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(ڈاکٹر سید منیر)  
(ایڈیٹر ہفت روزہ ویٹری نیوز اینڈ ویوز)

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جلد نمبر 14 تاریخ 23 مئی 2019 صفحات 10 قیمت 150 روپے شمارہ نمبر 27 ABC سے تصدیق شد

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# 2 مارچ 2020 بروز پیر کو پہلی مرتبہ ملک میں نیشنل بیفلو ڈے منانے کا فیصلہ

بیفلو بریڈریسیو ایشن پنجاب پاکستان کی طرف سے ہرسال میڈون 2 مارچ کو قومی سطح پر منانے جانے کا اعلان کر دیا گیا اس فیصلے کی اطلاع آئی ملی جاری بین الاقوامی ورکشاپ کے شرکاء کو بھی فراہم کر دی گئی، بیکریز جرنل ایڈیٹر مسیح اللہ BBAPP پنجاب حکومت کی طرف سے کھلے دودھ کی فروخت پر لاہور میں پابندی عائد کی جا رہی ہے شہریوں کو پاپیچر اٹمزڈ دودھ فراہم کرنے کیلئے حکومتی اقدامات کئے جا رہے ہیں

”پنجاب میں تازہ دودھ کی فروخت پر پابندی بائیکورٹ میں چیلنج، نوڈ اتھارٹی سے 10 جون تک جواب طلب: ریگولیشنز کے تحت 2022 تک پنجاب نوڈ اتھارٹی فریش دودھ کی فروخت پر پابندی نہیں لگا سکتی، درخواست گزار: تازہ دودھ کی فروخت پر پابندی نہیں تو پھر کارروائیاں کیوں کی جا رہی ہیں، لاہور بائیکورٹ کا اظہار برہمی

لاہور (ایڈیٹر مسیح اللہ) پنجاب میں حکومت نے بیفلو ڈے کے شہریوں کو تازہ دودھ فراہم کرنے کے لیے ایک نیا اقدام کیا ہے۔ حکومت نے 25 مارچ سے بیفلو ڈے منانے کا فیصلہ کیا ہے۔ اس دن تمام شہریوں کو تازہ دودھ فراہم کیا جائے گا۔

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**2 مارچ 2020 بروز پیر**

**نیشنل بیفلو ڈے**

ہر سال 25 مارچ کو نیشنل بیفلو ڈے منایا جاتا ہے۔ اس دن تمام شہریوں کو تازہ دودھ فراہم کیا جائے گا۔

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# 3 مئی کو فیصل آباد میں آن وینڈا گولڈ کی تقریب افتتاح اور ڈیری فارمرز کیلبر سرفیکلیٹس کی تقسیم

تقریب سے ڈاکٹر خالد محمود شوق، ڈاکٹر شیر علی، ڈاکٹر ندیم سلیمان گجر، جمہوریتق نے خطاب کیا زرعی یونیورسٹی فیصل آباد کے طلبہ بھی تقریب میں شریک ہوئے اور اسے آراہل سوسائٹی کی طرف سے ڈرامہ پیش کیا گیا اور لوک گیت بھی پیش کئے گئے۔

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# Veterinary News & Views

Faisalabad

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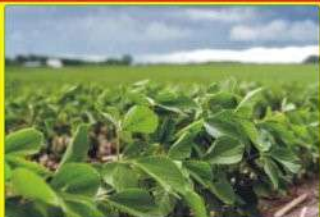
Vol 14

16 - 23 May 2019 Rs. 150/- Page 10 Issue No. 27

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## CHINA EXPECTS SOYABEAN OUTPUT TO HIT HIGHEST IN 14 YEARS

China expects its soyabean output to hit the highest level in 14 years in 2019/20, boosted by a plan to revitalise the nation's production of the oilseed. The country will churn out 17.27 million tonnes of soyabeans in the 2019/20 crop year, up 7.9% from the year before, its agriculture ministry said on Friday in a monthly crop report.



That would be the most since 2004/05, when China produced 17.4 million tonnes of the commodity, according to US Department of Agriculture records. That was the only previous time its output has risen above 17 million tonnes. China, which uses soyabeans to make feed for its vast livestock herds, has been pushing to reduce its dependence on oilseed imports from the United States amid mounting trade tensions between the two.

China's agriculture ministry expects 86.6 million tonnes of soyabeans to be crushed in 2019/20, flat with levels in 2018/19, as an African swine fever epidemic curbs demand for feed ingredient soyameal. The virus kills almost all pigs infected and has spread rapidly around the country. China's 2019/20 soyabean imports will come in at a similar level to the year before at 84.9 million tonnes, the ministry said.

Soyabean consumption in 2018/19 was forecast at 103.56 million tonnes. China will import 3 million tonnes of corn in 2019/20, according to the monthly Chinese Agricultural Supply and Demand Estimates (CASDE). The ministry also raised its forecast of China's corn imports for 2018/19 to 2.5 million tonnes, up from the previous month's estimate of 1.5 million tonnes.

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**Special Lecture Of Solution of unemployment & Philosophy Of Akhuwat by Dr Muhammad Amjad Saqib Chairman AFP at GC University old camps Faisalabad on Tuesday 14th May 2019**



## MANAGING EGG SIZE

Balancing bird welfare with the public's love affair with large eggs has prompted one company to produce an e-book for farmers to help them manage the issue.



The UK egg market has seen a leap in demand for large eggs (63-73g) and a widening gap in prices paid to producers for large and medium sized eggs. While this provides an incentive for egg producers to increase the proportion of large eggs laid by their flocks, the welfare issue remains over how far this can go. It has prompted Humphrey Feeds and Pullets to produce an e-book on the variables influencing egg size, including physiological factors such as bird genetics, age, feed and pullet quality, as well as environmental factors such as lighting and temperature.

### Genetics and age

Possibly the largest factor determining the average egg size is genetic. For consistently larger eggs, farmers must choose certain breeds, which are able to produce larger eggs, with their pullet supplier. As the hen's reproductive systems naturally changes with age, one impact is that the eggs laid become larger. Maximum egg size can be expected when the birds are 52 weeks old.

### Lighting

If the onset of lay is delayed, a bird will produce larger eggs throughout its life. A major factor in putting off maturity is the number of hours in the day that young birds are exposed to light. Chicks in rearing sheds are initially given 20 hours of light a day, and this is reduced to 10 hours over a period of time. If the reduction in light hours is slow, which is then followed by a slow increase once delivered to the laying farm, egg size will increase over a flock's lifetime. If the bird lays larger eggs, it will lay fewer; the egg mass is generally constant.

### Pullet quality

The way pullets are managed during their brooding and growing phase influences their performance in the laying period. Housing a well reared, robust pullet is the foundation of a successful laying cycle. Immunologically and physically robust pullets are essential if egg size and production targets are to be met and are the result of 16 weeks of care and attention.

