

# ***Veterinarian's Oath***

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Being admitted to the profession of Veterinary medicine, I solemnly swear to use my scientific Knowledge and skills for the benefit of society through the protection of animal health, the relief of animal suffering, the conservation of livestock resources, the promotion of public health, and the advancement of medical knowledge.

I will practice my profession conscientiously, with dignity, and in keeping with the principles of Veterinary medical ethics.

I accept as lifelong obligation the continual improvement of my professional Knowledge and competence.

***"Veterinarians for Food Security, Public Health and Animal Welfare"***



# Souvenir 2010

## **Ninth National Veterinary Conference** *(April 22-24, 2010)*

Nepal Academy Hall, Kamaladi, Kathmandu  
United World Trade Centre, Tripureshwor, Kathmandu

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# NEPAL VETERINARY ASSOCIATION

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**9th NATIONAL VETERINARY CONFERENCE  
(VETCON'10)  
NEPAL VETERINARY ASSOCIATION  
नेपाल भेटेरिनरी एशोसिएसन**



***From the Desk of General Secretary***

Nepal Veterinary Association (NVA) is a solely scientific and professional organization of entire Nepalese veterinarians. NVA was established on 11th Ashad 2024 (BS) and legally registered on 13th Falgun 2025 (BS). The Association was affiliated as national member of World Veterinary Association (WVA) on 1986 and Federation of Asian Veterinary Association (FAVA) on 1998. In the year, 2009, NVA has received "World Veterinary Day Award" from OIE-WVA for global outstanding performance in celebration of WRD 09.



Until now 560 veterinarians including 45 foreign nationals have been registered as member of this association. The association has members with wide range of expertise in animal health and production, public health and natural resource management enabling the association fully capable for providing competent veterinary service in Nepal.

**Objectives of NVA:**

The objectives of the association are:

- to emphasize the necessity of the unity among the members of the profession.
- to promote the spirit of harmony, cooperation among each other and the staff working in this profession.
- to make aware of new discoveries and development in the field of veterinary and allied sciences to livestock wealth of the profession.
- to work for the development of livestock wealth of the country.
- to encourage production and quality of livestock products.
- to improve animal disease diagnosis in the country.
- to provide consultancy service.
- to modernize veterinary medical treatment and surgery.
- to improve access of veterinary service.
- to help prevention, control and eradication of animal disease.
- to safeguard public health from diseases communicable from animals to man and vice versa (=zoonotic diseases).
- to keep up the honor and dignity of the profession in the society and to safeguard its interests.
- to publish scientific periodicals and journals to disseminate the information.
- to arrange seminars, conference and discussion forum to address national issues.

Conference organization is one of the most significant affairs of NVA. The technical conferences, involving scientists, planners, policy makers, industrialists and farmers involved in various sector of livestock resource management at home and abroad, comprise incredibility to exchange technical information and experience in order to address scientific and filed level setbacks. In true words, this kind of conferences has played school for professional continue education. The association has so far organized eight such national veterinary conferences with the participation of distinguished personalities from national and international arena. A brief flash back of the conference is as follows:

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### National Veterinary Conferences of Nepal Veterinary Association

	<b>Venue</b>	<b>Period</b>	<b>Chief Guest</b>	<b>Chairperson</b>
First	APROSC building, Singhadurbar	Aug 10-13, 1983	Mr. Lokendra Bahadur Chand, Rt. Hon. Prime Minister	Mr. Hem B. Malla Hon. Minister for Agri. & Land Reform
Second	Hotel Blue Star, Thapathali	Feb 23-25, 1987	Mr. Hari Narayan Rajauriya, Hon. Minister for Law & Justice	Dr. Ratna SJB Rana, VC, RONAST
Third	APROSC building, Singhadurbar	Aug. 10-12, 1990	Mr. Krishna Prasad Bhattra, Rt. Hon. Prime Minister	Mr. Jhala Nath Khanal, Hon. Minister for Agriculture & Forest
Fourth	Hotel Blue Star, Thapathali	Nov. 16-19, 1992	Mr. Ram Chandra Poudel, Hon. Minister for Agriculture	Dr. Ram Prakash Yadav, Hon. Member, NPC
Fifth	International Convention Center, Baneswor	Sept. 11-13, 1996	Mr. Sher Bahadur Deuwa, Rt. Hon. Prime Minister	Mr. Prem Bahadur Bhandari, Hon. Minister of State for Agriculture
Sixth	International Convention Center, Baneswor	Feb. 22-24, 1999	Mr. Kul Bahadur Gurung, Hon. Minister for Education (On behalf of Rt. Hon. Prime Minister Mr. Girija Prasad Koirala)	Mr. Prithviraj Ligal, Hon. Vice President, National Planning Commission
Seventh	Hotel Radisson, Lazimpat, Kathmandu	Nov. 5-7, 2003	Dr. Prakash Chandra Lohani, Hon. Minister for Agri & Cooperative, and Finance	Dr. Neel Prakash Singh Karki, President, NVA
Eighth	International Convention Center, Baneswor & United World Trade Centre, Kathmandu	May 8-10, 2008	Rt. Honorable Sepaker, House of Representative Mr. Subash Chandra Nemwang	Dr. Braja Kishor Pd. Shaha, President, NVA

