-century; has focused attention on a question about the impact of ultraviolet radiation on human biology and disease risk. In particular, a change in ultraviolet radiation exposure levels will affect the incidence of skin cancer and ocular disorders like cataracts and various immune-related diseases. Monitoring the health impacts of climate change is an essential task by which the public health community



humans inducing changes and depleting various other natural systems like soil fertility, aquifers, ocean fisheries, and biodiversity in general. Despite early recognition that such changes would affect economic activities. infrastructure, and manage ecosystems. There has been less awareness that such large scale environmental change would weaken the supports for a healthy life. Human influences will continue to change atmospheric composition throughout the twenty-first-century. The natural complexities of weather and climate variability concerning health outcomes offer unique challenges. Change in climate affect the air we breathe both indoors and outdoors. Extremes events can affect human health by reducing safe food availability, damaging roads

Overall adverse effects are expected to outweigh positive impacts. Essential influences on health will include the difference in the frequency and intensity of extremes of heat, cold, droughts, floods, hurricanes, and other forms of extreme weather. Climate change also will impinge on health by disrupting the ecological and social system, resulting in a change in infectious disease transmission, food production, air pollution, population displacement, and other forms of social disruption. Poverty, population growth, and migration are major contributory factors affecting this vulnerability. Particularly in low countries, the impacts of major vector-borne diseases and disasters can limit or even reverse improvements in social development. The occurrence of atmospheric ozone depletion over the

provides scientific and policy evidence related to global warming. With all forms of monitoring, the evidence's interpretation will be strengthened by procedures for standardization, training, and quality assurance. Building capacity is an essential step in preparing adaptation strategies. Education, awarenessraising, and the creation of legal frameworks. institutions, and an environment that enables people to make well informed, long-term sustainable decisions are all needed. It must be stressed that adapting to climate change will require more than financial resources, technology, and public health infrastructure. The public health community is critical to help nations face the health challenges associated with climate change.

Understanding meat industry ...

Continued from page 09

Role of Government of Pakistan

Lahore meat company working under the Punjab Agriculture And Meat Company (PAMCO), has been established by the Government of Pakistan having mechanical slaughtering lines for beef and mutton separately, clean processing facilities, a blood draining plant, services of consultation, regulatory regime, wastewater treatment plant, the cooling system as well as value addition through meat and meat-based products developments to meet the increased demand of Halal beef globally. Besides this, Kisan package worth 100 billion, 4-year exemption of income tax policy, extension services, feasibility studies, literature about "broiler farming, calf fattening, rural poultry, goat production" are some services provided by the Government of Pakistan, UVAS is providing chances to research on meat science and offer M.phil in Meat Sciences. Save the calf scheme and rural poultry distribution of this Government are highly appreciable programs. Recently Sec. Livestock Cap. (R) Saqib Zafar visited PAMCO on 28 august 2020 and advised to ban illegal slaughtering. An online conference for the meat industry was held on 08-07-2020.

Halal Research Council: An innovation toward Halal food

Halal Research Council (HRC) is an organization working internationally on Halal certification to serve food and nutrition companies. Shariah Supervisory board checks the product's ethical and health values to assure whether it is fit for human consumption or not. It provides certification to Slaughterhouses as well as food items, both raw and processed.

Halal food must be eaten as we are Muslims; it has been stressed heavily in the Holy Quran: "So eat food that upon which Allah's name is indicated, if you are believers in his verses." Abu Baker RA told that Hazrat Muhammad PBUH said, "That body will not enter in heaven which has been nutrified with Haram."

Future potential

Meat and meat products will be highly demanded in the future due to their awareness among people and urbanization. The need is to develop processor units as well as proper slaughterhouses. Advantages like the Muslim population, vast pastures, cheap labor, and resource availability will enable Pakistan to become the number one exporter of Halal meat and meat products in Islamic countries. It will provide its meat to Islamic and other countries.

Conclusion

Meat demand in Pakistan is affected by religion and economic status. As there is the Muslim community in the majority, there is an increased demand for Halal meat and meat products. Pakistan can get an advantageous position in exporting Halal meat and ready to cook products. Due to its vast area, Pakistan can rear livestock quickly. By improving processing and chilling facilities, Pakistan can meet its local demands and become a major exporter of meat. For the meat sector's progress, there should be an improvement in slaughterhouses and their facilities, quality, and proper supply chain.