### Feed

Humphrey's say that judging the optimum feed nutrients is key to optimising bird performance. A series of small nutritional changes can drive up the average egg size but these changes require careful judgement and the experience of a poultry specialist. Producers should be mindful that any change is "one way" and must be carefully judged as the impact is seen weeks later. Digestive infections and overall gut health can also impact how much birds eat and can affect the size of egg being laid.

### Temperature and time of year

In colder times, the birds require more energy for warmth and body maintenance and will eat more feed to satisfy larger energy requirements. However, if the type of feed is not adjusted too many other nutrients will be consumed over influencing egg size. Conversely, during hot spells, birds eat less, so they need higher levels of nutrients in their feed to compensate and maintain egg size. It is therefore important to keep a poultry house as cool as possible during the summer.

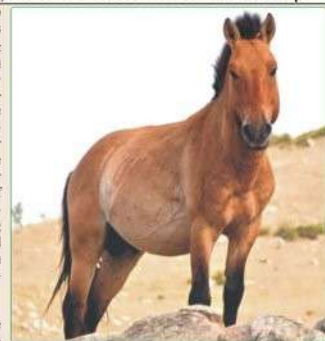
### Case study

One farmer struggling to produce larger eggs was East Sussex, UK producer Sharon Barnard, who has been supplying eggs to the retail and catering sector for the past 15 years. Ms Barnard found last year that her flock was producing too many medium sized eggs, relative to her breed's targets. Egg weights had stalled just beneath the important 63g average egg weight. She called in Humphrey's poultry specialist Steve Clout who advised increasing the level of some nutrients in the feed. "We really appreciated Steve's wider experience. We tried increasing the level of some nutrients in the feed and six weeks later the flock was meeting its breed target for large eggs," she said.

## HORSES IN CHINA: 10 NUTRITION ISSUES TO IMPROVE

China invests heavily in horse farming, but there are problems with poor performance, slow growth, suboptimal body condition, colic, lameness, infertility, and other diseases. How can nutrition help?

Ten key issues related to nutrition and feeding horses in China have been identified by Peter Huntington and Junling Sun as possible contributors to this wastage. These issues include lack of nutrition knowledge, lack of grazing, poor water supply, poor forage supply, reluctance to pay for quality feeds and overuse of imported supplements amongst others. By addressing these issues, the health and performance of horses in China can improve, and wastage will decrease.



### 1. Lack of knowledge

Whilst China has a large horse population, it has a narrow distribution so relatively few Chinese involved in the horse industry have had a long term involvement in horse care. This means that horsemanship skills and an understanding of digestive physiology, nutritional requirements and feeding management is often lacking.

### 2. Lack of grazing

Because of competition for land use, climate and some ignorance of the importance of grazing, few horses are given year round grazing and many horses in China get no grazing time at all. This means supplementary concentrates and forages must supply all or nearly all the horses nutrient requirements.

### 3. Poor water supply

Water is a critical nutrient and deprivation of water will impact on health faster than deprivation of other nutrients. Few stables in China monitor intake or consider keeping water at an optimum temperature to reduce temperature related effects on water consumption.

### 4. Poor forage supply quality and quantity

In China, few horses have access to pasture and so rely on hay for their forage intake. Chinese grass hay is cut too late and is usually of lower quality than that grown in many countries. Poor transport conditions and storage often leads to further deterioration in quality.

### 5. Many horses are too fat and not fit

In common with many other countries, Chinese horse owners tend to like their horses to be fat and shiny, rather than fit. The extra bodyweight requires extra feed and increases the risk of joint disorders, behaviour problems and colic.

### 6. You get what you pay for in horse feed

There is currently only 1 registered horse feed manufacturer in China and several imported brands are approved. To save money, many stables use unapproved cheap feeds, mix their own feed from raw grains or use feeds designed and made for other animals.

### 7. Feed transport is expensive, time consuming and prone to delay

China is a very large country and road freight is slow and expensive. As most hay is made in northern China shipping it to other parts of the country is slow and expensive. This can lead to shortages or inadequate amounts of forage being fed due to the cost.

### 8. Poor nutrient balance

Poor health and performance. Chinese forages tend to be much lower in minerals like calcium, phosphorus, zinc, selenium and iodine. Also the intake of vitamins like A, E and K and vitamin D can be a problem.

### 9. Overuse of expensive supplements

There are no registered Chinese made supplements for horses so owners who want to feed supplements tend to rely on expensive illegally imported supplements. Many of these are added without regard for what nutrients the horse needs in the hope it will improve performance but that's not unique to China.

### 10. Don't feed all horses the same

The nutrient requirements of a horse vary with body weight, breed, metabolism, workload, growth rate and reproductive status in mares. This means you can't use the same feed or the same feed rates for all horses in a stable but some stables follow this principle for simplicity. This results in under feeding or overfeeding and can lead to obesity, poor body condition and poor health, fertility, growth rate and performance. The report: Nutrition: 'Key Issues and the consequences of getting them wrong' was presented at the World Equine Veterinary Association Conference, 2018.

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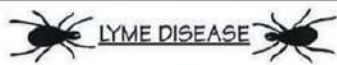
ایم اینڈ ایس کیٹل فیڈز 9 کلو میٹر اور جو سعادت سٹاپ نزدیکی شکر گڑھ، فیصل آباد چینیٹ روڈ، چینیٹ



# LYME DISEASE: PUBLIC HEALTH CONCERN

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**Flu-Like Symptoms**  
• Headache  
• Fatigue  
• Fever  
• Chills  
• Sore Throat  
• Muscle Ache



**Hearing Loss**  
**Paralysis of Face**  
**Heart Complications**  
Rapid or Slow Heart Rate  
Chest Pain  
**Syncope, Palpitations, Dyspnea**  
**Hot, Swollen, Painful Joints**  
**Rash at the Site of the Tick Bite - Itching**

**Insomnia**  
**Psychological Complications (Long Term)**  
• Depression  
• Dementia

Ticks are blood sucking (obligatory) ectoparasites (invertebrates). Commonly, they are present in hot and humid areas. In their seasonal abundance is in the summer (April-September). Ticks (Arachnida) are classified into three different families: Ixodidae (hard ticks), Argasidae (soft ticks) and Nuttallilidae. Ixodids (hard ticks) of medical and veterinary importance belong to seven different genera including *Hyalomma*, *Amblyomma*, *Boophilus*, *Rhipicephalus*, *Hemaphysalis*, *Dermacentor* and *Ixodes*. Hard ticks are commonly found on animals. Hard ticks are called as hard due to their external hard covering. Argasids has four different genera including *Otiobius*, *Ornithodoros*, *Argas*, *Amblyomma* and *Nyssalix*. Soft ticks are most commonly found on birds. Ticks are major constraint in the development of economy. They cause direct as well as indirect losses. Directly, they cause anemia, hide damage and toxicity. Indirectly, their losses include the decrease in milk production, development of different diseases by vectoring various infectious agents to animals as well as human. Commonly tick transmitted diseases of animals and humans are Anaplasmosis, Babesiosis, Theileriosis, Lyme disease, Q fever, etc. Currently, Lyme disease is one of the rapidly-spreading vector-borne disease. The disease transmitted only by a tick vector (Deer tick), scientifically called as *Babes microsporum* and commonly known as black legged tick. Ticks attach to the body when person is going outdoors where there is grassland. Tick can attach to pet also when pet comes in contact with grassland. Ticks hide in different body parts such as under the collar, the tail, front legs, ears, groin area, between the toes and elbows. The size of adult female tick is as big as sesame seed which have reddish hind bodies and black dorsal marking. Males have slightly smaller size and different color which is solid dark brown. The tick of Lyme disease lives for two years which have four phases of life: egg, larva, nymph and adult. Exclusively, they are dependent on animal blood and feed in three stages of their lives. The only stage in which they don't feed is when they are larval molting. Once they molted into larva they start feeding on larval stage and when they feed they molt into nymph, then nymph takes feed and molt into adult. Adult males and females take feed. Adult males attach to body and take blood in short time while females take more time to get engorged because they have to lay eggs. These ticks can contract bacteria in anytime from infected