#### **The Ninth National Conference (VETCON '10)**

The Ninth National Conference (VETCON'10) to be held with the theme of "Veterinarians for Food Security, Public Health and Animal Welfare" at Kathmandu on Baisakh 9-11, 2067 (April 22-24, 2010) which will be participated by members and scientists from home and abroad.

The formal inauguration of the Ninth National Conference (VETCON'10) will be formally inaugurated on the first day at Nepal Pragya Pratisthan, Kamaldi, Kathmandu on 9th Baisakh, 2067 (April 22, 2010), the second day technical session will be organized at same venue and the last third day programs as the closing session will be organized at United World Trade Center, Tripureswor, Kathmandu. All the events and programs of the VETCON'10 are focused to the celebration of World Veterinary Day 2010 (April 24, 2010).

During the inaugural session of the conference, NVA will honour with NVA National Awards to some institutions and personalities who have significantly contributed in bringing effective veterinary services

in the country. The NVA Service Awards will be provided to more than 08 members who have served the nation for more than 25 years. The Narendra Memorial Trust Awards, Pasudhan Kaushal Award, Pashudhan Vikram Award and NVA-Rotary-Shrijana Awards will also be presented to selected individuals during the inaugural ceremony. In addition, 3 industrial papers and more than 4 thematic papers will be presented and discussed on the second half of the first day.

On the second day of the conference, a total of 59 scientific papers will be presented orally and discussed at the conference. This day is hoped to serve the continue education motive of members. On the last third day, a procession will be carried out in Kathmandu valley to celebrate WVD '10 and closing session will run on the same day of the conference to deal/discuss NVA affairs, plan future activities and constitute the new executive committee for next two year tenure.

### **MAJOR ACTIVITIES OF 2008 - 2010 TENURE**

After the formation of new executive committee with 8th National Veterinary Conference on 10th May, 2008 (Baisak 26, 2065), NVA took several steps to accelerate its activities. Apart from its routine and professional activities, NVA has carried out the following activities:

1. NVA received a computer set from Avian Influenza Control Project (AICP) to support and strengthen NVA activities.
2. NVA office strengthening was conducted with furnishing the meeting hall. Records keeping of the members were established by maintaining complete personal database system.
3. Central Committee of NVA worked in the feeling to boost up and active all its regional chapters and sister organizations.
4. Publication of Proceeding of VETCON'08, Veterinarian's Directory, Veterinary Chaumasik, Souvenir of AGM 09 and Nepalese Veterinary Journal.
5. NVA put a thrust on communication network among the members and build up a regular e-mail contact group to circular the activities and message among them. Also, website of the association was prepared functional.
6. Advocacy and lobbying for the establishment of proposed "Ministry of Animal Husbandry and Fisheries", "Poultry Development Board" and "Agriculture, Veterinary Science and Animal Husbandry University". The team under NVA worked for logical documentation and coordination between allied professional organizations in this regard.
7. NVA made request to DLS to participate field/private vets at Meat Inspection training. Also, NVA made an effort to post/employ meat inspectors, wildlife officers and field vets to work under govt. service system.
8. The Nepal Veterinary Association and Directorate of Livestock Market Promotion jointly organized a national workshop on "Status and Challenges of Meat Hygiene and Marketing in Nepal" on the premises of the DLS meeting hall, Hariharbhawan, Lalitpur on July 6 to mark World Zoonosis Day. The purpose of celebrating the Zoonosis Day was to create awareness and seek the responsibility of govt. as well as line agencies to control the zoonotic diseases in Nepal. There were altogether 117 participants in the workshop, representing govt. high level officials, university faculties, scientists from NARC, vet. clinicians, retired vet. professionals, vet. students, paravets, representatives from meat animal production and marketing forum, butcher and meat sellers forum, representatives from Kathmandu metropolitan city as well as from Lalitpur sub metropolitan city, animal welfare forum and media houses/ news reporters.