MYCOTOXINS

Effect on poultry production and more

by Muhammad Shahbaz Zafar, Azhar Rasool University of Veterinary and Animal Sciences (UVAS), Lahore

eed grains contaminated by mycotoxins hurt feed quality and are detrimental to poultry production. Some key mycotoxins can induce differential impacts on poultry production and performance. It is not a secret that animal feed containing mycotoxins will negatively impact production. During wet seasons, mycotoxins are very likely to be present in your grain products. Most animal systems are affected by a large dose of a single mycotoxin or a combination of many mycotoxins. The damage that mycotoxins can have on the digestive, immune, and reproductive systems of poultry.

Fact 1: Mycotoxin exposure can cause direct damage to the digestive tract

Intestinal disturbances, regardless of source, are often linked to reduced growth performance and reduced feed efficiency. Trichothecene mycotoxins can induce necrosis in the oral mucosa, esophagus, and gastric compartments. Fumonisin mycotoxins often have extended periods of exposure time to the intestinal tissues due to low absorption. The extended contact contributes to direct cellular damage, resulting in intestinal inflammation and diarrhea. In addition to the direct damage to the intestinal tract, ochratoxins and aflatoxins produce severe damage to the liver, which plays a fundamental role in the digestion and mobilization of nutrients after being absorbed in the intestine.

Fact 2: Mycotoxin exposure decreases the ability of the digestive tract to digest and absorb nutrients.

In poultry, the intestinal tract is relatively short, making villi the main structures responsible for amplifying intestinal surface area to absorb nutrients. Deoxynivalenol (DON) and Fusarium mycotoxins can shorten the intestinal villi in broilers and poults. Intestinal secretions and activity of enzymes responsible for the digestion of nutrients can also be affected by some toxins and thus contribute to decreased digestive

Fact 3: Mycotoxins' presence may render poultry more susceptible to some bacterial pathogens, like E. coli and Salmonella

This could be secondary to an immunosuppressive effect of mycotoxins. In general, large doses of mycotoxins such as ochratoxin and trichothecenes will lead to lymphocytic depletion in immune organs, meaning reduced immune function overall. Reduced immune function can also occur when contamination of feed occurs from different mycotoxins simultaneously, even if concentrations are below the respective maximum threshold individual mycotoxin. This is due to cooperative activity that occurs when several mycotoxins are fed at the same time. Depression of immune cells occurs along with inflammation on different organs, renders several tissues more prone to bacterial and viral contamination. As a rule of thumb, after monogastric have been consuming feed with mycotoxins' contamination levels, they will be



A feed bin left unclean from the previous contents can grow mold on the metal walls

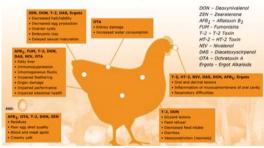


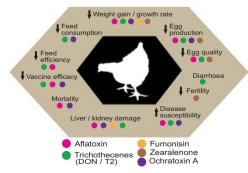
Substantial build up of grain materials and mold on the inside of a bin

Table 1. Recommended mycotoxin risk thresholds for poultry **Parts** per

b	illon (ppb)
Aflatoxins (Afla)	20
Zearalenone (ZEN)	50
Type B trichothecenes e.g. deoxynivalenol (DON	1) 200
Type A trichothecenes e.g. T-2 toxin	50
Fumonisins (FUM)	1,500
Ochratoxin A (OTA)	10

Effects of Mycotoxins





Mycotoxin	Poultry production	Carry over in Meat and Eggs
Aflatoxin B 1	+	Liver
Ochratoxin A	+	Hatching eggs
Cyclopiazonic acid	+	Meat and eggs
Deoxynivalenol	+	Hatching Eggs
Zearalenone	+	Eggs
T-2 toxin	-	-
Diacetoxyscripenol	-	-
Fusarochromanone (Fusarium toxin)	+	Hatching Eggs
Aurofusarin (pigment)	+	Eggs

more susceptible to infections and disease.

What can you do to reduce mycotoxin load in feeds?