host of their feeding stage but transmit only they molt from larva to nymph and nymph to adult. They need at least 24 hours to transmit disease. Larvae take blood meal from birds or mice. Nymph size is about of poppy seed while adult have sesame seed size. Nymph and adult both seek deer, dog or human host. Adult females can mate on the host or off the host and then they feed for several days, and duplicate their normal size when fed. When adult females have taken blood meal and get engorged, drop off the hosts and lay their eggs and die. These can be rarely seen on the body. Ticks, especially the nymphs (infected tick) don't have specific attachment site so they can attach anywhere on the body. They need only 36-48 hours attachment to body to take blood meal for them and to transmit disease. The bacteria for Lyme disease is *Borrelia burgdorferi*. This disease is debilitating and rarely fatal. Infected tick bite transmits etiologic agent to human. Most of the times this disease is misdiagnosed due to its early symptoms which are closely related to flu and similarity it goes unreported. Almost nine cases out of ten are misdiagnosed and ultimately not reported. Signs and symptoms for this disease generally appear after 3-30 days of infected tick bite are: the development of bull's-eye shaped rash (erythema migrans), facial paralysis or palsy (one of facial muscle lost, side of face facial muscle droops), fever, chills, fatigue, dizziness episodes, shortness of breathing, muscle pain (myalgia), heart palpitations or an irregular heartbeat (Lyme carditis), joint pain (arthritis) and inflammation (arthritis particularly knees and other large joints), intermittent pain in tendons, bones, joint, muscle, severe headaches, neck stiffness, and when it is left untreated it leads to neurological disorders which include inflammation of brain (meningitis) and spinal cord, nerve pain, numbness, tingling in the feet and hands, problems of short term memory. Erythema migrans start after 3-30 days of tick bite, average (7) days and gradually increases with the passage of time up to 12 inches, it may feel warm on touch but there is no pain (rarely painful), sometimes as large as bull's eye. The tick which transmits Lyme disease is capable of transmitting other diseases too. This disease is treated by antibiotics. Antibiotics which are commonly used are Doxycycline, Amoxicillin and Ceftriaxone/ceftriaxone. Commonly these antibiotics are orally administered at regular dose.

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## AVANT-GARDE BUDGET PROPOSALS I: GROWTH, TAXES & EQUITY

The budget for fiscal year 2019-20, the first Government of Pakistan Tehreek-e-Insaf (PTI), is expected on May 24, 2019. Every year before the announcement of annual federal budget which has become an official ritual-plethora of tax proposals are received by the Federal Board of Revenue (FBR) from trade and professional bodies, tax bars and industry's representatives. For the last many years, FBR itself has been soliciting budget proposals by placing detailed guidelines on its website. However, each year the Finance Bill proposes to be a haphazard document containing meaningless amendments in tax codes, imposing more and more burden on the existing taxpayers—especially through cumbersome withholding of taxes—with no policy shift to promote business, facilitate existing taxpayers and bring the untaxed sectors/persons in the tax act. This series will run till the announcement of budget to present some evocative changes in our tax system that can boost business, in particular export sector, to ensure sustained economic growth leading to enhanced taxes for the government to overcome fiscal deficit and overcome imbalances on external account.

Taxation in Pakistan is oppressive, lopsided and counterproductive—there is only 2% of corporatization of total business. By heavily taxing corporate sector vis-à-vis firms and association of persons, FBR has been encouraging undocumented sector. We have about 95,000 companies registered with Securities & Exchange Commission of Pakistan (SECP) out of which return files are less than 40,000 as per Tax Directory for tax year 2017. The annual addition is less than 10,000, whereas in countries like Malaysia and Turkey having much less population than Pakistan, the number is in much higher with impressive annual growth. If we want to move from undocumented economy to transparent corporatized sector to achieve rapid growth, the government must reduce corporate rates to 20% and tax firms and other non-corporate business entities at a higher rate (30%).

Taxation should serve as a catalyst for industrial expansion and economic growth. In Pakistan, the ill-directed, illogical, regressive and unfair tax regulations are causing a dampening effect on the industrial and business growth. The sole stress on meeting revenue targets, without evaluating its impact on the economy, has crippled our trade and industry, especially since we have started submitting completely before the dictates of the foreign donors. Had the successive governments concentrated on economic growth and industrial expansion, there would have been consequential substantial rise in taxes. It is impossible to enhance revenues with stagnation in economy, and over-taxing such economy, as has been done in Pakistan—it has in fact destroyed our tax system as well.

The priority of our economic managers have been achieving revenue targets, fixed ambitiously every year in the foreign donors. Had the economy is actually behaving or at the dictate of International Monetary Fund (IMF). This is the main problem of tax system. By fixing revenue targets in isolation and without making necessary efforts to improve productivity and economic growth, Pakistan has been forced into a quandary, where it can neither afford to give any tax relief package to the trade and industry [due to growing fiscal deficit] nor can it achieve a satisfactory level of economic growth [due to retrogressive tax measures]. This is a vicious circle which has ensnared our policymakers. They will have to find ways and means to come out of this tangle to make Pakistan an economically viable and secure place which can attract investors. In a country where there is no security of life or property, notwithstanding the availability of a host of tax benefits and other incentives, investors would never come forward.

FBR, as administrative revenue authority, has been single-handedly destroying Pakistan's trade and industry by resorting to discretionary powers [Statutory Regulatory Orders (SROs)] withholding undispensed refunds payable to the taxpayers, making excessive tax demands and recovering the same by freezing the account even before the order by Tax Tribunal, resorting to all kinds of negative tactics and highhandedness to meet its budgetary targets. Such actions of the tax machinery are detrimental for business and industry and resultantly, FBR not only has failed to tap the revenue potential but has remained unsuccessful in meeting even many times revised targets for the last many years. Besides, there is perpetual increase in our fiscal deficit and debt burden.