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9. Animal welfare allied group meeting: NVA organized a meeting with NGOs and INGOs of Nepal working for animal welfare, at NVA office, Tripureshwor, Kathmandu on 20/04/22 (Aug. 9, 2008). Representatives from SPCA Nepal, SAWM Nepal, KAT Centre, HEIFER International Nepal, Animal Welfare lovers and NVA members attended the meeting.
10. Animal health and vaccination camp Koshi Flood Relief: NVA conducted an "Emergency animal health and vaccination camp" at Bharadaj, Saptari for the care of livestock and birds victimized by Saptakoshi flood. Altogether 42 thousand animals' populations are directly affected and 9,321 animals has been reported death due to flood. A volunteer veterinary team (Dr. Subir Singh, Dr. Manoj Kumar Shah, Dr. Pushpendra Shah and Dr. Anil Poudel) and IAAI Rampur's students (Mr. Anjay Shah, Mr. Ganaram Yadav, Mr. Indira Narayan Shah, Mr. Subash Chandhary, Mr. Binu Narayan Mandala and Mr. Rabintra Mandala) worked with the weekly camp at the site. NVA also received enormous supports from pharmaceutical and feed companies with free drug and feed supply to conduct the camp. NVA was supported through Heifer International/Nepal, Pro-Bio Tech Industries Pvt. Ltd. (NIMBUS) and several pharmaceuticals companies like Verpac, Vetcare, Aesthetic, Wockhard, TTK Medvet, Verpharm, etc. provided more than 32 cartons of medicines which worth about 3.2 lakhs. Directorate of Animal Health facilitated to provide H.2. & B.O. and PPR vaccines. The team worked in coordination with DLS/Saptari and formulated four mobile and one stable camp at the site. Altogether, about 8 thousand cattle and buffaloes received H.2./B.O. vaccine while the team extended its major service to attended, treat and manage 322 sick animals affected by flood. The animals are suffering from Ulcer, Wounds, Stomatitis, Conjunctivitis, fractures, dehydration, emaciations, foot rot, degens, dermatitis and poor performances. Many animals are dying due to lack of feed and forage. There was also threat situation due to outbreak of FMD, H2 and BQ disease.
11. Organization of World Veterinary Day and Winner of the award: NVA organized World Veterinary Day on last Saturday of April every year from 2004-2009. In the year 2009, NVA celebrated World Veterinary Day 2009 (WVD '09) as weeklong profound celebrations with concluding ceremony on April 22 to conclude the festival. As the theme, "Veterinarians and Livestock farmers, a winning partnership," NVA too decided to conduct and celebrate the day with veterinary professionals, paraprofessionals, farmers, livestock industrialists, consumers, veterinary students and community people. The final event for the closing ceremony of WVD was organized at Rampur and Bharadaj of Chitwan, Nepal. NVA celebrated more than 12 remarkable events throughout the country on the occasion of World Veterinary Day 2009 with full endeavor and potentiality, which ultimately result to win the WVD'09 award. Technical seminar, Animal health camps, Vaccination camps, Castration camp, Press meet, Annual General Meeting of NVA, National march pass, Horse cart rally, etc. were the winning events of weeklong activities. The 2009 Joint WVA\OIE World Veterinary Day Award was decided on April 30, 2009 and presented on May 29, 2009 to Nepal Veterinary Association. The declaration of WVD '09 award has lead NVA at international veterinary professional arena. The presentation was made during the 77th Annual General Assembly of the World Animal Health Organization (OIE) in Paris, Nepal. Veterinary Association won the \$1,000 award for best promoting the theme "Veterinarians and livestock farmers, a winning partnership."
12. Similarly, NVA implemented successful national plan and activities in celebration of World Rabies Day (Sept. 28) and World Animal Day (Oct. 04).
13. NVA supported for successful organization of Third general meeting of Nepal Veterinary Council



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was organized on 24 Mansir, 2065 at World Trade Centre, Tripureshwor, Kathmandu. About 210 registered NVC members participated the meeting which was chaired by Dr. Bhabananda Thakur, Chairman of NVC. The program was inaugurated by chief guest Hon'ble Minister Ganesh Sah, Minister of Environment, Science and Technology.

