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ویٹرنری نیوز اینڈ ویوز

چیف ایڈیٹر ڈاکٹر خالد محمود شوق | ایڈیٹر ڈاکٹر محمد جاسر آفتاب | ایگزیکٹو ایڈیٹر فرحان خالد | فیصل آباد

جلد نمبر 13 | 01 تا 07 ستمبر 2018ء | مالیت 12 | قیمت 150 روپے | شمارہ نمبر 41 | ABC سے تصدیق شدہ

Email: pakissan2002@yahoo.com

فراز خواب سی دنیا دکھائی دیتی ہے
جو لوگ جانِ جہاں تھے ہوئے فسانہ وہ

ڈاکٹر ظفر الطاف مرحوم

یکساں نظامِ تعلیم کا ادھورا خواب ـــــ [illegible]

ڈاکٹر ظفر الطاف مرحوم کی صاحبِ عین شائع شدہ اردو تحریر کی اردو ترجمہ سے اقتباس۔

زرعی یونیورسٹی فیصل آباد میں 59 سالہ جواں جذبوں کے امین

پروفیسر ڈاکٹر ظفر اقبال رندھاوا نے 3 ستمبر کی شب 9 بجے قائم مقام وائس چانسلر کا چارج سنبھال لیا

قائم مقام گورنر پنجاب/ چانسلر چوہدری پرویز الٰہی کی منظوری کے بعد ان کو پرو وائس چانسلر بنانے کا نوٹیفکیشن جاری کر دیا گیا۔ مستقل وائس چانسلر کی تقرری تک وہ قائم مقام وائس چانسلر کے فرائض بھی سرانجام دینگے

ایلومنائی ایسوسی ایشن زرعی یونیورسٹی فیصل آباد کے روحِ رواں پروفیسر ڈاکٹر حافظ عبدالقیوم، ایگزیکٹو ورازم کے طارق تنویر، پروفیسر ڈاکٹر شبیر احمد، ڈاکٹر خالد محمود شوق اور ڈاکٹر عبدالجبار عباسی کی طرف سے مبارکباد کے پیغامات

زرعی یونیورسٹی فیصل آباد کے بارے میں سوشل میڈیا پر مقبول ترین گیس بک پیج روزنامہ پوائنٹ کے ایڈیٹر "نومی" کی طرف سے بھی تقرری کا خیر مقدم "آپ سے پوائنٹ کمیونٹی کی توقعات بہت زیادہ ہیں" کاش وہ دن بہت جلد آئے کہ ہم یونی ایوارسٹی اور چارج والٹن نہ سہی کم از کم وائس چانسلر پروفیسر ڈاکٹر اقرار احمد خان نے وائس چانسلر ہاؤس سے 90 فیصد ذاتی سامان منتقل کر دیا

زرعی یونیورسٹی فیصل آباد کے قائم مقام وائس چانسلر پروفیسر ڈاکٹر ظفر اقبال رندھاوا نے ویٹرنری کمیونٹی کے ترجمان نیوز اینڈ ویوز کے ساتھ ایک خاص گفتگو میں بتایا ہے کہ مقام میں درخت لگانے کے لئے زرعی یونیورسٹی فیصل آباد کی خدمات حاضر ہیں۔

درد کی حکایت

[illegible]

(باقی آئندہ)

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پروفیسر ڈاکٹر ظفر اقبال رندھاوا کو زرعی یونیورسٹی فیصل آباد کے قائم مقام وائس چانسلر کا عہدہ سنبھالنے پر

مبارک باد

Mega Corruption

This is for information and strict action by the government against the people who are using govt land available alongwith canal banks for their private purpose, income, etc. PEOPLE of my age specially those having rural background may well recall millions of trees on the both banks of canals and the kacha roads on the banks were also very well maintained by the employees of irrigation department. Unfortunately, with connaivance of the employees of irrigation department and local people, almost all trees have been sold, the govt lands around DAK BUNGLAWS and on bank canals are being cultivated by local people. THIS IS MEGA CORRUPTION which must be investigated. It is proposed to the government to add these areas in their NATIONAL TREE PLANTATION movement. University of Agriculture, Faisalabad would love to be part of this nation building move not for COSMETICS but actual contribution being a community of more than 40000 people including students and staff.

Please share as much as possible so that it reaches the highest level of government for a swift action.

PROF. DR. ZAFAR IQBAL
University of Agriculture, Faisalabad

ڈاکٹر محمد ندیم سرور
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ویٹرنری نیوز اینڈ ویوز

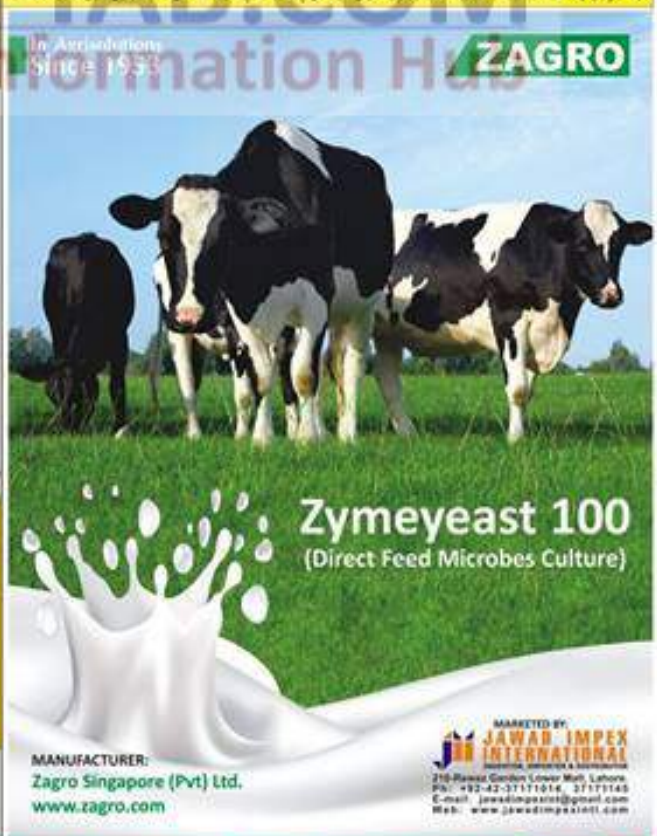
فیصل آباد

ڈاکٹر خالد محمود شوق | ڈاکٹر محمد جاسر آفتاب | فرحان خالد

جلد نمبر 13 | 07 : 01 ستمبر 2018ء | صفحات 12 | قیمت 150 روپے | شمارہ نمبر 41 | ABC سے تصدیق شدہ

وزیر اعظم پاکستان عمران خان کی طرف سے پلانٹ فار پاکستان پروگرام میں 10 ارب درخت اُگانے کی قومی مہم کا آغاز

زرعی یونیورسٹی فیصل آباد میں سینئر ترین پروفیسر ڈاکٹر ظفر اقبال رندھاوا کی قیادت میں شاندار مہم محکمہ لائیو سٹاک پنجاب میں یکم ستمبر کو پنجاب بھر میں پونے 2 ارب پودے لگانے کا ٹارگٹ مکمل کیا



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THE GOVERNMENT COMMITTED TO ADDRESS THE PROBLEMS OF COMMON MAN AND TO MOVE THE COUNTRY TOWARDS PROSPERITY: PUNJAB EXCISE MINISTER HAFIZ MUMTAZ AHMAD

Faisalabad: Punjab Excise Minister Hafiz Mumtaz Ahmad on Thursday said that the government was committed to address the problems of common man and to move the country towards prosperity.

He was talking to University of Agriculture Faisalabad senior most professor and Dean Veterinary Sciences Dr Zafar Iqbal Randhawa. Registrar Muhammad Hussain was also present on the occasion.

He said that lack of awareness about modern agricultural technologies among farming community was marring getting full benefit from our potential and it is responsible to increase per acre low productivity compared to the rest of the world. He also recommended opening up UAF sub campus in Samundari in order to provide modern agricultural education to dwellers at their doorstep. He added that quality education and research works were imperative for the uplift and the development of the any country.

Dr Zafar Iqbal Randhawa said that the UAF was running up sub-campus in Toba Tek Singh, Burewala, and Okara Depalpur. He said that we had the potential to open up new sub-campus in Samundari also. He added that the agriculture was backbone of our economy that is contributing 20 percent to the Gross Domestic Product.

He lauded the initiative of government of launching a massive plantation campaign that will begin from September 2, 2019 to address the issue of the climate changes. He said that we have to turn the arens especially at the bank of canal lush green. He said that people with the rural background can recall millions of trees at the bank of canal tree and our four back. But now the situation has changed. He said that UAF would love to be a part of this nation building move for actual contribution being a community of more than 40,000 people. He said that we can make the banks of the canals lush green in 60 kilometers radius.

ہفت روزہ ویٹرنری نیوز اینڈ ویوز کے بیورو ایگزیکٹو
راولپنڈی / اسلام آباد پیر محمد آصف مغل
0341-5902361
Pakissan2002@yahoo.com

USAID AND UVAS HOST SEMINAR: WEINSPIRE INVESTING IN WOMEN AND THE RURAL ECONOMY

Lahore: USAID Deputy Mission Director Clay Epperson, Additional Secretary Livestock and Dairy Development Department (L&DDD) Government of Punjab Khalid Mehmood Chaudhry, and Vice Chancellor University of Veterinary and Animal Sciences (UVAS) Prof. Dr. Talat Naseer Pasha participated in a seminar held at UVAS today to discuss the accomplishments of the Women Empowerment in South Punjab through Investment in Rural Economy (WEinSPIRE) initiative launched last year by USAID's Punjab Enabling Environment Project (PEEP). WEinSPIRE empowers women involved in the livestock sector of South Punjab by facilitating linkages between public and private sector stakeholders.