There cannot be two opinions about the complete shifting of our economic priorities. We, as a nation must concentrate on increasing our productivity, efficiency and economic growth, which alone can ensure more revenues for the State. The main cause of our pathetic economic situation is existence of inefficient, corrupt, regressive and criminal government/institutions, which do not give a damn for the welfare of the common people. Successive government's onerous tax and regulatory policies on the dictates of the foreign masters have pushed millions of people below the poverty line. We will have to move quickly and decisively to reverse this trend by restoring Pakistan's undeniable geo-strategic and business competitive position in the region. There is an urgent need to take necessary and tough decisions to make Pakistan a respectable place to live, work and invest.

We are, therefore, not proposing cosmetic changes in the Income Tax Ordinance 2001, the Sales Tax Act 1990, the Federal Excise Act, 2005 or the Customs Act, 1969. On the contrary, we are concentrating on key areas where paradigm shifts are needed in structural and operation level to ensure not only more tax revenues for the State but also business growth, social equity and fairness so that honest taxpayers are not disillusioned—presently FBR is extending concessions, immunities and amnesties to dishonest non-compliant taxpayers engaged in trade, business and industry.

**TAXPAYERS' BILL OF RIGHTS**

The Government, before imposing any new obligations on the taxpayers, must restore the confidence of taxpayers by immediately promulgating a Taxpayers' Bill of Rights, as was done by a number of countries including the USA and UK in the 1980s.

The provisions of the Bill amount to:

- Safeguard and strengthen the rights of taxpayers.
- Ensure equality of treatment.
- Guarantee the privacy and confidentiality of their declarations.
- Provide right to assistance by State in tax matters.
- Guarantee unfettered right of appeal through an independent appellate system and alternate fast-track administrative dispute resolution system.

**ASSIGNMENT OF TAX**

Assignment of a tax means transfer of taxation power from a higher level to a lower level government. Taxation power includes the following: right to levy tax, collect tax, and appropriate proceeds from the tax. Thus, there can be three interpretations of assignment of tax. Firstly, higher-level government may levy and collect a tax but hand over the entire proceeds to lower level governments. Secondly, the higher-level government may levy a tax but allow the lower level government to collect it and retain fully the proceeds therefrom. Finally, the higher-level government may transfer a tax to lower level governments, a situation which defines assignment of tax in its strictest sense. All provincial governments are violating the command of Article 140A and not developing political, administrative and fiscal powers to elected local governments.

In the Pakistani scenario, the exact opposite has happened. The levy of presumptive taxation by the federal government and no powers to local bodies to raise funds for providing education and health at grass root level have denied the fundamental rights of the people. The provinces enjoy exclusive right under the Constitution to levy taxes on services within their respective physical boundaries. The federation blatantly encroaches upon their undisputed right by levying tax on services on presumptive basis—this is in substance indirect tax under various sections of the Income Tax Ordinance, 2001. Such taxes are not taxes on income, which the federal government is empowered to levy under item 47 of the Federal List. Generally, the purpose of tax assignment is to augment the resources of lower level governments. The assignment of tax may be conditional. Thus, it may be obligatory on the part of a lower level government to levy the tax assigned to it. Not only this, the lower level government may not have power to alter the basic structure of the assigned tax. It may enjoy flexibility in fixing the tax rates within a narrow range prescribed by the higher-level government. There is an urgent need in Pakistan to reconsider the equitable distribution of fiscal and taxing powers among federation, provinces and local governments. True provincial autonomy can only be guaranteed if assignment of tax principle is followed in letter and spirit. Establishment of local governments is a constitutional obligation [Article 140A] sections and asking them to disclose the District Management, provincial autonomy but all the four provinces and federal government have failed to fulfill this command. Let the provinces have exclusive right over their resources and finances and they must transfer taxes to local governments so that grass root democracy and funds for public services can be utilized and guaranteed.

(The writers, lawyers and partners in HUZAIMA, HUZAIMA & HAZ, are Adjunct Faculty at Lahore University of Management Sciences)

# USU VIRUS AN EMERGING ZOONOTIC VIRUS

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**Overview:**  
The Pakistan haven't seen many of the viruses that are more common in Africa and Asia, but Pakistan do have mosquitoes and other vectors. These are often the same or similar mosquitoes as found around the world, just as globalization spreads viruses, it also spreads mosquitoes. Do we know what the next virus will be? The simple answer is no, we don't. And before there's another virus that takes us by surprise, it would be good to know as much as possible about the many viruses that could possibly spread, like Zika, Chikungunya, and different strains of Dengue that we've seen in recent years in the European countries. As we look more, we find more, too. There are also viruses that we are just beginning to recognize as they begin to spread further. One of these viruses, which seems mild but may hold surprises, is the Usutu virus.

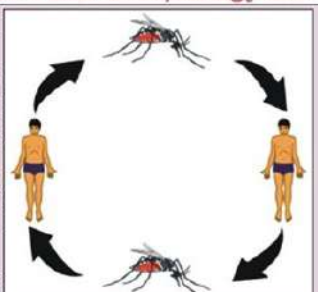
**Introduction:**  
The genus *Flavivirus* of family *Flaviviridae* is composed of more than 70 viruses. Among them, Japanese encephalitis virus (JEV), West Nile virus (WNV), dengue virus (DENV), and yellow fever virus are important threats to human health. Usutu virus (USUV) is a mosquito-borne flavivirus belonging to the JEV serocomplex and thus is closely related to JEV and WNV.

**Vector:**  
USUV has been isolated from mosquito species that include *Culex pipiens*, *Culex neavei*, *Culex peruvianus*, *Aedes albopictus*, *Aedes caspius*, *Anopheles maculipennis*, *Culex fuscescens*, *Couilletioides*, and *Mansonia Africana*. Of these, *Culex pipiens* is considered to be the most common vector.

**Host Range:**  
USUV is highly pathogenic to several bird species, such as the blackbird (*T. merula*), the great gray owl (*Strix nebulosa*), the blue tit (*Parus caeruleus*), the house sparrow (*Passer domesticus*) the grassquit (*Parus major*), the nuthatch (*Sitta europaea*), the robin (*Erithacus rubecula*), and the song thrush (*Turdus philomelos*). Humans are considered as incidental and dead-end host for this virus.

**Life Cycle of USUV:**  
Its natural life cycle involves mosquito-bird-mosquito cycles, in which mosquitoes act as vectors and birds as amplifying hosts. Mosquitoes facilitate viral transmission to humans, horses, and rodents, which then act as incidental hosts.

**Clinical Signs and Symptoms**



The observed symptoms in wild birds include: hepatomegaly, neuronal necrosis, and necrotic changes of liver, spleen, and heart. In human, this virus may just cause a rash and a fever. The infection may be mild and may pass quickly. However, there is a worry that for a small number, the infection may be more severe.