14. Nepal Veterinary Association organized a Welcome meeting of NVC executives at its office's meeting hall, Tripureshwor, Kathmandu, on 24th Mansir 2065.
15. NVA Conducted 6 animal health camps at several regions of the country.
16. Birdflu and zoonotic disease awareness campaign was organized at Jhapa, Chitwan, Dolkha, Kathmandu and Nepaljung.
17. NVA actively participated at three days NVC strategic planning workshop from 13 to 15 Falgun, 2065 (24 to 26 Feb. 2009) at Heifer Office, Hattiban, Lalitpur. About 24 delegates from all vet. sectors, participated the workshop and formulated the vision, objectives, strategy and indicators for the coming 5 years plan of NVC.
18. NVA supported and contributed human resources and technical advice to DLS and Govt. of Nepal in the control of birdflu in Nepal. In this regard, NVA developed the distribution of Veterinary health certificate format to facilitate the vets in carrying the inspection and certification works at ease.
19. NVA prepared the draft of "Participant Manual: Training on Biosecurity for poultry farms and markets Nepal" for STOP AI/USAID in Dec. 2009.
20. NVA received the responsibility to draft first amendment draft of "Animal Health and Livestock Service Act, 2055" from Animal Health Directorate, Kahtmandu and has successfully submitted to it.
21. NVA organized Talk Programme and Training on:

<b>Date &amp; Venue</b>	<b>Title</b>	<b>Key Speakers</b>
October 21, 2008, DLS Hall, Kathmandu	Commonly Used Injectable Anesthetics For Companion And Large Animals Under Field Conditions	Dr. Pedro Boscan, Colorado State University, US
May 24, 2009, DLS, Kathmandu	Training on Biosecurity and diagnosis on AI	Team of German scientists
May 27, 2009, IAAS, Rampur	Transboundary Animal Diseases	Prof. Dr. Anthony P. Knight Colorado State Universit, USA
June 5, 2009, CVL, Kathmandu	Biodefense and Transboundary Animal Diseases	Prof. Dr. Anthony P. Knight Colorado State Universit, USA
July17, 2009, CVL, Kathmandu	Cysticercosis and Taeniasis : Recent Advances of Serological and Molecular Diagnosis	Prof. Dr. Hiroshi Yamasaki Japan
Oct. 16, 2009, CVL, Kathmandu	An Epidemiologist's journey through one world one health	Dr. Drona P. Rasali Epidemiologist, Canada
Jan. 04, 2010, CVL, Kathmandu	Clinical Experience on Small Animal Practice	Dr. Balram Aryal Clinician, Maryland, USA
Jan. 04, 2010, CVL, Kathmandu	Zoonosis Control in South-East Asia Region : Opportunities and Challenges	Dr. G. N. Gangol WHO Regional Office, India

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### **Obituary**

Nepal Veterinary Association expresses its deep sorrow for the untimely demise of its following members and prays to God for the eternal peace of the departed soul

1. Dr. Bir Mardan Basnyat (69 years) on 19th Shrawan 2065. He was born on 1997 Asoj 01. He was associated with Ultra Pharmaceuticals Pvt. Ltd.
2. Dr. Dharmendra Chaudhary, who was posted at DLSO Mugu. He was permanent residence of Amawa-3, Bara, Nepal.

### **Conclusive Remarks:**

NVA heartily thanks to all its members, sister organizations, WVA, line agencies and well-wishers for providing their supports and encouragement to promote and perform professional activities.

# A report on award winning "WORLD VETERINARY DAY 2009"

*Dr. Subir Singh*

*General Secretary, Nepal Veterinary Association*

In the year 2009, NVA planned to celebrate World Veterinary Day 2009 (WVD '09) as weeklong profound celebrations with concluding ceremony on April 25 to conclude the festival.