Partners in this initiative include the Women's Chamber of Commerce and Industry Bahawalpur WCCIB) the NRSP Microfinance Bank Ltd., three Livestock Breeders Associations, UVAS, Telenor Pakistan, and L&DDD, Government of Punjab.

On the same occasion, USAID PEEP signed a Memorandum of Understanding with the First Women Bank Limited to formalize the bank's partnership with the WEinSPIRE initiative. Also, USAID Deputy Mission Director Clay Epperson, VC UVAS Prof Dr Talat Naseer Pasha, and Additional Secretary L&DDD Government of Punjab Kh-ahd Mehmood Chaudhry unveiled three herd books for Nachi, Beetal and Lohi Livestock Breeders Welfare Societies to promote animal record keeping and traceability necessary for improved international market access.

Speaking at the seminar, USAID Deputy Mission Director Clay Epperson said, "Promoting women's economic empowerment can be challenging. USAID has developed a creative and powerful platform through WEinSPIRE, which involves mobilizing a unique network of partners in reaching out to women livestock farmers to help improve their access to markets, finance, information, and veterinary services all essential ingredients of a functional rural market system." Since WEinSPIRE was launched in 2017, hundreds of rural women farmers have joined partner livestock associations, more than 2,000 women have been trained in improved animal husbandry practices, and over 30,000 have received microloans from banks to initiate or expand their livestock businesses.

Speaking at the event, Additional Secretary L&DDD Khalid Mehmood said, "Women play a pivotal role in Pakistan's livestock sector; they will be able to see wider socioeconomic benefits of the initiative through enhanced livestock rearing training opportunities at their doorstep offered by the Livestock department, Go-*Pb as part of WEinSPIRE.

USAID's Punjab Enabling Environment Project is a five-year, $15 million project to spur investment and improve the business environment in the livestock, dairy and agriculture sectors of Punjab.

UVAS Vice Chancellor Prof Dr Talat Naseer Pasha said, "Empowering women in livestock can help boost Pakistan's domestic economy. This initiative will build the capacity of female livestock farmers to enhance the meat and milk production potential of indigenous livestock breeds and improve their entrepreneurial capacities and capabilities."

Other participants were present at the event included Provincial Director USAID Lahore Lea Swanson, Agriculture Advisor USAID Lahore Asadullah Khan, Registrar Livestock Breeding Services Authority Asif Sule-man Sahi, President First Women Bank Tahira Raza, General Secretary Women Chamber of Commerce and Industry Bahawalpur Jaba Ata Abbasi and Chairman Nachi Goat Breeders Welfare Society Malik Hameed.

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LOW RATIO OF MOTHER FEED INFANTS WAS CAUSING PHYSICAL AND MENTAL DISABILITY FOR INFANT AND IT IS ONE OF PRIMARY CAUSE OF MALNUTRITION IN THE COUNTRY

Faisalabad: Speakers at a seminar on Friday showed their concern that that low ratio of mother feed infants was causing physical and mental disability for infant and it is one of primary cause of malnutrition in the country.

They were talking at a walk held in connection with World Breastfeeding Week. It was arranged by Faculty of Food, Nutrition and Home Sciences, UAF in collaboration with Integrated Reproductive Maternal New born Child Health and Nutrition, Government of Punjab at the National Institute of Food Sciences and Technology (NIFSAT) UAF.

Faculty Dean Dr Masood Sadiq Butt said that low ratio of mother feed causes diseases including diarrhea and other childhood illnesses. He was of the view that some people consider formula milk as healthy as mother. We have to root out such misconception among the society. He stressed upon need to educate the people about the issue.

DG NIFSAT Dr Tahir Zahoor said that 44 per cent of children were stunted with lower height for age. Compliance to breast feeding for two years could significantly reduce stunting in the country.

Dr Atta Bora Integrated Reproductive Maternal Newborn Child Health and Nutrition stressed upon the need to create the awareness among the people about the issue.

Dr Benish Sarwar said that newborn must be mother feed within the 30 minutes of the months. She said that mother feed was essential not only for physical health of infant but also for mental ability.

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جلد نمبر 13 | 24 تا 31 اگست 2018ء | صفحات 12 | قیمت 150 روپے | شمارہ نمبر 40 | ABC سے تصدیق شدہ

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ڈاکٹر خالد محمود شوق
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کنٹریکٹ پر رکھ کر وظیفہ دینے پر پی ایچ ڈی ڈاکٹروں کا احتجاج

بیروزگار پی ایچ ڈی ڈاکٹرز میں امید کی لہر دوڑ گئی ہے، IPFP کا دورانیہ تین سال تک کرنے کی سمری منظور کر لی گئی ہے

ہائر ایجوکیشن کمیشن آف پاکستان کا IPFP کا دورانیہ ایک سے تین سال کرنے کا نوٹیفکیشن جاری

800 سے زائد پی ایچ ڈی ڈاکٹرز بیروزگار ہیں، ایک اکثریت پاکستانی جامعات میں 70 فیصد فیکلٹی نان پی ایچ ڈی ہے، اس کے باوجود جامعات بیروزگار پی ایچ ڈی ڈاکٹرز کو مستقل روزگار دینے کو تیار نہیں، پی ایچ ڈی ڈاکٹرز نے سوی ایشن کی حالیہ رپورٹ

جامعات میں سیاسی مچھر، برادری ازم اور اقربا پروری نے قابل پی ایچ ڈی ڈاکٹرز کو نظر انداز کیا ہوا ہے۔ سینئر فیکلٹی بار بار خود کو اوور ٹیک ہوتا دیکھ رہی ہے، پارٹ ٹائم جاب اور ایوننگ پروگرام میں خود کو ایڈجسٹ کر رکھا ہے۔ پی ایس سی، ایم ایس سی اور پی ایچ ڈی مارننگ، ایوننگ پروگرام کے انتہائی زیادہ کریڈٹ آورز آپس میں پارٹ ٹائم کے نام سے بانٹ لئے جاتے ہیں اور اضافی پیسہ کمایا جا رہا ہے۔ حالات سے دل برداشتہ ہو کر کئی بیروزگار پی ایچ ڈی ڈاکٹرز خودکشی کرنے کی کوشش کر چکے ہیں

400 سے زائد پی ایچ ڈی سکالرز کے بے روزگار ہونے کا انکشاف

14 ارب روپے خرچ ہونے کے باوجود مختلف ممالک سے ڈاکٹریٹ کی ڈگری لینے والے نظر انداز، سہولتیں نہ دی گئیں

پاکستان کی یونیورسٹیوں میں 70 فیصد فیکلٹی ارکان نان پی ایچ ڈی، روزگار نہ ملا تو ملک چھوڑ جائیں گے، ڈاکٹر شیر افضل

زرعی یونیورسٹی فیصل آباد میں فوری طور پر وائس چانسلر کا تقرر کیا جائے: ڈاکٹر خالد محمود شوق

جائیں تو جائیں کہاں، پی ایچ ڈی کر لی نوکریاں نہیں ملتیں

فاضل حکمت عملی کے باعث اس وقت ملک میں پانچ سو کے قریب پی ایچ ڈی ڈاکٹرز بیروزگاری کی تلاش میں در در کی ٹھوکریں کھا رہے ہیں

ایچ ای سی وژن 2025 کے تحت 38 ہزار سے زائد پی ایچ ڈی اساتذہ کی بھرتی کرنے کیلئے فنڈز بڑھا کر 40 فیصد کرنے کا فیصلہ

Country facing 36,000 PhDs shortage

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جانوروں سے دودھ اور گوشت کی معیاری پیداوار حاصل کرنے کے لئے ان کی صحت پر بھرپور توجہ دینا ضروری ہے۔ جانوروں کی اچھی صحت اور نشوونما کے لئے حشرات اہم کردار ادا کرتے ہیں۔ متوازن خوراک کی غیر موجودگی اور بیماریوں کے حملے کی وجہ سے اکثر جانوروں میں حشرات کی کمی واقع ہو جاتی ہے جس سے ان کے دودھ اور گوشت کی پیداوار میں خاصی کمی واقع ہو جاتی ہے۔

نیوٹرامن سے جانور صحت مند، دودھ و گوشت اور ان کی پیداوار میں اضافہ
☆ نیوٹرامن۔ اہم حشرات اور نمکیات کا مرکب ہے یہ جانوروں میں ریکٹس، اوسٹیوپیرا سس اور ملک فیور جیسی جان لیوا بیماریوں سے نجات دلاتا ہے
☆ نیوٹرامن کے استعمال سے جانوروں کی قوت مدافعت میں اضافہ ہو جاتا ہے جس سے وہ جان لیوا بیماریوں سے بچ جاتے ہیں۔
☆ نیوٹرامن کے استعمال سے جانور صحت مند اور توانا ہو جاتے ہیں اچھی صحت کی بدولت ان کی پیداواری صلاحیتوں میں اضافہ ہو جاتا ہے۔
☆ نیوٹرامن مناسب قیمت اور رنگ کی خوشبو ہے۔

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PVMC Registration Issue of Graduates from Accredited Vet Universities

AoA Dr. Khalid Mahmood Shoq,

I honor the support you have been providing since more than a decade to the veterinary profession. I am a regular e-subscriber of your newspaper and I take keen interest in the subjects, your newspaper brings each week. I am shope that you'll include this story of almost every DVM graduate from batch 2013-2018 throughout PVMC accredited Universities across Pakistan.