In general, fungi that produce mycotoxins are commonly present in the field. Therefore, crops are exposed to them at a very early stage. This means that mycotoxins are widely present in all crops. The concentration of mycotoxins in grain products is the key to understanding the potential impact of mycotoxins on livestock's health and performance. Weather, especially during the harvesting season, plays a critical role in influencing the production of mycotoxins. In general, moisture and high temperatures encourage mold growth and mycotoxin production. This is why rainy harvesting seasons are related to a higher content of mycotoxins in crops vs. drier harvesting seasons. Storage of grain can either introduce mold or encourage mold growth and the consequent production of mycotoxins. Grain left exposed to the elements and feed stored in dirty silos or bins are a primary area for controlling mycotoxins in grain. Metal walls of silos conduct heat during the hottest hours of the day, transferring them to the adjacent grain. As the temperature cools, condensation builds inside the silo or bin. Humidity and heat in the presence of mold contamination on dirty silo walls are the perfect environments for mold growth and mycotoxin production. Concerns with mycotoxin contamination during feed storage is especially relevant in young animals or small herds where feed tends to be held for more extended periods (greater than seven days) within bins and silos. Clean storage bins, however, are only part of a system of management for mycotoxin exposure

Managing mycotoxin exposure should start at harvest by removing laboriously contaminated grains when possible. One of the most costefficient ways to eliminate mycotoxins is by eliminating heavily contaminated grain. Not all grain is equally contaminated with mycotoxins. Very few grains contain most of the overall contamination affecting a crop. The heavily contaminated grain is considerably lighter than non-contaminated grain. It can be removed with a grain separator that uses airflow to raise and separate very light kernels from the undamaged grain. Investment for grain processor or feed mill is high, to begin with, but savings in the long term are guaranteed. If you have purchased grain or feed that is contaminated, dilute the affected grain with uncontaminated, high-quality grains. In general, there is a range for most mycotoxins at which they start affecting animal production significantly. If mycotoxin affected grains must be used, dilution of the affected batches of grain is a cost-effective measure for reducing mycotoxins' impact on livestock consuming that grain. However, multiple sampling and mycotoxin analysis are needed to determine the concentration of mycotoxin in every batch of feed, reducing this method's practical efficiency for feed manufacturers. As an additional tip, before diluting affected raw materials, organic acids could be sprayed on them. This will kill most of the fungal

Continued on Page 19

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PACKING:

1Kg

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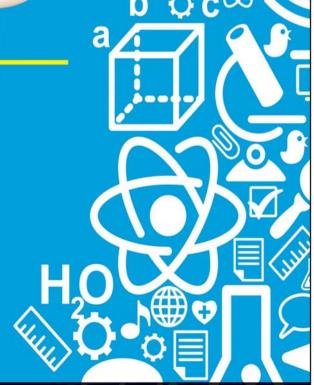
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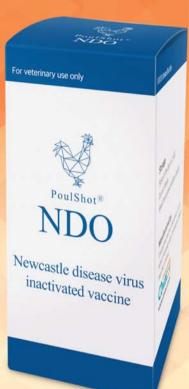
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Chicken price rises as ... Continued from page 04

wedding halls and the start of the wedding season, the demand for chickens increased, which directly affected the poultry rate. The price of chicken has gone up to Rs190 per kg with an increase of Rs20 in a single day.

Regarding the sudden increase in the price of chicken, sources said that there is no mechanism to control the chicken price due to which the dealers decide it themselves.

Livestock farmers ...

Continued from page 04

Asif said in this regard instructions were also issued by courts, but district administration is not implementing such.

Livestock Farmers demanded that price of cow milk should be increased from prevailing Rs 80 to Rs.120 while the price of milk of buffalo be increased to Rs 150 per kg.

Dutch all set to invest ... Continued from page 08

sought Netherlands' investment in dairy farming, agribusiness and

food processing. It was mentioned that the Dutch agriculture sector was diversified and covered a wide range of

products. Pakistan is importing genetic material from the Netherlands for artificial insemination and is also importing milk-producing cattle. Friesland Campina of the Netherlands, which is the sixth largest dairy cooperative in the world, acquired 51% shares in Engro Foods in 2016 and it became a subsidiary of FrieslandCampina.

Mycotoxins: Effect on ... Continued from page 16

contamination and limit mycotoxin production once the contaminated material weakens.