**Zoonotic Potential**  
The zoonotic potential of USUV was initially described in the Central African Republic and recently confirmed in Europe by reports of neuroinvasive infections caused by this virus. In September 2009, the first two human USUV infections in Europe have been reported in Italy, representing the

first cases of human neuroinvasive infection ever, even though neuroinvasiveness in mice after experimental infection has been already demonstrated. The patients, an orthotopic liver transplantation recipient and a patient with diffuse large B-cell lymphoma, suffered from severe neurological impairment caused by encephalitis, demonstrating the role of USUV as a human pathogen at least for immunocompromised individuals. These cases raised the concern that the virus might be much more serious for some individuals.

**Transmission to humans:**  
Human catch it from a mosquito bite. But not all mosquitoes bite (or will) carry the virus. The virus seems to be carried by *Culex* mosquitoes, especially *Culex pipiens*. The birds in which the virus is found often fly long distances, even as far as Asia. Similar birds are found in America.

**Diagnostic Test:**  
Most labs would not be able to test for it. A healthcare professional would need to contact a specialty referral laboratory to handle a specimen.

**Treatment:**  
There is no treatment for this virus. Because, most infections in healthy people appear to be mild and no severe symptoms have been seen so far.

**Conclusion:**  
It is concluded that the Usutu virus has public health importance; therefore further research is needed about this virus, so we will be well prepared for any kind of future circumstances. Scientist are needed to do more research about this virus and vaccine development should be done for prevention of this disease both in human and wild birds.

**Other Contributing Authors:**  
Ashiq Ali Aneela Amin, Yasir Nawaz (Department of Pathology, Faculty of Veterinary Science, University of Agriculture, Faisalabad, Pakistan).

# THE PLAN FOR THE EXCESSIVE REVENUE GENERATION AND FAST UPLIFT OF LIVESTOCK SECTOR IN PAKISTAN

## Exploring The Livestock Potential In Pakistan

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**Opportunities in Livestock, Meat Quality introduction, Embassies special focus to Get Attention of International Livestock Investment companies.**  
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 Pure Wool and Pure Leather Designer Products are in High Demand throughout the World. Many Developed Countries including USA, Canada, UK, UAE, KSA, China, Russia has huge demand of these products.  
**Establishment of Government Sale and collection Points of Pure Milk in Big Cities of Punjab and sale on Market Value Price of Milk.**  
 The Khoya export can reach up to a maximum of 500 Million USD per year. It will need the technical measures for packing, handling and preserving as per ISO measures.  
**Establishment of Tanneries and Leather Production Companies for finalized Leather Designer Products on Public-Private Partnership basis on CPEC Routes.**  
 CPEC's efficient use could be possible if Pakistan start exporting its own products through the CPEC. Leather is one of the biggest exports of Pakistan. But unfortunately, Pakistan doesn't export Leather Designer Products under his own brand. Therefore the Foreign Exchange earned is very low. Many Chinese Companies shall be willing to invest in Leather processing in Pakistan. Because the Skin/Hides in Pakistan are very cheap, labour here is very cheap. Otherwise on Public-Private partnership basis, anyone could join and invest in this Emerging sector on CPEC routes near export centers. The total Exports of Leather and designed final products can start @3 Billion USD/Year and reach upto 5 Billion USD/year in just 4 years.  
**Establishment of Wool Processing Factories for Production of finalized pure wool Designer Products on Public-Private Partnership Basis on CPEC Routes.**  
 Wool Products are the need of every human being. The designed wool products such as ornaments, Clothing etc are in demand in all countries. Many Investors in side Pakistan would be ready if Government offer them the space and chance

to invest and export the wool designer products on CPEC route. This will also boost the Pakistan exports. The Wool end designer products export can reach a level of 1 billion USD/Year.  
**Establishment of Organic Meat Concept for Uplift of Mutton and Beef Sector of Pakistan through Public Awareness Advertisements and Seminars.**  
 Mutton and Beef are of Organic quality. This Organic quality makes the meat perfect for human consumption. Some of the countries accepting Pakistani Meat without OIE reservations, must be reached. In those countries, Pakistani Government shall work on Public awareness about organic concept. It will help Pakistan to reach the global halal Meat market. The Pakistan's Meat Exports has the potential to be at level of 2 billion USD/Year at start and 8 Billion USD at Peak/Year.  
**Establishment of Duck Rearing and Duck Egg Markets.**  
 Duck farming is very rare in Pakistan's Livestock. Establishment of Fine Milk Processing/Chocolate Production Units on CPEC's Major Routes by Chinese Investments. State of the Art Milk Processing units for finalized milk products could be established by Chinese investments. Milk has a very short shelf life if pure, so local milk processing could be very easy and economical for Chinese companies, government must look out the proposals for it. Because it will also help in Pakistan's Exports. The Exports can be of 200 Million USD per year, and saving 100 USD Imports.  
**Establishment of Ostrich Meat Processing Units on CPEC Routes by Chinese Investment.**  
 Ostrich farming was announced by Previous government. But the meat Market was not established. China has good demand of ostrich meat. CPEC's route can be used for Ostrich Meat Export to china. Ostrich Meat Exports could be of 300 Million USD at start and reach the level of 1.3 Billion USD after 3-4 Years.  
**Establishment of Pakistan Meat Company, to Establish and Run State of the Art Meat Processing Units for Final Exports, and opening of Bids and call for proposals to Purchase Pakistani Meat to International World.**  
 To export Meat, Pakistani government needs to invest in Meat Company to establish state of the Art, ISO certified Halal Meat Processing units throughout the country, these units can directly export Pakistani Meat to the world by accepting this meat without OIE Reservations.  
**Export of Broiler Meat to China in bulk through CPEC.**  
 Broiler market has become very strong in Pakistan, but the farmers are facing the reduced rates of sale and increased production cost problems. The supply and demand chain is working in such a way that sometimes the supply becomes more than demand and meat rates decrease. However, China has a big Demand of Broiler Meat. After implementation of the Organic Ordinances, the Drug free Production could be achieved and exported to China. Pakistan's Broiler Industry is of 70 Billion Dollars. Therefore the broiler meat can be exported in Bulk. China could be a big Market for this. Exports can start from 500 Million USD/Year and easily be reached @2 Billion USD/Year.  
**Establishment of Angora Rabbit Farming Concept, and its Export to China on Chinese Partnership through Proposals.**  
 Rabbit Farming is also an emerging sector in many countries. Various Middle east countries have rabbit meat demand. Pakistan's Angora rabbit is well adapted for farming and meat purposes, it has a fast growth and production. The export would be very low, but can increase once established.  
**Export of Live Animals (Donkeys/Stray dogs to China)**  
 China look for Donkeys and Dogs for its own markets. Since it is odd to say to export these animals to china, but its better for the economy that these animals must be exported to china. This Export can be of 1 Billion USD/Year.  
**Establishment and Export of organic Fertilizer from manure through Chinese Investments.**  
 Organic Fertilizer is made from Animal Manure, and its demand is increasing throughout the world. It helps the soil to regain its maximum fertility without affecting the land. India is now using the Farmyard Manure for Organic fertilizer.