I am writing this letter with great hope that you'll take prompt actions about the above said issue. I, on behalf of all students from accredited PVMC institutions of Pakistan, am sharing a story of common student:

I am a recent Veterinary graduate from PVMC accredited government institution for Veterinary Medicine. Now I require license from PVMC for either practice or postgrad studies . The issue with most of my batch fellows throughout the country is that our self esteem does not allow us to ask from our parents further monetary help for letting us heavy amounts needed for registration with the PVM. I am ABSOLUTELY not convinced to pay handsome amounts of 5000+2000+200 in order to get registered for MERE 5 YEARS as a graduate while I will not be earning/practicing during my enrolled degree program. The prior stated feed will be taxing my parents un necessarily. I humbly request you to fetch reasonable answers to our following queries:

1) Do you think it is pretty easy for every parent to issue another 7000 rupees apart from the dues to be paid for postgrad studies especially for fresh graduates?

2) Do you have any idea that how much does PMDC (a well-organized body) charge from recent MBBS or BDS students to get registered? It is our concern and I AM interested to know that where does this money go? Is anybody answerable for this legit money of mine?

3) We surely DO NOT want to listen "PVMC aik iddara hae jesko functional rkhny k liye bhee paisay drkaar haen". I AM NOT SORRY to state" It isn't my parent's responsibility to pay for your integrity or salaries!

4) I am already REGISTERED AS A VET STUDENT with them. I paid a draft in PVMC's favour valued Rs.1200 back in September 2013, which got me a card as registered vet student. Then why do I need to pay for registration separately?

I believe that social media would help me bring this issue to light before the post graduate admissions 2018. It is a serious concern which needs to be resolved decently. We do not have any political intentions, so kindly help us resolve this issue before we may take help of other media resources or law suits. Thanks.

High Regards, DVM Graduates (2013-2018)

پاکستان ویٹرنری میڈیکل کونسل کے ترجمان کا بیان

اسلام آباد: [illegible] پاکستان ویٹرنری میڈیکل کونسل کے ترجمان نے [illegible] کی ہے کہ پاکستان ویٹرنری میڈیکل کونسل کی طرف سے ای میل کے ذریعے [illegible] کی جا رہی ہے [illegible] کونسل کی طرف سے [illegible] کے لئے [illegible] کونسل کی طرف سے [illegible] کونسل کی طرف سے [illegible] کونسل کی طرف س

جانوروں میں دودھ کی پیداوار اور معیار متاثر کرنے والی بیماری

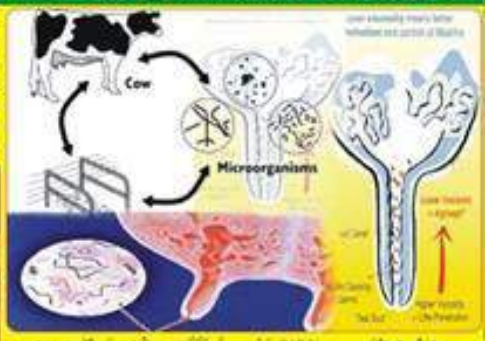
سوزش حیوانہ (ساٹرو Mastitis) کی وجوہات، علامات، تشخیص اور روک تھام

تحریر و ترتیب: ڈاکٹر زین محمد سینئر ریسرچ آفیسر دیہاتی علاقوں میں بھیڑ بکریوں کا تحقیقی و ترقیاتی ادارہ AZSRRI لام بانڈہ کوہاٹ

ڈاکٹر برکت خان ایسوسی ایٹ ڈائریکٹر دیہاتی علاقوں میں بھیڑ بکریوں کا تحقیقی و ترقیاتی ادارہ AZSRRI لام بانڈہ کوہاٹ

ڈاکٹر محمد اقبال خٹک ڈائریکٹر لائیو سٹاک ریسرچ اینڈ ڈویلپمنٹ خیبر پختونخوا پشاور

معاونین: ڈاکٹر خسرو بلیم ایسوسی ایٹ ڈائریکٹر LR&DS سوڈلی ٹرکی پشاور



سوزش حیوانہ کے نقصانات

سوزش حیوانہ دودھ دینے والے جانوروں کی اہم بیماری ہے جس سے دودھ کی پیداوار میں کمی، دودھ کی کوالٹی میں خرابی، دودھ کی مقدار میں کمی،

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AGRI TOURISM DEVELOPMENT CORPORATION OF PAKISTAN

A MASS TREE PLANTATION CAMPAIGN HAS BEEN KICKED OFF AT UNIVERSITY OF AGRICULTURE FAISALABAD IN COLLABORATION WITH SERENA HOTEL FAISALABAD

Faisalabad: Like other parts of the country and organizations a mass tree plantation campaign has been kicked off at University of Agriculture Faisalabad in collaboration with Serena Hotel Faisalabad where saplings were planted at Lilbotany Higher Secondary School for Boys. Senior Professor of the varsity Prof. Dr. Zafar Iqbal Randhawa and General Manager Serena Hotel Faisalabad Mr Saqib Ahmad along with School alumni planted threes.

Addressing the participants, Senior Professor Prof. Dr Zafar Iqbal Randhawa said that being an old and largest university of South Asia, UAF will assist the government organizations in a way to make the country greener place of the globe. He said that UAF is a vibrant community of 40 thousands young students, faculty and staff that will make a big difference in planting thousands of saplings on the canal banks throughout the country. He told that during the recent months, UAF experts have successfully planted one million moringa trees across the country.

Dr. Randhawa described 2.5 percent forest net of the country a negligible figure and vowed to raise the forest net upto global level in order to fight the global warming and other challenges posed by climate change. He said that Billion Tree Tsunami of KP was a successful story recognized at national and international level. He emphasized that monitoring of plants is very important with plantation. He urged the youth and University community to collectively plant trees for creating awareness about benefits of forests and to increase forest cover in big cities of the country. The focus would be to plant species according to area and weather conditions. He said that in a bid to commemorate the sacrifices of the brave soldiers who laid down their lives to the country, on the eve of 6th September, the varsity will plant saplings on their names in the university.

Global Champion of Moringa, Prof. Dr. Shahzad Maqsood Basra said that his team has distributed 1.0 million moringa trees across the country and vowed to gear up the government campaign with the help of thousands of volunteers. He told that his team is in close collaboration with Sitara Chemical and would be able to use its network in planting thousands moringa saplings.

Principal Officer Schools Prof. Dr. Khalil ur Rehman, PO Public Relations Prof. Dr. Iqbal Arif, Manager Marketing Serena Hotel Faisalabad Mr. Muhammad Yasoon, School Principal Saifullah Saif were also present on the occasion.

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TRAINING OF DRUG TREATMENT PROFESSIONALS BASED ON UNIVERSAL TREATMENT CURRICULUM KICKS OFF

BY KARAMAT ALI

Lahore: The United Nation Office on Drugs and Crime (UNODC) country Office Pakistan in collaboration with Ministry of Narcotics Control Government of Pakistan launched a global training programme in Pakistan for the drug treatment professional on Universal Treatment Curriculum with support of the Department of State's Bureau of International Narcotics and Law Enforcement Affairs (INL) here on Tuesday at Avari Hotel Lahore.

The main theme of this training is to train 100 drug dependence treatment practitioners on the Basic Level called Universal Treatment Curriculum (UTC) curricula 1-8, including 4A and then to have a cadre of 44 Pakistan National Trainers on Basic Level UTC (1-8) and to support credentialing by ICCE through Training of Trainers (ToT). The current 2-year project was supported by the Department of State's Bureau of International Narcotics and Law Enforcement Affairs (INL). These training would be completed by January 2019 and followed up by a refresher course leading to certification to "International certified addiction professional" (ICAP).

The successful candidates would be able to attend ToT, to increase and strengthen the services on drug dependence treatment in the country.

Around 75 drug treatments professionals from public and private sectors from all provinces of Pakistan and Azad Jammu Kashmir attended the training.

The participants were of a diverse workforce, various professions ranging from doctors, psychiatrists, psychologists and social worker who are in the field and working for more than two years at various drug treatment centers in Pakistan.

The trainers for the training were International Certified Addiction for Professionals (ICAP) certified professionals (Doctors, psychologists and Sociologists) working in Pakistan in different sectors government and private sectors.

Talking to Daily The Business, Chief Guest, Section Officer Ministry of Narcotics Control Hassan Abdullah said that the goal of the training series is to reduce the significant health, social, and economic problems associated with substance use disorders (SUDs)".

Dr Farrukh Ansari and Rashda Niazi from UNODC informed that the training has nine curriculums, and at the moment we are starting with the first two".

The training has been launched simultaneously in Lahore and Karachi on August 27th to 28th whereas, total duration of the course is 40 days.

Earlier, this program was started in 2010, which wasn't carried out in sequence. The INL has supported the development of the global training series appropriate for the certification of addiction professionals in the South Asia Region for building international treatment capacity through training, professionalizing, and expanding the global treatment workforce.

The training prepares counsellors and other health providers for professional certification at the entry level, by providing the latest information about SUDs and their treatment.

Putting science into practice, with a special focus on capacity building for the delivery of evidence-based drug dependence treatment and care services in Pakistan through the implementation of the Universal Treatment Curriculum (UTC) training strategy, UNODC plan a periodic round of training to train drug dependence treatment practitioners at the national level on the Basic Level UTC (1-8) and 119 treatment practitioners in the country credentialed internationally.

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TREE PLANTATION CEREMONY AT UAF

It is need of the hour to boost up plantation area to cope with climate changes and environmental issues

Faisalabad: It is need of the hour to boost up plantation area to cope with climate changes and environmental issues. The government's initiatives of massive plantation will open up new avenue of development to address the issues at national level.