If mycotoxin contamination is still an issue after attempted dilution of the diet, mycotoxin binders could be another option to reduce mycotoxins' impact on poultry. In general, non-polar (aflatoxin) mycotoxins are effectively bound by mycotoxin binders. Most of the binders available on the market effectively bind this toxin as most clays will do this naturally. Most binders can simultaneously bind toxins and nutrients; however, this should not be a concern if binders are only used for a short period. Suppose mycotoxin binders need to be utilized over a long period. In that case, you may want to explore specific, porous surface clays that are especially suitable

for toxin binding or formulate your diet with additional vitamins and

Critical evaluation of mycotoxin binders should be practiced when looking for a binder to utilize on mycotoxins from the aflatoxin family. Some mycotoxin binders on the market that advertise 'added technology' tend to be more expensive than generic products and not adequately tested in live animals. Many of the current tests to demonstrate the efficacy of mycotoxin binders are conducted in vitro (in the absence of animals). Binders tested only in vitro may have been exposed to unrealistic conditions, such as prolonged contact time with the substrate (24 h) or while using pH ranges that do not mimic physiological pH ranges. In nature, the intestinal tract's pH is variable, and the contact time of the toxins with the intestinal mucosa can be short. For example, in chickens, feed enters and leaves the duodenum in 15 minutes or less, and most of the ingesta is out of the chicken in 6-9 hours. In vitro binding ability, over 24 hours on a constant pH. is meaningless. It is also important to note that binders will not bind mycotoxins in dry feed. Mycotoxin binding will only start when the animal ingests the feed (binders

need an aqueous substrate to bind toxins). Due to this delay, even the most effective binder will not mitigate the initial toxic effect immediately after feed ingestion. Only after a few minutes, the dietary binders will start binding to mycotoxins, even in utilizing handy dietary mycotoxin binders. In summary, animal production is hindered when livestock are exposed to large amounts of mycotoxins. Mycotoxins cause damage to the intestinal tract, immune and reproductive systems in poultry.

Avoiding mycotoxins' ingestion by removing affected kernels, diluting contaminated raw materials or feed, or adding mycotoxin binders. Each method of managing mycotoxin contaminated feed and ingredients presents advantages and disadvantages. Mycotoxin binders are popular and incredibly useful for aflatoxins, easy to control by most commercially available binders. Products that offer the ability to bind or deactivate toxins other than aflatoxin should be cautiously evaluated and require further inspection.

Be aware of mycotoxins' impact on your livestock; apply these tips to your feed quality and mycotoxin management plans.





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GASTRO-INTESTINAL NEMATODES:

- Trichostrongylus spp
- ✓ Bunostomum spp
- ✓ Oesophagostomum spp



Dictyocaulus viviparus







Orient Traders International =





درآ مدتمل طور برختم ہونے سے سالا ندار بول ڈالرکازرمادلہ بحایا جاسکے۔ پنجاب بھر کیاس کی قصل پراس وقت سفید مكهى اورگلانى سنڈى كاشد پدحمله بنايا جار با ہےجس سے کیاس کی فی ایکڑ پیداوار کم ہونے کیساتھ اس کا معیار بھی متاثر ہونے کا خدشہ ہےاس لیےمحکمہ زراعت کو جاہیے کہ وہ ہنگامی بنیادوں پرسفید کھی کو کنٹرول کرنے کے لیےاقدامات کرے تا کہ کیاس کی قصل

لا کھوں ملین ایکڑیانی کی بحیت کے ساتھ ساتھ ماحولیاتی آلودگی میں کمی سے یا کستانی روئی کامعیار بھی بہتر ہونے سے روئی کی

کاشت مکمل طور برختم ہونے سے پاکستان نہ صرف کیاس کی پیداوار میں خود کفیل ہوسکے بلکہ گنے کی کاشت انتہائی محدود ہونے سے

روئی کی بڑھتی ھوئی طلب کے باعث قیمت میں تیزی سے اضافہ

تاریخ کے سب سے زیادہ برآ مدی آ رڈرز موجود ہیں تاہم اندرون ملک معیاری روئی کی محدود دستیابی کے باعث بڑے ٹیکسٹائل گروپس نے بیرون ملک سےروئی درآ مدی معامد برناشروع كرديئة بي اورتو قع

> ظاہر کی جارہی ہے کہا گلے40 روز کے دوران بیدرآ مدی روئی یا کستان پہنچنا شروع ہوجائے