## CLIMATE CHANGE: PROPELLING HEAT STRESS PROBLEMS?

As a result of global warming, heat stress can have a negative impact on dairy cattle in several ways. Besides the reduction in milk production and high economic losses this can bring, socio-economic impacts are more pronounced in the low-income populations that mainly depend on subsistence agriculture. The effects of high ambient temperatures were earlier thought to be limited to tropical areas, but with climate change, this effect is now being experienced worldwide.

Climate change is not easy to predict, this makes it a relatively complex matter and limiting factor in the prediction and assessment of its effects. In addition, quantitative simulation studies that estimate the effect of possible future climate change are few. However, the effect of weather and extreme events on several aspects of animal production have been well documented. Studies review that climate change may adversely affect economies and global food production. Studies have also shown that, besides seasonal climatic changes, milk loss in dairy cattle due to heat stress varies geographically, especially with dairy cattle that is mainly dependent on pasture-based systems.

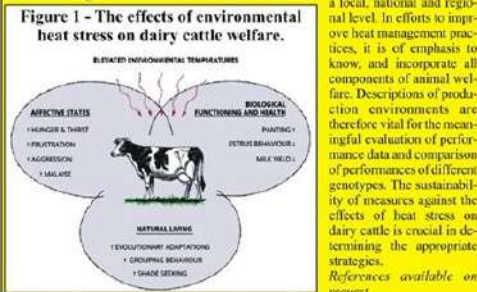
**Heat stress in Africa**  
 The definition of heat stress can be put as the sum of external forces acting on an animal, causing an increase in body temperature resulting in a physiological response. Most studies have highlighted that this occurs when the ambient temperature exceeds 25°C, and in most cases, coupled with high humidity, low airflow and direct sunlight. This normally results in an atmosphere that has high water vapour-rendering evaporative heat loss in cattle less effective. In Africa, agriculture is still the main contributor to the GDP of most countries. FAO (2007) reported that the agricultural sector in Africa employs between 70% and 90% of the total labour force. About



Where temperatures rise above the upper critical temperature, which may occur more frequently as a result of the climate change conditions, long-term viable alternatives such as changing nutrition and replacing breeds with more heat tolerant strains are necessary. Nutritional strategies mainly focus on increasing energy density and balance the electrolytes. The logic behind the practice of feeding low fibre rations during hot weather is that greater heat production is associated with metabolism of acetate compared to propionate. Therefore, feeding more concentrate at the expense of fibrous ingredients increases milk energy density and should reduce heat increment. Electrolytes are a key element of acid-base chemistry and their supplementation during heat stress may be critical to homeostatic mechanisms. Potassium and sodium are the primary cations involved in the maintenance of acid-base chemistry.

**What does the future hold in Africa?**  
 Vulnerability to climate change depends on physical, biological and socio-economic characteristics. In most African countries, the low-income populations that depend on subsistence agriculture are particularly at high risk of being affected. The dilemma with climate change is the uncertainty surrounding it and its time frames. It is uncertain which areas, regions and countries will be affected by the changes and to what extent. This may lead to a reluctant approach to the initiation of mitigating measures.

Livestock production in Africa and Southern Africa, especially its developing component, is vulnerable and at high risk of being severely affected by climate change. Current research, education and sensitisation are needed in order to adapt to and combat the possible effects of climate change at a local, national and regional level. In efforts to improve heat management practices, it is of emphasis to know, and incorporate all components of animal welfare. Descriptions of production environments are therefore vital for the meaningful evaluation of performance (data and comparison of performances of different genotypes). The sustainability of measures against the effects of heat stress on dairy cattle is crucial in determining the appropriate strategies. References available on request.



- Establishments and Use of CPEC:**
- ✓ Pakistan Livestock Commission Establishment
  - ✓ A Separate Cabin in All Foreign Embassies of Pakistan to Promote Pakistan's Livestock Products for Sale, Investment opportunities in Livestock, Meat Quality Introduction, Embassies special focus to Get Attention of International Livestock Investment companies
  - ✓ Establishment of Government Sale and collection Points of Pure Milk in Big Cities of Punjab and sale on Market Value Price of Milk
  - ✓ Improvement in Quality standards for Uplift and export of Pakistan's Major Milk Products: Khoya
  - ✓ Establishment of Tanneries and Leather Production Companies for finalized Leather Designer Products on Public-Private Partnership basis on CPEC Routes
  - ✓ Establishment of Wool Processing Factories for Production of finalized pure wool Designer Products on Public-Private Partnership Basis on CPEC Routes
  - ✓ Establishment of Organic Meat Concept for Uplift of Mutton and Beef Sector of Pakistan through Public Awareness Advertisements and Seminars.
  - ✓ Establishment of Duck Rearing and Duck Egg Markets.
  - ✓ Introduction of Cage Free Farming Concept in Rivers/Canals/Water Rows/Lakes on Chinese Model
  - ✓ Establishment of Fine Milk Processing/Chocolate Production Units on CPEC's Major Routes by Chinese Investments.
  - ✓ Establishment of Ostrich Meat Processing Units on CPEC Routes by Chinese Investment.
  - ✓ Establishment of Pakistan Meat Company, to Establish and Run State of the Art Meat Processing Units for Final Exports, and opening of Bids and call for proposals to Purchase Pakistani Meat to International World.
  - ✓ Export of Broiler Meat to China in bulk through CPEC
  - ✓ Establishment of Angora Rabbit Farming Concept, and its Export to China on Chinese Partnership through Proposals.
  - ✓ Export of Live Animals (Donkeys/Stray dogs to China)
  - ✓ Establishment and Export of organic Fertilizer from manure through Chinese Investments.
  - ✓ Pakistan Falcon and Houbara Breeding Act 2019, Establishment of Houbara and falcon Breeding Centers. Export of Live Birds to UAE. Trophy Hunting schemes for Houbara bustard.
  - ✓ Trophy Hunting Program of Domesticated Deer, Sheep in Forest Areas of Punjab
  - ✓ Opening of Lahore zoo for Foreign tourists permanently
- Legal Reforms:**
- ✓ Merger of Wild life and fisheries in L&O as 'Punjab Livestock, Fisheries and wildlife Act 2019'
  - ✓ Punjab Pure Milk Ordinance 2019
  - ✓ Punjab Disease Free Zones Ordinance
  - ✓ Punjab Livestock Census Revenue ordinance 2019
  - ✓ Punjab Livestock Act, Amendment 2019
  - ✓ Punjab Wildlife Act Amendment 2019.
  - ✓ Declaration of some wildlife breeds as domesticated Animals (Houbara, Falcon, Deer)
  - ✓ Punjab Broiler Production Act 2019 (European Union's Model)
  - ✓ Punjab Pet Animals Ordinance 2019
  - ✓ Pakistan Falcon and Houbara Breeding Act 2019
  - ✓ Notifications/Measures on Urgent basis:
  - ✓ Ban on Import of Whey Powder/Milk/Dry Milk powder
  - ✓ Ban on import of Milk products/ Chocolates
  - ✓ Ban on Import of Cheese
  - ✓ Review on Contracts with DPI (direct Foreign Investment) Companies, The Monitoring of Nestle, its milk collection centers, milk prices, total milk collection per day, total milk sale per day, total Revenue collected by the company, the Grade products imported by the company, the conversion of Pakistani Rupee into Dollars on company's behalf and its shifting outside Pakistan
  - ✓ Ban on Sale of Powdered Milk under Punjab pure Milk Ordinance 2019
  - ✓ Ban on Import of Poultry Antibiotics and Anthelmintic under Punjab Broiler Production Act 2019
- Education:**
- ✓ Opening of 30% Slots for Foreigners in DVM Admissions throughout Pakistan
  - ✓ Unpaid Internships at 200s/Veterinary Hospitals for Foreigners
  - ✓ Establishment of Tourist Marine/ Sub water Aquaria by Direct Foreign Investment, and Opening of Marine Research for international Scholars through Fellowships.
  - ✓ Opening of Lahore Zoo's Animals (Special Range for Foreign Researchers) Under Fellowship Scheme introduced by Government of Punjab.