As the theme, "Veterinarians and Livestock farmers, a winning partnership", NVA too decided to conduct and celebrate the day with veterinary professionals, paraprofessionals, farmers, livestock industrialist, consumers, veterinary students and community people.

Following are the celebrations and events conducted on the eve of World Veterinary Day 2009.

## **1) Seminar on "Current outbreak Newcastle Disease and its control strategy"**

On the request of Nepal Egg Producers' Association and Nepal Poultry Entrepreneur's Forum, NVA-Chitwan Chapter organized a "Technical Seminar" in the beginning of the WVD week. Dr. Subir Singh, Dr. Dinesh Yadav and Dr. Khagendra Sapkota presented papers on current outbreak of Newcastle disease, its control strategy and biosecurity measures in the hall of the Narayangadh Chamber of Commerce and Industries. The focus of that talk was on the short term and long term strategy to control ND the disease causing huge economic loss to poultry farmers of Chitwan. Altogether 60 poultry farmers, entrepreneurs and businessman participated the seminar, while more than 25 vets working in the poultry field were present at the session.

## **2) Free Animal Health Camp at Lekhnath, Kaski:**

A wonderful animal health camp was organized at

Lekhnath -9, Lamaswara, Kaski, on the occasion of World Veterinary Day 2009. The camp was organized in coordination with NVA- Pokhara chapter with leading support of Animal Health Training and Consultancy Service (AHTCS), Pokhara, on 18th April 2009, Saturday.

The total animals treated in the camp were Cattle/Bufaloes: 109, Goat: 51 and Dogs: 17

Service provided in the camp: Vaccination against HS, BQ and FMD; Castration, Dehorning, Pregnancy diagnosis, Internal and external parasitic drug administration, Anorexia, Infertility and other common ailments.

Human Resource involved in the camp were Dr Shiva Devkota - Regional Lab, Pokhara/ Regional Coordinator-NVA, Dr. Kedar Raj Pandey-DLSO, Kaski/Regional Member-NVA, Veterinarians and Paravets from AHTCS and Village animal Health Worker (VAHW) trainees. Altogether 11 vets and 22 paravet professionals participated the camp.

## **3) Free Dog Sterilization and Anti-rabies Vaccination Camp at Sauraha, Chitwan:**

On April 17, a Dog Sterilization and Anti-rabies Vaccination Camp was organized at Sauraha, Chitwan. Celebrating WVD '09, the NVA-Chitwan Chapter and Chitwan National Park with joint support of Institute of Agriculture and Animal Science (IAAS), Rampur Campus, Mirgajunja Consumers' Society, Central region livestock service committee, Tarai Bhuparidhi Program, National Trust for Nature Conservation and Hotel Association Nepal/Sauraha organized the program at the buffer zone of Chitwan National Park.



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Altogether, 23 male dogs were castrated at the site and 48 dogs and 1 cat were vaccinated with ARV.

Surgeons of IAAS, namely Dr. Subir Singh and Dr. Manoj Kumar Shah worked for surgery and the supporting team was made among the internship students and final year students of IAAS. Dr. Bhuminandan Devkota, Dr. Kamal Gairae, Dr. Jivan Thapa and Dr. Sarad Poudel helped to smooth organizing of the camp at local level. A team of 6 veterinarians and 22 veterinary under-graduate students were involved for successful completion of the camp. Spay Clinic of IAAS (running with joint support of Tufts University and Tribhuvan University) provided all the surgical logistics while Anti-Rabies vaccine was supported from Merial.

The site of the camp, on one hand is densely located with tourist hotels and visitors while on other hand it is the buffer zone of national park, so the dog sterilization and vaccination camp was organized with an objective to control dog population and save the tourist society and animals with rabies.

### **4) Free Animal Health Camp at Madi, Chitwan:**

As per the scheduled week long celebrations of the World Veterinary Day, a "One Day Animal Health & Infertility Camp" was jointly organized at Basantapur of Bagauda V.D.C. Madi, Chitwan, by Nepal Veterinary Association Chitwan Chapter (NVA-CC), District Livestock Service Office (DLSO), Bharatpur, and Veterinary Teaching Hospital (VTH), Rampur.