It was said by speakers at tree plantation ceremony arranged at the University of Agriculture Faisalabad. CPO Faisalabad Ashfaq Ahmad Khan along with UAF senior most professor Dr Zafar Iqbal Randhawa, Dr Shahzad Basra, Controller of Examinations Dr Adbul Wahid planted the tree in front of Faculty of Agriculture.

Ashfaq Ahmad Khan said trees are essential part of healthy environment for a better life. He urged the society to play their active role in the plantation. He also lauded the vision and initiatives of the government of the green country with massive plantation. He said that 30 percent of the country population was directly or in an way linked to the agriculture sector. He added that textile industry was depending upon the cotton production whereas the other industries like food were due to agriculture.

Dr. Zafar Iqbal Randhawa said that we have to turn the areas especially at the bank of canal lush green. He said that people with the rural background can recall millions of trees at the bank of canal. But now the situation has changed. He also praised initiative of government for making the country greener. He said that UAF would love to be a part of this nation building move for actual contribution being a community of more than 40,000 people. UAF was producing skilled manpower. It is a lush green area and we are making it more greenish.

Dr Shahzad Basra said if we would not pay the attention to environment, the issue of climate changes will worsen in the years to come.

He also added: "the UAF is the greenish campus.

He said that there were numerous benefits of planting trees, from health to environmental impact, economics and even psychological effects. He said that they had done lot of the work on the moringa that is a miracle plant and now due to their effort it is being planted massively.

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LIVESTOCK MEDICINES SEIZED FROM QUACK'S CLINIC

Multan: A team on Friday recovered from a quack's clinic veterinary medicines and injections being used to treat people.

A task force constituted by Deputy Commissioner Mudassir Riaz Malik in a crackdown raided a clinic of Ehsan Haidar on Vehari Road and recovered medicines and injections that were used for the treatment of people though these were meant for livestock.

Assistant Commissioner City Agha Zaheer Abbas Sherazi, who heads the task force, said Ehsan Haidar turned out to be a quack and had been arrested and a case registered against him by the Social Mari police. He said the stock of medicines and injections had been seized and the clinic sealed under the Punjab Drug Act.

The elements playing with the lives of people will not be spared, he said. The DC constituted more task forces at the tehsil level to take action against the quacks. Anti-smoke communicators will join the task force.

DC Mudassir said that under the drug act, the task forces would be authorized to seal the clinics and arrest the suspects. In another directive, the DC has asked his subordinates to take action against the parents of the children who are refusing the health staff to administer the polio vaccine to their children. He said actions would be taken against the parents if they still refuse vaccination to their children.

He made Deputy District Health Officer Ayesh Chaudri as officer on special duty over his poor performance.

PROTEST: A number of daily-wage employees of Shahbaz Sharif Hospital protested against their removal outside the health facility on Friday.

The hospital administration removed more than 50 employees who had been working since 2017. The protesters said they were denied their wages for July and August.

Later, a meeting between the representatives of the protesters and Health Development Authority Chief Executive Officer Dr Muzaffar Abbas was held. The CEO claimed that the decision of their removal had been cancelled and the workers would be paid the wages.

Dr Abbas told Dawn that recommendations for the regularisation of these employees would be forwarded to the higher authorities.

DATA TAKES THE HUNCH OUT OF POULTRY PRODUCTION

How do we exploit data we collect on our farms? How do we maintain oversight? Mike Jansen and Wim Polman from PoultryPlan have developed a clever software suite to help poultry integrations overcome the gap between hunch and putting data to work.

In the interconnected world of today we collect an unimaginable amount of data, and that is not leaving the poultry industry untouched. There was a time when poultry farmers were accustomed to roughly estimating a chicken's feed and water intake when the bottom of the grain silo had come into sight. The determination of egg weight and body weight often did not go beyond pure guesswork, and integrated operations sent data by mail or fax. This is now a thing of the past. We are living in the data era. More data than ever before is also being collected in the poultry sector. This unimaginable amount of data has also helped the poultry sector into a digital transformation. The sharing of data via fax has found its way to sharing data via e-mail or the cloud. The current account no longer determines whether a hunch was correct or not. Fact based analyses are helping farmers to make even better decisions.

Interpreting data

And this has resulted in certain challenges. "The more data we collect, the more useful information and insights we acquire," says Mike Jansen, managing director of the ERP-system PoultryPlan, which was recently launched at VIV Europe in Utrecht, the Netherlands. "That is, if data is subsequently analysed. If not, it simply remains a collection of meaningless data. By interpreting the data being collected, you acquire insight into how to help your farm advance."

Wim Polman, spiritual father of PoultryPlan: "In our work we noticed how easy it is for employees on a farm to work in silos and fail to work with the information learned from the data. To overlook certain key figures." He realised that when data was not shared, the opportunity to improve a product or a sector as a whole was lost. "The smart use of data is about a mindset. A new approach to assembling data from different links to create an optimal end-product as a result." Every poultry farmer, every parent stock farmer and every hatchery has a need for more information about the history of a chicken or egg before it arrives. This will led to the development of a software suite to support this. Polman's idea and Jansen's knowledge of IT resulted in a company comprising of several specialists who jointly developed the software suite PoultryPlan. "PoultryPlan is an ERP system that covers the entire poultry meat or egg chain, which consists of several modules and records all technical data directly from production companies. It compares results in a benchmark view and analyses performance. An early warning system detects problems at an early stage. This and the efficient processes should lead to considerable cost savings. There is room in the software package for order processing and planning and recording logistical actions. "It provides integrations with a single clear overview of all relevant data," explains Mr Jansen. "The beauty of this system is that it was truly developed from the poultry industry perspective. Our developers know how people in the industry work and think, how they plan, how the sales process works and, above all, how software can truly support those processes." PoultryPlan is cloud-based, accessible at all times and from everywhere, which is highly valued by its users.

Connecting the entire production chain

PoultryPlan was launched at VIV Europe in June this year. Mr Jansen: "We heard positive feedback on the fact that it can be used chain-wide. It doesn't merely cover a few links, but the entire chain." Poultry Plan is a solution for companies in the poultry meat and laying chain. The software package can be used at each link in the poultry chain, from parent stock to laying hens to broilers, from production through to planning and administration. Mr Jansen spoke with a representative of a large poultry meat integration, who suffered from enormous losses with every percent decrease in chicken fillet. "He didn't dare to adjust their production, as he lacked data that could steer him in the right direction. Adjusting the production in the wrong direction would result in even bigger losses. That is why he left things the way they were. Insight in validated production data would have showed him exactly what production changes he had to make in order to avert weight loss and save money." Developing partner Ter Heerdt N.V. saved tens of thousands of euro's by examining the switch over moments between feed types in rearing. "To have the right data present and have actual insight in the effect of it is indispensable for making management decisions. I think it is interesting how many some very large companies still work with Excel sheets. Multimillion-dollar companies that send their production data in Excel sheets back and forth, never knowing whether or not you are working in the latest version. This still happens. Who knows how much money is lost due to this. More knowledge and a smart tool offer timely opportunities for interventions and for adjusting operations, with better margins as a result. A smart tool such as PoultryPlan simplifies this task. It enables you to manage on the basis of facts and trends, directly tackle any issues and make smarter decisions faster. Oversight provides certainty and consequently calm."

Necessity data integration

Although PoultryPlan was developed by market leader Ter Heerdt N.V. over a course of more than ten years. As an answer to market demands it was decided to bring PoultryPlan onto the international market in order to help other integrations grow. According to Mr Jansen, the necessity to use data in your (semi) integration is undeniable. According to the UN's prognoses, the global population will reach 9 billion people by 2050. Due to this, the demand for high-quality protein such as eggs and poultry is increasing enormously. The requirements that poultry farms and chain integrations must meet are becoming increasingly stringent. "We have embraced a mindset that enables us to manage our farms or integration on the basis of reason rather than emotion. That enables us to exploit and analyse data and pass it on to the next link. This is what will help us advance as a global poultry sector. In the end, everyone in the sector has the same ultimate goal in mind: better, more sustainable, healthier and safer production with less."

BIRD FLU SEASON FAST APPROACHING

An outbreak of avian influenza on a Russian poultry farm has left producers across Europe looking nervously towards the east as winter in the Northern Hemisphere approaches.

Authorities confirmed a site housing almost 500,000 birds in the Kostromskaya region in north western Russia was infected with H5N2 highly pathogenic **avian influenza**. The virus belongs to the Asia lineage of H5 high path strain that has been in outbreaks across Asia, Africa and Europe since 2014.

It follows 67 outbreaks of H5 **avian influenza** in several regions of western Russia this summer.

An assessment by the UK government said that if the source was wild birds then their migratory paths could see farms across northern Europe at risk. The site of this latest outbreak is overlapped by three migration flyways, one of which brings birds into Europe.

Whatever the source, it is important at this time of year to review biosecurity on farms, and considering the risk points and vulnerabilities that your poultry business may have. Last year was a relatively quiet one for European producers when it comes to avian influenza, but that's no reason to suggest this one won't be.

ARGENTINA'S BEEF EXPORTS TO DOUBLE ON HIGH CHINESE DEMAND

BUENOS AIRES: Argentina's beef exports could double in 2018 for a total of $1.8 billion thanks to increased Chinese demand and a sharp devaluation of the peso currency, according to analysts and industry experts.

Analysts expect shipments to total a minimum of 400,000 tonne, the largest for Argentina's beef industry in the last nine years, indicating the sector is strengthening despite a financial crisis that has bedeviled President Mauricio Macri's government.

Regulations imposed by former President Cristina Fernandez in 2007 and 2015 reigned in exports of beef, a product many Argentines see as part of their national identity.

According to data provided by sectoral chambers and one analyst, Argentine beef exports could end the year between 400,000 and 470,000 tonnes. That is well above the 200,000 tonnes sold last year, official data shows.