بیشتر ٹیکسٹائل گروپس برازیل، امريكااور تنزانية سميت ديگر چند افریقی مما لک ہےروئی درآ مد كرنے كے معاہدے كررہے ہیں،وزارت خزانہ نے پچھلے چند ماہ کے دوران ٹیکٹائل انڈسٹری کے پچھلے کئی برس سے رکے ہوئے انکم اور سیارٹیکس ریفنڈ زکی ادا ئیگی شروع کردی ہے جبکہ بنک مارک ایکی شرح میں بھی نمایاں کمی کے باعث ٹیکسٹائل انڈسٹری اب مالی طور پر کافی مشحکم دکھائی وےرہی ہے جسے ٹیکٹائل انڈسٹری کی بہتری کی ایک بڑی وجہ مجھا جار ہاہے تاہم برآ مدی ٹیکسٹائل سیٹر کے زیرو فيصدا سنيٹس بحال ہونے سےملکی ٹیکٹائل برآ مدات میں مزید اضافه ہوسکتاہے۔ وفاقى اورصوبائى حكومتوں كوملك

بھرمیں کراپز وننگ قوانین پر

سختی ہے مل درآ مد شروع کروانا

عاہیےتا کہ کاٹن زونز میں گنے کی

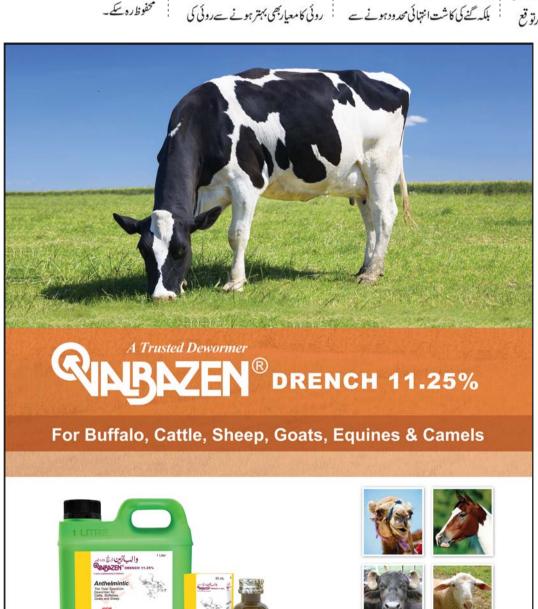
صنعتوں کی بوری استعداد کے ساتھ پیداواری سرگرمیون اور برهتی ہوئی طلب کے باعث روئی کی قیمتوں میں زبر دست تيزي كارجحان غالب ہوگيا۔ ٹیکٹائل سیٹر کے مقامی برآ مدکنندگان کوایئے بیرونی خریداروں کی جانب سے مختلف ویلیوایڈڈٹیکٹائل پراڈکٹس کے نئے برآ مدی آرڈ رزموصول ہورہے ہیں کیکن ان نے آرڈرزی بھیل کے لیے ملک میں معیاری روئی کی دستیابی محدود ہے جس کے باعث ٹیکسٹائل ملز ما لکان نے بڑے پیانے پرروئی درآ مدکرنے کے معاہدے شروع کردیئے

كراچى: ٹيكسٹائل سيکٹري مقامي برآ مدي

چیئر مین کاٹن جز زفورم احسان الحق نے بتایا کہ ٹیکٹائل ملوں کی جانب سے ایک بار پھر روئی کی بھر پورخر بداری شروع ہونے سے گزشتہ ہفتے کے دوران یا کتان میں روئی کی قیموں میں زبر دست تیزی کار جحان سامنے آیا ہے اور فی من روئی کی قیمت میں 200 ے250روپے کا اضافہ ریکارڈ کیا گیاہے نتیجے میں پنجاب میں فی من روئی کی قیمت بره کر 9 ہزار 250روپے جبکہ سندھ میں 9 ہزار 100 رویے کی سطح تک پہنچ گئی ہے، تو قع ہے کہ رواں ہفتے روئی کی قیمتوں میں مزيداضافيكار جحان سامنے آنے كاامكان

کوروناکے باعث متعدد پورپین مما لک نے بنگلہ دلیش اور بھارت کی بجائے اب یا کستان ہے مختلف ٹیکٹائل پراڈکٹس خریدنے میں دلچیپی کااظہار کیاہےجس کے باعث یا کستانی ٹیکسٹائل ملز کے پاس اس وقت

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