Madi, a valley within Chitwan National Park, is regarded to be a remote area within Chitwan district and lies to the southern part of the park. The very rough road to Madi is functional only in the dry season. Almost 13 kms of the road is within the dense tropical forest of the Chitwan National Park.

Senior veterinarians Dr. Bihsnu Kumar Shrestha (DLSO, Bharatpur), Dr Tez Bdr. Rijal (DLSO, Bharatpur), Dr. Bhuminand Devkota (President, NVA-CC), Dr. Bishnu Bahadur Adhikari (NVA members), Dr. Krishna Kaphle (GS, NVA-CC) were present at the occasion. Extensive treatment of animals including 150 medical cases, 80 gynecological cases and 40 medial patellar

desmotomy operations were performed at the camp. Large animal especially the working buffalo bull was the most common patients. Goat was the most common case in case of small ruminants. The camp was mainly targeted to the working bull.

Other vets of NVA-CC, Dr. Laxman Dhakal, D. Rebanta Kr. Bhattarai, Dr. Narayan Paudyal, Dr. Suniti Jha and Dr. Prazila Shrestha along with the internship students of IAAS, Rampur also actively participated at the camp. Various medicines and feed supplements were donated by pharmaceutical companies.

### **5) Organization of Press Meet:**

On April 22, 2009, at Narayangadh, Chitwan, Nepal Veterinary Association organized a "Press Meet" to brief about the celebration, objectives and events of World Veterinary Day. The meet was chaired by Dr. Adarsha Pradhan, President of NVA and the program was conducted by Dr. Subir Singh, General Secretary of NVA. The meeting was organized at Kitchen Café, Narayangadh, Chitwan. Dr. IP Dhakal (Ex-VP of NVA), Dr. B.N. Devkota (President of NVA-Chitwan Chapter), Dr. Sarada Bhattarai (Vice Chirman of NVC), Dr. Krishan Kaphle (GS of NVA-Chitwan Chapter) and Dr. Khagendra Sapkota (EC member of NVA-Chitwan Chapter) participated the meet on behalf of NVA.

Altogether 21 news reporters, media personals and journalist from different national and local media houses participated the meeting. The brief press release, in Nepalese language, published by NVA and distributed among the participants. The release described about WVD and its celebration in Nepal and was put to the meeting as the theme paper to the participants. The meeting was organized with an objective to create awareness about WVD among the people.

### **6) PPR Vaccination Camp at Chitwan:**

Nepal Veterinary Association organized "PPR vaccination camp" at Chitwan on 22nd of April with joint effort of Nepal Veterinary Students' Association (NVSA) and District Livestock Service Office (DLSO) Chitwan. Two mobile units

consisting 20 veterinary under-graduate students in each unit, conducted the vaccination in 420 goats at Dairy Chowk, Beluwa, Chauki, Bangai, Shardanagar Town and Dharmodaya Chowk of Shardanagar VDC, Chitwan. 135 farmer households were provided with the PPR vaccination facility and they were interacted about the event and WVD celebration. The PPR vaccine was obtained from DLSO, NVSA provided human resource and NVA facilitated with all the logistic supports to organize the event on the eve of WVD 2009.

Since last 10 years, PPR disease in goat is causing major economic loss in this area. The camp is hopeful to reduce the farmers' loss due to this disease.

**7) Free Anti-Rabies vaccination camp organized at Bhaktapur District:**

Nepal Veterinary Association organized Free ARV Vaccination Camp on 23rd and 24th of April, on the eve of World Veterinary Day 2009 with joint effort of Himalaya College of Agriculture Science and Technology (HICAST) and vaccinated 39 community dogs. The veterinary students of HICAST actively participated the program.

The advertise of the camp was disseminated by broadcasting in local FM radio and using loudhailers in differently densely populated areas and pasting pamphlets on the walls, since three days before the program. On the first day, the camp was organized at HICAST Veterinary Hospital and on following day, the vaccination was carried at various wards of Bhaktapur Municipality.

**8) Annual General Meeting (AGM) of NVA:**

On the week end of the WVD celebration, NVA organized its "Annual General Meeting" at Institute of Agriculture and Animal Science (IAAS), Rampur, Chitwan. The meeting was organized at April 24, 2009 from 10 am to 7 pm.