"As a regional leader, the Chinese market is what determined the substantial increase in volume," Mario Ravettino, president of the Consortium of Argentine Beef Exporters, told Reuters. The consortium expects the country to ship 410,000 tonnes of the meat for $1.8 billion this year.

From January to July 2018, China doubled its purchases of Argentine beef to 96,500 tonnes, according to the Ministry of Agriculture. That represented half of the total 184,000 tonnes of beef shipped in the same period from Argentina, totalling $1.027 billion. In May, China expanded its imports to include frozen, boned beef, as well as chilled beef with and without bones. Previously, Argentina only exported frozen boneless beef to the Asian country.

Argentina's peso currency has depreciated more than 40 percent against the dollar since the beginning of the year. While the weak peso has exacerbated the country's already high inflation, it has also benefited some exporters.

"It is good for us to have the exchange rate we have today. It helps us work in all types of exports and in all types of markets."

Ravettino said.

"The value in dollars (exporters) pay per kilo of cattle dropped considerably. In December, it was between $3.20 and $3.30 per kilo, and today it is at $2.70," consultant Victor Tonelli said.

Thanks to the decreasing dollar cost of Argentina's cattle, Tonelli expects the country's beef exports to finish the year at 470,000 tonnes.Reuters

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سمندری میں زرعی یونیورسٹی فیصل آباد کا سب کیمپس قائم کرنے کے امکانات کا جائزہ

صوبائی وزیر ایگریکلچر حافظ احتشام احمد کا زرعی یونیورسٹی فیصل آباد کے دورہ کے دوران سینئر پروفیسر ڈاکٹر ظفر اقبال رندھاوا سے ملاقات میں اظہار خیال

فیصل آباد (نمائندہ خصوصی) صوبائی وزیر ایگریکلچر حافظ احتشام احمد کا زرعی یونیورسٹی فیصل آباد کے دورہ کے دوران سمندری میں زرعی یونیورسٹی فیصل آباد کا سب کیمپس قائم کرنے کے امکانات کا جائزہ لیا جانے کا اعلان کیا گیا۔ وائس چانسلر زرعی یونیورسٹی فیصل آباد کے دورہ کے دوران سینئر پروفیسر ڈاکٹر ظفر اقبال رندھاوا سے ملاقات میں گفتگو کرتے ہوئے صوبائی وزیر ایگریکلچر حافظ احتشام احمد نے کہا کہ سمندری میں زرعی یونیورسٹی فیصل آباد کا سب کیمپس قائم کرنے کے امکانات کا جائزہ لیا جانے کا اعلان کیا گیا ہے۔ سمندری میں سب کیمپس کے قیام کی صورت میں علاقہ کے طریقہ سے پیداوار میں اضافہ ہوگا۔ عوام کو زرعی ادارے کیلئے کوشاں ہیں۔ انہوں نے کہا کہ محکمہ زراعت کی پوری ٹیم عوام کی توقعات پر پورا اترنے کیلئے کوشاں ہے۔ انہوں نے کہا کہ محکمہ زراعت کی ٹیم کسانوں کی بہتری کیلئے دن رات کام کر رہی

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INTERVIEW: WHAT MAKES A GOOD SENSOR?

We are learning fast when it comes to sensors for dairy cows. But what are the latest innovations and insights? Dairy Global talked to Arnold Harbers from Nedap about what is yet to come.

Sensors are making their way to dairy farms around the world. Often, sensors are used for heat detection. But sensors can tell us so much more. Think of data around eating, rumination, non-chewing, lying, standing, number of steps and the number of times the cow stands up. To speed up our knowledge about this, Dutch company **Nedap** started an extensive field study in 2016, on 8 dairy farms, together with **Utrecht University, Wageningen University and Research Centre** and **Yetvier Consultancy** in the Netherlands. Arnold Harbers, data analyst at Nedap is actively involved in this field study and explains more.

Arnold Harbers is data analyst at Nedap and actively involved in a large field study on cow sensors.

Nedap calls this project 'Sense of Sensors in Transition Management'. What does this project entail and why did you start it?

"The goal of the project is to create tools that can help farmers improve their dairy cow transition management. Ultimately, we want to make it possible for every cow to transition healthy. That is of course ambitious but I believe it is good to have big dreams. The information from the sensors can identify areas for improvement, can show effects of management changes and can monitor transition management. In this project extensive health checks are done by veterinarians in the pre-fresh and fresh cows, and sensor data is collected from all cows on 8 dairy farms. Together with the production and reproduction data of these cows we can identify the cows with a successful transition. From the sensor data we want to extract 'feed forward indicators' to monitor and improve transition management."

There are many sensors on the market. What are the important features of a good sensor, besides the price?

Activity sensors are key as they measure how active the transition cow is. Reduced eating and/or ruminating makes the cow less active. And a less active cow means a potential health issue

"This is, by far, service and support. I really believe it is even more important than price. A cheap sensor with limited service or support is actually a very expensive sensor. Our sensor, for example, is integrated in reproductive management solutions of AI / breeding companies and in the milking solutions of major milking equipment companies. These companies have worldwide distribution channels. Using this existing network, we can ensure a good service and support all day, every day around the world. Often, sensors are used for heat detection. But sensors can tell us so much more. Think of data around eating, rumination, non-chewing, lying, standing, number of steps and the number of times the cow stands up. To speed up our knowledge about this, Dutch company **Nedap** started an extensive field study in 2016, on 8 dairy farms, together with **Utrecht University, Wageningen University and Research Centre** and **Yetvier Consultancy** in the Netherlands. Arnold Harbers, data analyst at Nedap is actively involved in this field study and explains more.

A good sensor tracks a cow 24/7 and collects information that is otherwise hard to measure. Eating time, rumination time, non-chewing time (time not eating and not ruminating), lying time, number of steps, number of standups are examples of features that good sensors collect.

and goals. When they are not ok, you will want to correct things. For instance, the body condition score (BCS) during the dry period is a feed forward indicator for fresh cow problems. Eating time, rumination time, feed intake, rumen fill, and BCS during the start of lactation are feed forward for the process of getting cows pregnant. In our project we focus on these feed forward indicators. We believe these types of indicators are very promising and are underrepresented in the current indicators available to producers."

How can sensors help the modern dairy farmer manage large herds?

"Sensors are a very good way to keep a close eye on the fertility, health, well-being and location of every cow. And this can be done 24/7. This is important as farms and herds are getting bigger. Farm owners struggle to get qualified, motivated and affordable staff. In addition, sensor technology makes it possible to implement 'management by exception' on large farms. This means only focus on those cows that need attention while not disturbing daily routines of the cows that do not need attention or treatment. Think of dairy cows as workaholics. They need to spend a lot of time feeding and lying without interruption. Lockup time is a huge interruption in the daily routine of a dairy cow. Minimizing lockup time is a good way to improve the life of a dairy cow. She will reward you with higher milk yields. Sensors have the potential to reduce lockup time because you do not need to lockup the entire group for cow checks and protocols. Sensor data can be used to identify heat, health and fertility issues.

detected already. Sensors can confirm your suspicion that a cow is struggling. Plus, they can give you a better impression of how sick a cow is and how long it has been having problems. Skilled people are still necessary to make the final call, but sensors add extra information to this process so they can make better decisions. Sick cows are a good example of a feedback indicator: once the cow is sick, you are too late. With sensors we want to identify at-risk cows. This is a feed forward indicator because you have the opportunity to prevent the cow from becoming truly sick."

How can sensors help to better understand and improve transition management?

"The transition period is a very delicate period for the dairy cow. A perfect start after calving ensures a healthy lactation with good production and fertility. For example, it is important that the cow eats enough before calving and starts after to be able to make ends meet. Activity sensors are key as they measure how active the transition cow is. Reduced eating and/or ruminating makes the cow less active. And a less active cow means a potential health issue. These changes are subtle and difficult to observe by people. We already see that cows that develop ketosis spend less time eating and ruminating in the entire dry period. This changes by a couple hours, but less than an hour per day. Sensors can track these changes and notify you which animals are at risk for developing ketosis. This gives you the option to treat this cow and help her to a good start of the lactation."

Will you continue to run the project in the coming years and what are still the knowledge gaps in using sensors and the data?

"This study will continue for several years. We are at the start of discovering all the possibilities to improve transition management. That is a really exciting journey and I am anxious to know where we will be in a couple of years. I think the biggest knowledge gap we have right now is to define the success factors of a healthy transition and to understand what is happening when a cow goes through transition. Once the success factors are known, we can develop effective feed forward indicators that the sensors can measure. Producers can use these indicators to improve their transition management and that should ultimately result in a healthy transition for every cow."

GUT HEALTH AND IMMUNITY KEY IN ANTIBIOTIC-FREE PRODUCTION

It seems that not a moment passes in which we do not hear about antibiotic resistance and the need to reduce antibiotic use in animal production systems. Maintaining gut health and its functions are the main objective in successful poultry production, as a healthy gut usually means a healthy bird.

Antibiotics have historically been, and are still extensively, used to minimise the impact of enteric disease, and a major challenge is to find alternatives to antibiotics to maintain **gut health**. Genetic advancements in modern broiler production yielding increased average daily gain, with lower feed intakes and increased meat yield, places ever-increasing pressure on the gastrointestinal tract to function optimally. The intimate relationship and the balance in the gastrointestinal tract between gut flora, the host and environment are key to maintaining a healthy gut.

It is widely accepted that only a healthy gut can digest and absorb the maximal amount of nutrients to obtain the most out of the diet

Healthy gut

A healthy gut involves multiple physiological and functional components, including digestion and absorption of nutrients, host metabolism, energy production, a balanced gut microbiota, mucus layer, barrier function and the mucosal immunity. A healthy gut is not only a gut without disease.