**Establishments and Use of CPEC:**  
 Pakistan Livestock Commission  
 Pakistan Livestock Commission could be an Government Commission to Regularize the Livestock Policies, their Implementation and Revenue generation. It could work Uniformly in all provinces of Pakistan including GB/AJK. The Livestock Commission, Purely a Technocratic Body, shall be constituted of Hardworking Brains, to Monitor the progress of Livestock departments. This Commission can propose the Merger of All provincial Livestock departments into Federal Government. It would work on Direct Foreign Investments with Ease of Access and continuous Contact with all Foreign Embassies in Pakistan and out of Pakistan of its own. This Commission shall also Regularize the Legal Reforms required and submission in parliamentary Sessions.  
**A Separate Cabin in All Foreign Embassies of Pakistan to Promote Pakistan's Livestock, Products for Sale, Investment opportunities**





# RCB PLANNING TO SET UP CATTLE MARKET

**Rawalpindi:** Rawalpindi Cantonment Board (RCB) has planned to establish a cattle market to provide a specific place for the sale and purchase of animals. A senior RCB official told Dawn that the cantonment board sought applications from the land owners to submit details of their property within the limits of the cantonment board area by May 10 which will be procured for the establishment of the cattle market.

He said the basic aim of the market was to end illegal cattle pens in the cantonment areas and provide space to people to bring their cattle for sale.

He said the market would be built on modern lines where water would be provided and veterinary doctors would be deputed to check the health of animals. He said 10 kanals were re-

quired and the RCB would check record of the land from the district revenue department.

He said the cantonment board would earn money from the fee imposed on the sellers and buyers of the animals. Another senior RCB official told Dawn that the civic body was facing financial crisis and launched such projects just to increase its income, adding that the RCB was also working to establish a housing scheme in the cantonment areas on the former landfill site in Dhoke Gajran.

He said the RCB's income was decreasing due to poor tax collection last year as more than Rs1.5 billion property tax was not collected from Saddar area. He said most traders and plaza owners contacted courts for the rental value assessment of the RCB.

He said there was a need to form a committee that would take all stakeholders on board to assess property's rental value, adding that the traders had to pay three types of taxes in the cantonment areas.

Rawalpindi Cantonment Traders Association General Secretary Zafar Qadri said the traders had to pay property, trade and signboard taxes and in return RCB failed to provide them any incentive.

He said roads and footpaths were in deplorable condition whereas the RCB was just focussing on The Mall and its adjoining areas.

He said there was no other option for the traders but to contact courts.

Mr Qadri said there was a dire need for a modern slaughterhouse in the cantonment areas.

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# WHY IS RETAIL SALE OF OXYTOCIN BANNED?



**Priyanka Pulla**

**What has the govt. decided?**  
 From September 1, the Union Health Ministry will impose a highly controversial ban on the retail sale and private manufacture of oxytocin, a life-saving drug for new mothers. The reason for the ban is the misuse of oxytocin in dairy animals, like buffaloes, to increase milk production.

The government's April ban order refers to a 2016 Himachal Pradesh High Court judgment, which said daily oxytocin injections made cattle barren and reduced their lifespan. In addition, it claimed that drinking milk from oxytocin-treated cattle led to male impotence, early puberty among women and cancers.

**Does it make cattle barren?**  
 There is little evidence that oxytocin, when used judiciously under the oversight of a veterinary doctor, harms animals. According to Prakash Nadoor, a veterinary pharmacologist at Karnataka Veterinary, Animals and Fisheries Sciences University, veterinarians use oxytocin in very few situations. One situation is to induce labour in cattle. Here, around 50-100 international units (IUs) of oxytocin is administered over the period of a day.

Another situation is when a dairy animal is unable to produce milk because her calf is either dead or has been taken away. To supplement the animal's natural oxytocin, which stimulates milk production, an injection of up to 5 IUs is given twice a day for 2-3 days, says Mr. Nadoor. "It is not for long-term use," he adds.

At such low levels, oxytocin is not known to harm cattle. A 1991 study published in the *Journal of Dairy Science* found that when Holstein cows were given 20 IU injections of oxytocin daily for a 305-day period, it did not increase prevalence of mastitis, a painful inflammation of the udder. Nor did it shorten the 21-day reproductive cycle of cows, known as the estrous cycle.

In a more recent unpublished study by the National Dairy Research Institute (NDRI), Haryana, buffaloes were given 2.5 and 5 IUs of oxytocin daily for 50 days. Here, too, there were no adverse effects on the buffaloes' estrous cycle and ability to conceive, according to Mahendra Singh, a cattle physiologist at the NDRI. However, the animals grew addicted to oxytocin and produced lesser milk when deprived of it. This is why, continuous use of the hormone is problematic.

**Does milk from such cattle hurt humans?**  
 Again, there is little evidence that oxytocin injected into cows at low doses is secreted in milk. In a 2014 study by the National Institute of Nutrition, Hyderabad, researchers found that oxytocin levels were similar in milk from cows injected with up to 1 IU of the hormone and untreated cows. Plus, whatever little oxytocin was in the milk did not survive intestinal digestion. So, it is unlikely that humans would experience effects like cancer.

**Why is oxytocin banned?**  
 Oxytocin can be overused in the absence of oversight by a veterinary doctor. At high doses, it can hurt animals. Also, when untrained dairy farmers are administering the injection, it can cause pain for the animals.

Several investigations, both by the media and by law-enforcement officials, have found indiscriminate oxytocin use in States like Punjab and Haryana. Sometimes oxytocin is used to compensate for stressful living conditions, which interferes with milk let-down. Also, because the synthetic oxytocin available in pharmacies is expensive, farmers buy crude pituitary extract of the hormone from grey markets. Such extracts contain several other hormones like gonadotropins, which could have ill-effects too.

What can go wrong if animals are continuously given high doses? In a 1958 study, when dairy heifers were given over 100 IUs of the drug daily, the hormone interfered with the formation of the animal's corpus luteum, an endocrine structure critical to pregnancy.