A healthy gut is an effective digestive organ that can resist a good protective against disease and cope with changes. Production stressors can result in an inflammatory response directed at containing any disease. We know that the gut microbiota is involved in modulating the host inflammatory response, and such a response can be costly in terms of feed efficiency and growth performance. Therefore, to enhance feed conversion efficiency under current market constraints, the emphasis must shift from maximising host gastrointestinal thereby resistance to managing gut ecology that will optimise host resilience.

It is widely accepted that only a healthy gut can digest and absorb the maximal amount of nutrients to obtain the most out of the diet. If the gastrointestinal tract is compromised, its requirements for energy and protein increase, which in turn can reduce the nutrients available for growth and impede average daily gains. This results in reduced feed efficiency, and any challenge can also result in reduced feed intake levels at a time when feed intakes are already somewhat low through genetic selection.

Maintaining gut health without antibiotics

An effective **gut health** programme must focus on optimising gut absorptive membrane developement and integrity. The early establishment and maintenance of a beneficial intestinal flora is the key, since the gut flora competes with pathogens such as Clostridium spp. Furthermore, a favourable flora also helps to stimulate early enterocyte development.

The aim of any gut health programme is to protect flock health by establishing and maintaining a stable normal flora immediately after hatching. This requires several possible interventions:

Seed the gut with a host-adapted favourable flora. This will prevent the establishment of pathogens. Success would be dependent on the degree of challenge.

Prepare a favourable gastrointestinal environment to help the rapid establishment of the favourable flora. This will also assist enterocyte development to accelerate gut maturation to aid digestion efficiency and absorption capacity.

Exclude pathogens to maintain the stability of the gut flora. Gut flora management aimed at ensuring competitive exclusion can prevent the pathogens from establishing and prevent any negative impact of mycotoxicosis on the gut flora.

Improve digestion and absorption by reducing substrate accumulation in the lower gastrointestinal tract, thus avoiding the negative impact on the gut flora profile. This will help to improve the membrane integrity and therefore improve absorption.

Based on the above multiple intervention strategies, a unique gut health programme has been developed by Dr S.R. Collett at the University of Georgia in the US. This approach has been shown to achieve improved growth rates and feed conversions by ensuring good gut health. The programme developed by Collett comprises the sequence of "seeding" the gut with beneficial intestinal organisms, "feeding" these intestinal flora by creating a positive gut environment to allow their proliferation and, finally, "weeding" for the selective exclusion of potentially dangerous flora using probiotics that inhibit pathogens.

Favourable intestinal flora

Seeding the gut with favourable flora begins with the parent stock. Since normal eggs have a sterile surface prior to incubation, the point of lay is the first opportunity for contamination. The level of contamination varies from 103-105 colony-forming unit (cfu) per egg under clean conditions to 107-108 cfu per egg under dirty conditions, therefore confirming that contamination is a function of the environment into which the egg is laid (Board and Fuller, 1994). These eggshell contaminants provide the first seed stock for the chick and its gut colonisation at hatch. Positive manipulation of parent stock flora provides the first opportunity for seeding beneficial flora in the gut of the subsequent broiler chick. Fernandez *et al.* (2001) reported that feeding the parent stock mannan-rich fraction (MRF) (Actigen, Alltech) positively altered the normal flora.

The need for appropriate environmental management of houses, especially of ventilation, which influences litter quality, is the key for overall success.

Apply direct-fed microbials at day-old in the hatchery to establish favourable flora, prior to the chicks being housed. Hollister *et al.* (2003) reported that using a direct-fed microbial (All-Lac, Alltech) resulted in improved conditions due to colonisation of the gut with favourable microbials, and he went on to suggest the direct-fed microbials may be strain-specific, since Lactobacillus acidophilus and Streptococcus faecium were the primary organism used.

Appropriate environmental management of houses is crucial with any nutritional programme. Ventilation will influence litter conditions especially and in turn will intensify any **coccidiosis** challenge as well as shift the balance in favour of pathogenic populations, impacting overall gut health of the bird. Controlling relative humidity, particularly during the brooding period (when ventilation needs are low), is essential to prevent proliferation of Clostridium, coccidia and other pathogenic organisms.

"Feeding" for favourable environment

This refers to using preparations consisting of organic acidifiers that reduce pH levels and promote beneficial bacteria at the expense of pathogenic organisms. With a beneficial microbiomal community and an intestinal ecology established, the resultant healthy villi allows maximum capacity absorption and minimises the presence of pathogenic bacteria within the gastrointestinal tract. *Figure 1* shows an overall improvement in broiler performance due to acidification of drinking water.

saccharide (MOS) is therefore able to maintain a stable gut flora.

Actigen, the only known concentrated, mannose-rich oligosaccharide fraction in the market, was evaluated for its effect on ileal villi morphology as an indicator of enteric health in turkeys by Baraish *et al.* (2011). Their findings indicated a greater villous surface area (*Figure 2*), indicating a healthy intestinal surface allowing an improved absorption of nutrients and subsequent improved overall performance.

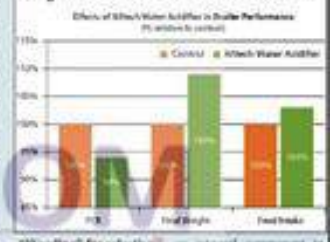
A study conducted by Lea *et al.* in 2011 investigated the impact of the dietary inclusion of MRF in broilers on gut histology and reported the following (see *Table 1*): Villi were significantly taller and thinner in birds fed diets containing 400 mg/kg of MRF compared to other diets, crypt depth was significantly decreased in birds fed the diet containing 200 mg/kg of MRF but not by any other treatment and villus to crypt ratio was significantly increased by inclusion of both 200 and 400 mg/kg MRF compared to control.

The improvement in absorptive capacity of the gut is reflected by the significantly increased body weight gains observed in diets supplemented with MRF compared to control, but no effects of supplementation on feed-conversion ratio (FCR) were observed. This study indicates that there may be a positive dose-dependent response to MRF when looking at the villus to crypt ratio, with the decrease at the higher inclusion being caused by over-supplementation.

Continuous process

In conclusion, the "Seed, Feed, Weed" concept is a continuous process throughout the life of the bird and an integral component in the Alltech Antibiotic Reduction programme. The complete programme provides nutritional solutions for poultry health but also provides coaching, support and motivation to producers to achieve their targets. This multiple-strategy approach is likely to be more effective than any single solution often advocated at the farm level in order to reduce antibiotics from production systems, and it complements governmental programmes.

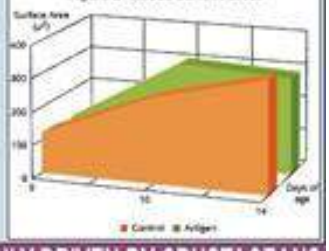
Figure 1 Effect of water acidification.



"Weeding" for selective exclusion

In order for most bacteria to colonise the gastrointestinal tract, they first need to attach to the epithelial surface. They do this via carbohydrate projections such as lectins that recognise certain epithelial surface sugars. Many enteric pathogens attach to these sugars via Type 1 fimbriae, which recognise mannose. Mannose-rich fraction (MRF; Actigen), a second-generation concentrated mannan oligosaccharide (MOS) is therefore able to maintain a stable gut flora.

Figure 2 Villous surface area.



AQUACULTURE GROWTH MAINLY DRIVEN BY CRUSTACEANS

Switching to more technology-driven and efficient intensive farming technologies has enabled fish farmers to increase production in the last few years.

Growth in India, Ecuador and Vietnam

From 2010 to 2016, crustaceans enjoyed the highest growth rates in value terms. Their production increased by $26.5 billion, representing 28% of the total aquaculture value growth. The production value of shrimp grew by a CAGR of 10%, mainly a result of the increasing volume of shrimp production in India, Ecuador, and Vietnam. The higher supply and demand for red swamp crayfish, which Chinese consumers have started to favour in recent years, led to 'other crustaceans' increasing in value by 13% for the same period.

Salmon leads the way

Among the premium marine-farmed species, salmonid farming leads the way and has increased in value by a CAGR of 10%. In general, supply has expanded, but we have seen some volatilities, mostly due to biological challenges. This occasional supply shortage kept the prices and value of salmon farming high. Only in 2015, the sector experienced a negative value growth due to the Russian embargo for Norwegian and Scottish salmon, accompanied by good supply coming from Chile. Marine fish has only shown a slight value increase in the last 6 years. The production of seabass and seabream has been stable for the last couple of years, due to the issues in the largest producer, Greece, while seabass production has grown in Turkey. However, with the current consolidation in Greece, there is long-term potential for the growth of the seabass and seabream sector.

Modernisation and professionalisation

Improved genetics, new husbandry technologies, and innovations in aquafeed will be the 3 key factors determining aquaculture's future. Further long-term growth in the sector can only be achieved through modernisation and professionalisation, while maintaining a strong respect for the environment and local communities.

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HIDES RATES PLUNGE AFTER SLOW RESPONSE FROM TANNERIES

KOHAT: The prices of hides have plunged by 80 to 90 per cent due to very slow response by the tanneries, thus causing heavy losses to the people associated with the business.

The businessmen have not yet transported the hides to tanneries in Kasur in the hope that the prices may rise to some extent and have dumped them in their warehouses of ter sahing.

The seminaries and welfare organisations, which collected hides once a year to sell them to pay salaries and run the madrassahs, have also been affected by the decline in hides prices.

The caretaker of a seminary said earlier when the business was at its peak they sold donated hides for more than Rs1 million but now the same number of hides raised only Rs20,000.

One Gulzar, who deals with hides in the chicken market, told Dawn that the buffalo hide which was priced at Rs4,000 to Rs5,000 in 2010 came down slowly to Rs2,500 in 2015, but during the last two years it hit the lowest price of Rs500 per piece, thus completely ruining his business.

Gulzar said the government had done nothing to save their business. He said that earlier the damaged hide could also fetch half the rate but now it was disposed of because tanneries did not buy them. Their profit margin has come down to Rs10 from Rs50 per hide, he maintained.

Gulzar said they had been told by the tannery owners that since the cheap artificial leather from China had occupied the market which was much cheaper than the original product, they were not much interested in purchasing hides.

Similarly, he said the hides of donkeys were purchased by the tanneries as China was importing them from all over the world because it was cheaper and produced good leather.

Shaida Khan, a businessman, said instead of doing hides business he had established his own factory to produce a range of exportable leather products and was earning huge profits. He said that only raw hide business had suffered and the manufactured products still had good international and local response.

AGRICULTURAL POLLUTANTS WORSEN WATER CRISIS IN SINDH

F.H. MUGHAL

AGRICULTURAL pollutants pose a major threat to the surface water, farms and the health of the people living in Sindh.

Almost all surface water bodies in Sindh the Phulleli Canal, Kalri Baghar Feeder, Pinyari Canal, Nara Canal, Rohri Canal, Rice Canal, Ghotki Feeder, Dadu Canal and Pat Feeder get contaminated by these pollutants.

The Phulleli Canal and Kalri-Baghar Feeder are further affected by the discharge of industrial and municipal wastewater. The canal network system in Sindh is surrounded by land used for agriculture. The discharge or overflow from these lands flows directly into surface water bodies.

This has worsened the water crisis by leading to deterioration in water quality, thus reducing the volume of water that can be used. Agricultural pollutants typically comprise sediments, nutrients, pesticides, nitrates, phosphorus and heavy metals.

Heavy metals such as cadmium, cobalt, copper, nickel, lead, zinc, iron and manganese are found in a number of commercial mineral fertilisers, industrial sludge, animal feed additives, and in some pesticides, herbicides and fungicides.

Pollutants contain dangerous heavy metals such as cadmium, copper, nickel, lead, zinc, and iron, which require costly advanced water treatment systems not available in Sindh

The problem with heavy metals is that they require costly advanced water treatment systems (ultrafiltration, precipitation, biological oxidation, activated carbon, ozonation and ion exchange), which are not available in the water treatment plants in Sindh.

As a result, these pollutants are able to pass through the water treatment systems, ending up in household water storage systems. Drinking water contaminated by heavy metals leads to serious health problems. In infants it can cause methaemoglobinaemia, or blue-baby syndrome, which can be fatal.

In Pakistan, agriculture related regulations do not cover include agricultural pollutants. The Sindh Environmental Quality Standards of the Sindh Environmental Protection Agency (SEPA) contains a permissible standard of 0.15 milligrams per litre (mg/L) for discharge in inland waters. The Sindh EPA has the power to enforce the pesticides standard, but is not doing so.

While the Sindh EPA is responsible for the discharge of agricultural effluent into the surface water, the surface water bodies are the responsibility of the Sindh irrigation department. While agriculture practices are the responsibility of the Sindh agriculture department.

The three institutions need to work together to control the agricultural pollutants, and to achieve the Sustainable Development Goal Target 6.3, which states: "By 2030, improve water quality by reducing pollution, eliminating dumping and minimising release of hazardous chemicals and materials, halving the proportion of untreated wastewater".

The three institutions can use their respective regulations to control the pollutants. For example, in British Columbia, the westernmost province of Canada, the Health Act and Sanitary Regulations are applied to farm waste on matters of nuisance, conditions affecting human health, and stream pollution.

Another act, the Municipal Act, gives municipal councils certain powers to pass bylaws regarding nuisance conditions, locations of livestock operations, and property line setback distances for buildings. The Water Act aims to stop dumping of waste into streams.

The Federal Fisheries Act has broad power to prosecute persons whose work results in harmful alteration or destruction of fish habitat. The Pesticide Control Act Regulations exempt farm operators from certification, licensing and permit requirements when operating on their privately owned or leased land, and when using common agricultural pesticides.

The Sindh agricultural department's extension wing can implement simple measures in coordination with agriculturists to control the flow of agricultural pollutants into the surface waters. Some of these measures include: establishing stream bank buffer strips, preventing livestock from going into streams by placing fences around streams and constructing facilities to store manure. Furthermore, they can introduce waste minimisation practices to prevent pollution at the source, train field staff and conduct public awareness programmes for agriculturists.

Soil erosion can be curtailed by adopting minimum tillage operations, covering light-textured cultivated soils to prevent flow of sediment into streams, and setting up wetland treatment systems if run-offs are extensive. If field drains are constructed they can help pollutants bypass streams and collect in evaporative ponds.

The writer has a master's in environmental engineering from the Asian Institute of Technology, Bangkok

Published in Dawn, The Business and Finance Weekly

E-COLI INFECTION IN HUMANS LINKED TO POULTRY

Research published this week has found that a strain of Escherichia coli (E.Coli) found in retail chicken and turkey products could be causing a wide range of infections in humans.

The study, published in the American Society for Microbiology's open access journal mBio, provides evidence that the *E.coli* found in fresh poultry products can be passed to people, leading to bladder infections and other serious conditions.

Poultry products are not currently routinely tested for the kind of E.coli strains that cause UTIs, but the findings underscore the importance of cooking poultry thoroughly and handling it carefully in the kitchen.

The research, "*Escherichia coli* ST131-H22 as a Food-borne Uropathogen," was led by a multi-centre research team led by Lance B. Price, director of the Antibiotic Resistance Action Centre (ARAC) at the George Washington University. It has shown that there are multiple strains of *E.coli* ST131 and that one pathogen in particular may be passed to people via contaminated poultry meat.

Professor Price and his colleagues conducted a 1 year longitudinal study where they analysed retail chicken, turkey and pork purchased from every major grocery chain in Flagstaff, Arizona. During the same year, the team also collected and analysed urine and blood isolates taken from patients seen at Flagstaff Medical Centre, the only major hospital in the town.

E.coli in nearly 80% of meat samples

The team found *E.coli* in nearly 80% of the 2,452 meat samples and in 72% of the positive urine and blood cultures from patients. *E.coli* ST131 was the most common type infecting people and was also present on the meat samples.

They then looked at how closely related these bacteria were to one another, or genes that helps *E.coli* thrive in birds. This same poultry-adapted strain was also found to be causing UTIs in people.

E.coli going from poultry to people

Professor Price, who is also a Professor of Environmental and Occupational Health at Milken Institute SPH, said: "In the past, we could say that *E.coli* from people and poultry were related to one another, but with this study, we can more confidently say that the *E.coli* were from poultry to people and not vice-versa."

Poultry products are not currently routinely tested for the kind of *E.coli* strains that cause UTIs, but the findings underscore the importance of cooking poultry thoroughly and handling it carefully in the kitchen.

Cindy Liu, chief medical officer at ARAC, added: "This particular *E.coli* strain is typically capable of thriving in poultry and causing disease in people. Poultry products could be an important vehicle for bacteria that can cause diseases other than diarrhoea.

"We are now working to determine what proportion of UTIs might be caused by food-borne *E.coli*, looking at all *E.coli* strains, not only ST131," she added.

AGRI TOURISM DEVELOPMENT CORPORATION OF PAKISTAN

INSECTS: 3 HEALTHY COMPOUNDS FOR ANIMAL FEED

Insects are promising feedstuffs for animal feeds as they contain not only valuable nutrients but also particular compounds that seem to be able to modulate animal microbiota and to optimise animal health. Here we discuss what they are.

These healthy components are discussed in a new paper, published in the Journal of **Insects** as Food and Feed. **In this editorial**, the authors discuss the effect of **chitin, lauric acid**, and anti-microbial peptides provided by **insects**. These components can be beneficial for food producing animals and have potential to help in reducing the need for antibiotics for example.

1. Chitin

The first healthy component of insects is chitin. Chitin is a component of the exoskeleton of crustaceans and insects. Chitin and chitin derivatives can stimulate innate immune cells. Feeding shrimp chitin to broilers for example have been shown to inhibit the growth of the foodborne pathogens *Escherichia coli* and Salmonella in the intestine. In other trials, chitin fed broiler chickens resulted in a reduction in body fat and possibly the production of leaner meat. This is due to the hypolipidaemic and hypocholesterolaemic properties of chitin. Trials in laying hens that were fed about 1.02g per day of chitin provided by dietary black soldier fly larval meal inclusion showed enhanced immune response and a better disease resistance. In fish, research showed chitin is able to reduce pathogen growth by enhancing the growth of beneficial intestinal microbiota with positive effects on performance and health.

2. Lauric acid

In pigs and broilers anti-microbial peptides improve growth performance, promotes nutrient digestibility and gut health, positively alters intestinal microbiota, and enhances immune function.

The second beneficial component of **insect** is lauric acid. Lauric acid is known to have profound antiviral and antibacterial activity. Black soldier flies are rich in fat, with levels ranging between 15% and 49% on dry matter basis. Notably, the fatty acid profile of the prepupae is high in the medium-chain fatty acid lauric acid (C12:0). The fat of prepupae reared on organic waste streams with high amounts of starch contains up to 60% lauric acid. Recently, an in vitro trial showed that black soldier fly prepupal fat (0.56g C12:0/100 ml) suppressed growth of lactobacilli, with the most substantial antibacterial effects against D-streptococci infections in pigs.