**Was the ban the only solution?**  
 No, given the drug's importance to both human and veterinary medicine, the Drugs Technical Advisory Board recommended against a ban, advocating better surveillance instead. A ban might lead to scarcity and high drug prices.

# LIVESTOCK, POULTRY & AQUACULTURE ARE SOURCE OF HUMAN FOOD SECURITY AS SOURCE OF ANIMAL PROTEIN IN ADDITION TO THEIR ROLE IN NATIONAL ECONOMY, RURAL LIVELIHOOD, RURAL WOMEN ECONOMY & EMERGENCY BANK.

WRITER DR HAMID JALIL



**Livestock, Poultry & Aquaculture are source of human food security as source of animal protein in addition to their role in national economy, rural livelihood, rural women economy & emergency bank.**

Livestock is a value chain business including tiers of production, processing/ value addition and marketing (local & exports)—Marketing acts as an engine in this chain if no market pull this value chain cannot be triggered into a profitable business. Without market pull livestock production system will remain as subsistence, low input/output, non-market oriented—livelihood focused traditional system with inferior genetics and no support of local feeds industry.

Public sector interventions in Livestock sector are primarily veterinary services/ treatment focused with less focus on preventive services, not much investments on nutrition, genetic enhancement, markets development and livestock business promotion, same is the role of existing veterinary teaching institutions—producing only treatment practitioners—not much focus on production & productivity of animals. If we analyze the cost of production of one liter of milk & one Kg of meat which is currently Rs. 40/liter & 165/kg live only an academic institution/beta change center for rural prosperity—livestock & Food Security, policy strategy & advocacy centre—An incubation and facilitation center for animals related business and industry.

Change center to transform production systems from subsistence to agribusiness—paradigm shift from treatment only to production and productivity—In order to achieve this objective we need to upgrade and revise curricula in the light of our indigenous requirements of food security, livestock sector development and livestock based industry—we need to introduce diploma and certification programs focused on economic needs, animal's products based industry, and business requirements and national/international requirements at public/private sector's needs. Focus should be made to strengthen basic degree education through consistent review and up gradation of curricula—synchronized with regional, national and global requirements of veterinary, livestock and animals related education—to develop practitioners and entrepreneurs—including OIE obligations and ever changing guidelines and requirements of transboundary animal diseases control, epidemiology, rapid response, diseases diagnostics, vaccination, etc.—including view aspect of One World One Health approach—including curricula to not creating only employees—but Entrepreneurs in livestock, poultry, aquaculture and related allied businesses and industries. Introduction of products based skill development certificates and diploma courses—virtual and actual—both with massive practical learning/mentor for the needs of farming systems. Producing skilled workforce for farm production and products focused entrepreneurs and workforce—preferable certificates and diplomas to enhance employment in the

# POULTRY HAS A FOOD SECURITY STORY TO TELL ON WORLD POULTRY DAY

**Food security is a big issue on World Poultry Day as pork production continues to fall due to African swine fever in pigs in China while poultry is expected to fill the gap in world protein supplies.**

As poultry becomes the world's most-consumed meat protein in 2019, the International Poultry Council (IPC) is calling on producers worldwide to use World Poultry Day to engage consumers and critics about poultry's role in food security and sustainability. World Poultry Day is on 10 May, and the IPC invites producers in every country to join in the celebration in the year in which total worldwide poultry consumption will top that of all the meat proteins.

The celebration comes at a time when there is a heightened worldwide awareness of food insecurity. Total worldwide poultry production will exceed that of pork in 2019 due to production losses from African swine fever in hogs and pigs in China and elsewhere. With 2.2 billion more mouths to feed by 2050, experts estimate food production must grow by 70 percent. Poultry has demonstrated the ability to meet demand efficiently and sustainably.

World Poultry Day was first celebrated in 2012 in the IPC member country of Hungary, where it continues as an annual event. Member-country Colombia's first-time celebration in 2019 includes a nationwide media campaign that recruits its producer donations of poultry to food banks for distribution to vulnerable families. Brazil and India have plans to hold celebrations in future years. "World Poultry Day will dawn on May 10 with industry members working by the hundreds of thousands all



over the world to produce and deliver to consumers the most nutritious, healthful and sustainable of all the world's growing population.

sumers and influencers with messaging about poultry's role in safely, affordably and sustainably feeding the world's growing population. IPC, for example, is developing messaging about poultry's very efficient feed conversion, small carbon footprint and other traits that align with the United Nations' Sustainability Development Goals (SDGs). Beginning in 2020, the IPC plans to recognise the best World Poultry Day campaigns from around the world. For information about joining the International Poultry Council in the celebration of World Poultry Day, contact Secretary General Marilia Rangel. Country associations and companies involved in the poultry production and consumption chain are welcome to join the IPC.

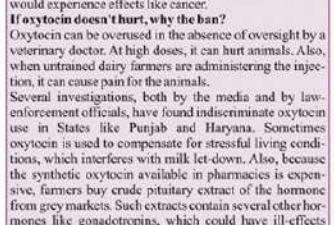
The IPC was formed in 2005 by leading poultry-producing countries to determine areas of common interest and develop policies for the overall betterment of the global industry. The organisation currently has 29 country members and 56 associate members representing more than 88 percent of the world's poultry production and 95 percent of the poultry trade.

# RECENT STUDY FINDS A NOVEL METHOD FOR SALMONELLA DETECTION

Researchers have piloted a salmonella detection method that yields results in two hours.

In a recent paper in *Food Control*, researchers have developed a new detection technique for *Salmonella typhimurium*. Their method used biosensors (devices that use living organisms, enzymes or antibodies to detect the presence of chemical substances). This method was able to accurately detect salmonella contamination in milk in as little as two hours.

The biosensor used for this study relied on magnetic nanoparticles (MNs) and catalases to detect the presence of *Salmonella typhimurium* in milk. Unlike detection methods that require the visual identification of *Salmonella* bacteria or identify the presence of salmonella DNA in food samples, this method relied on the presence of electrical fields. Scientists found that the higher the concentration of salmonella bacteria, biosensors would exhibit higher electrical voltage. The biosensors developed by the researchers were able to accurately and reliably detect the presence of salmonella contamination within two hours. The study also indicated that the biosensor could be adapted to develop a lab-on-a-chip system that could be used to detect foodborne contamination in the field.



Researchers have piloted a salmonella detection method that yields results in two hours.

# LETTER TO EDITOR

Dear Dr. Shouq Shouq, You are again appreciated & congrats for bringing new ideas in the industry. Undoubtedly, Buffalo is our Black Gold, but totally ignored by all means. No research work made in past on its Genetics & nutritional improvement. It is getting 18 lit average milk yield while we are getting around 3 lit. In reality this is not viable animal in such scenario until our researcher make some positive outcome. You start an awareness campaign for its day to celebrate, hopefully it will serve the purpose too. March 1st week, any date is best time to celebrate. Hope for the best, stay blessed.

**Dr. Asim Mahmood Khan,**  
 Chairman Punjab agriculture and meat company



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