3. Antimicrobial peptides

The third healthy ingredient of insects are the antimicrobial peptides. The greatest diversity of anti-microbial peptides are found in insects and until now, more than 150 **insect** proteins with antimicrobial activity have been identified and can be classified as follows:

1. α-helical peptides (e.g. cecropin and moricin)
2. cysteine-rich peptides (e.g. insect defensin and drosomycin)
3. proline-rich peptides (e.g. apidaecin, drosocin, and lebocin)
4. glycine-rich proteins (e.g. attacin and gloverin) (Orvos, 2000).

In pigs and broilers anti-microbial peptides improve growth performance, promotes nutrient digestibility and gut health, positively alters intestinal microbiota, and enhances immune function. Trials have shown that diarrhoea of weaning pigs was decreased from day 15 to day 28 of the trial due to the dietary supplementation with yellow mealworm, giant mealworm and housefly meal, and ascribed this result to the antimicrobial peptide effect of **insect meals**. In broilers the anti-microbial peptide P5 can be used as an alternative to antibiotics as a growth promoter.

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DELAVAL INTRODUCES NEW ROBOTIC FEED PUSHER

The new robotic feed pusher from DeLaval remixes and repositions feed onto the feed table. This new approach increases feed intake, reduces feed waste and helps farmers to use the time saved, on the jobs that make a difference to the farm.

DeLaval OptiFeed makes sure cows always have access to refreshed feed. Its technology allows remixing feed before moving it onto the feeding table. With its twin-spiralled rotating auger and adaptive drive function, all kinds of feed are repositioned onto the feeding table filling any gaps and ensuring that the strands of roughage remain intact. This means that low or ranked cows are not pushed to empty positions, reducing the competition and stress at the feeding table.

Trevor DeVries, Professor and Canada Research Chair in Dairy Cattle Behaviour and Welfare, University of Guelph:

Handling of different types of feed

"Technology such as this has the potential to ensure that dairy cows have continual access to a well-mixed diet. This should not only help to ensure maximal dry matter intake, but also help minimise feed sorting, and allow cows to use their time more efficiently. This leaves more time for lying down and ruminating," says Dr DeVries.

The new feed pusher has the option to add a concentrate dispenser. It can also automatically handle different amounts of feed as well as several feed types, including any kind of total mix ratio (TMR), straw, hay or fresh grass.

Additionally, the feed pusher can be used in a wide range of situations, including barns with 5% slopes and different width alleys, as well as on farms with multiple barns.

Simple maintenance

There are few parts that need to be changed, with no requirement for greasing. It is also available with DeLaval InService™ programme, a solution where service, consumables, advisory and everything in between is available. The new feed pusher is available in Europe, the Middle East and Africa, America, Asia and Oceania markets will follow shortly.

SUSTAINABLE MICROALGAE FEEDS FOR NILE TILAPIA

To address the environmental sustainability concerns regarding aquafeed, a US team has seen the effectiveness of replacing fishmeal and fish oil with different types of marine microalgae in Nile tilapia.

Aquaculture is growing and Nile tilapia (*Oreochromis niloticus*), a major aquaculture species and the focus of our current research, is predicted to be one of the 2 fastest growing aquaculture products in the next decade and a key driver of US and global consumer demand for farmed fish. Sustainable expansion of aquafeeds, among other things, necessitates finding alternatives to fishmeal and fish oil because of environmental, food security, and financial drawbacks of these ingredients. Alternative ingredients are for example **insect** meal or (micro)**algae** meal.

Microalgae: Several advantages

Marine microalgae show promise as alternative aquafeed ingredients that can improve environmental sustainability and human health benefits. Marine microalgae production offers several advantages over terrestrial crops: improved land and water-use efficiency due to higher yields per unit input, no need for freshwater and arable land, and lower greenhouse emissions.

Developing highly digestible algal ingredients will both improve feed conversion ratios and reduce nutrient loads in fish culture effluents, while also helping drive algae-based aquafeeds towards cost-competitiveness with conventional feed.

Effect on digestibility of lysine

The Dartmouth research team's latest work replaces fishmeal with a marine microalga coproduct, Nannochloropsis oculata, which is rich in both protein and omega-3 fatty acids, including eicosapentaenoic acid, that are essential to fish growth and quality. The researchers used *N. oculata* dried whole cells and *N. oculata*coproduct, followed by an 84-day nutritional feeding experiment with *N. oculata*co-product. The study's findings show promise in replacing conventional protein ingredients in tilapia feeds. The results demonstrated that the co-product had higher protein content than the whole cells but had lower digestibility than whole cells. The co-product showed the highest digestibility of lysine, an essential amino acid that is often deficient in terrestrial crop-based aquafeed ingredients, as well as the highest eicosapentaenoic acid (EPA) digestibility.

Enhancing nutrient digestibility

Based on these results, the US team concludes that microalgae based diets are currently in the preliminary development stage for aquafeeds. Achieving wide use of such a nutrient dense *N. oculata* co-product in fish feeds requires researchers to find ways to enhance nutrient digestibility. Developing highly digestible algal ingredients will both improve feed conversion ratios and reduce nutrient loads in fish culture effluents, while also helping drive algae-based aquafeeds tow-ards cost-competitiveness with conventional feed. Towards this goal, the researchers are now focusing on whether the inclusion of 1 or more non-starch polysaccharide and protease enzymes in *N. oculata* co-product diet enhances nutrient digestibility and retention and growth and reduces effluent nutrient loading in Nile tilapia.

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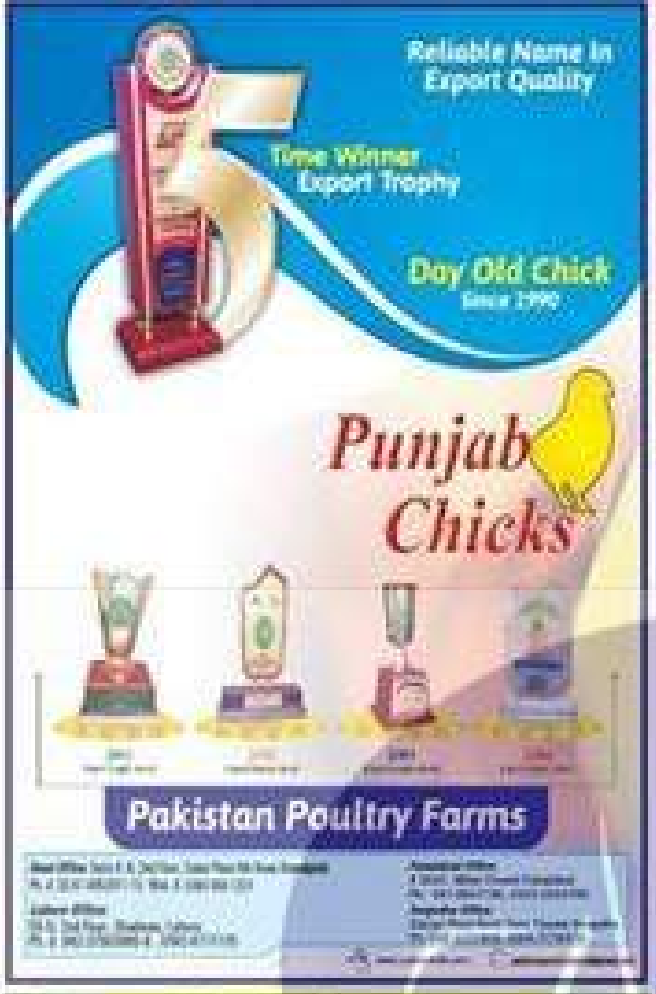

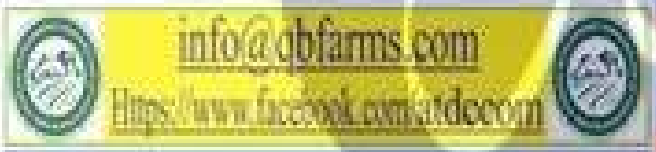

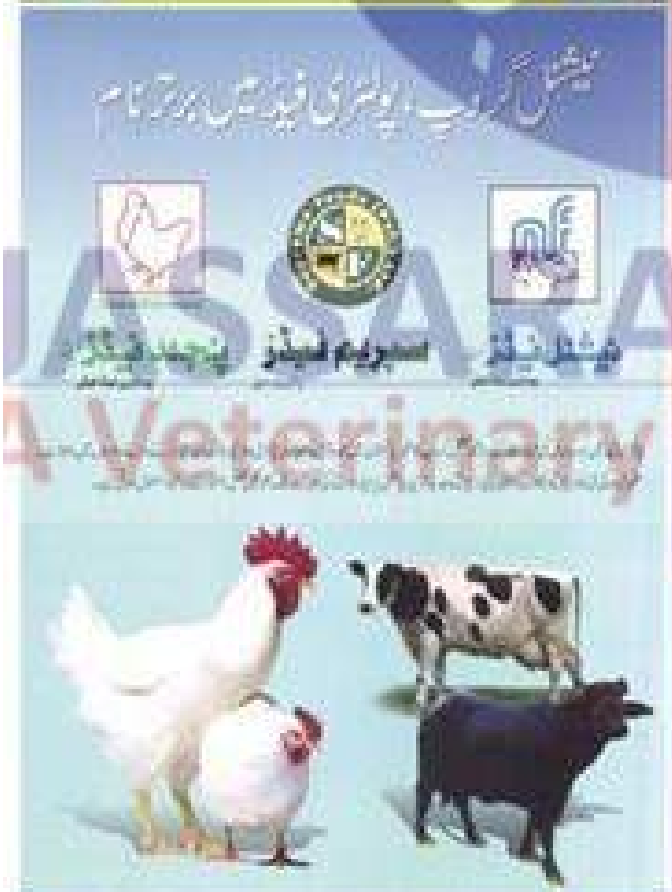

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