Due to some political disturbance and strike at the highway, only 100 NVA members were able to actively participate the meeting. The leading farmers and chairpersons/representatives of several farmer

associations (dairy, poultry, fish, swine, bee, etc.) participated the inaugural session of the meeting. Dr. Yadav Sharma Bajagai (secretary of NVA) conducted the meeting.

Dr. Adarhsa Pradha chaired the inaugural session of the meeting and Dr. Neel Prakash Singh Karki (Ex-President of NVA, Ex-Director General of DLS and Ex-Chairman of NVC) chaired the session as chief guest. Special guests and guests were Prof. Dr. Sundar Man Shrestha (Dean of IAAS), Mr. Arun Shanker Ranjit (Deputy Director General, Dept. of Livestock Services), Dr. Baikuntha Parajuli (Program Director, Animal Health Directorate), Mr. Mitra Raj Dawadi (Chairman, Narayangadh Chamber of Commerce and Industries) and Dr. I P Dhakal (Chief, Rampur Campus) chaired the dash. Dr. NP Ghimire, VP of NVA, formally welcomed all the guests and delegates. The chief guest inaugurated the meeting by lightening ceremonial lamp.

The papers were presented in this inaugural session:

1. Strengthening veterinary education to cope with challenges of livestock development in Nepal: Dr. IP Dhakal and Dr. Subir Singh
2. Role of veterinarians in the development of poultry industry of Nepal: Dr. Til Chandra Bhattarai
3. Veterinarian's role in vulture conservation of Nepal: Dr. Surya Poudel

The chief guest and guest delivered the Wishing Speech for the successful completion of the general meeting and they were also honored by token of love by the chairman on behalf of NVA. The chairman of the inaugural session gave vote of thanks to all the participants, guests and delegates with his closing remarks.

After a lunch break, the close session (second session) was held to discuss mainly with the progress report and financial report of NVA. The session also discussed to build up next year strategy planning and finally discussed to conclude major recommendations to the Govt. of Nepal. The session also discussed about the activities of NVA done in the favor of WVD and planned the next day

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ceremony.

After the completion of a day long session, the delegates enjoyed with magnificent cultural program conducted by the veterinary students of IAAS. Finally, the reception cocktail dinner was organized for all the delegates and guests.

### **ON THE DAY OF APRIL 25, SATURDAY**

#### **9) WVD National March Pass at Bharatpur, Chitwan:**

On the eve of WVD, NVA organized "National WVD March Pass" at Bharatpur, Chitwan on April 25, at early 7 am to 9:30 am. The event was participated by more than 700 participants involving more than 100 vets, para-vets, farmers, students, staffs of govt., Nepal army, NGOs and INGOs staffs, entrepreneurs, vet. drug sellers and industrialists, etc.

For the first time in Nepal, such a big march pass of veterinary professionals was organized. The events highlighted with two leading elephants (from wildlife department) and four horses (from Nepalese army). Several veterinary related organizations and farmers associations participated with their banners and play cards. The play cards were decorated with several awareness quotations. The rally was successful to draw the public attention and create awareness about veterinary profession.

At last, Dr. Adarsha Pradhan, president of NVA, addressed the mass and congratulated all the professionals on the eve of WVD.

#### **10) WVD Rally at Bhaktapur:**

Under the organization of NVA, on 25th April, about 125 students and teachers from HICAST build a rally with placards which was started from HICAST, Gatthaghar, Bhaktapur and moved to different areas of Bhaktapur Municipality. The awareness pamphlets and brochures, published by NVA, were distributed to the passerby, shopkeepers and local peoples to create awareness of WVD '09.

The rally moved through Gatthaghar, Kausaltar, Sanothimi and finally ended at HICAST. The rally

also relayed the information to the general public about the theme and objective of WVD celebration, using loudhailers.

#### **11) Tanga (horse cart) rally at Birgunj, Parsa :**

For the first time in Nepal, to mark the World Veterinary Day, NVA and AHTCS rallied mules, horses and donkey (with their owners and farmers) on the streets of Birgunj Sub-metropolis, Parsa on April 25, Saturday. The animals participating in the rally were sporting a tiring of slogans but the message was loud and clear. The animals were asking for love, care and respect. The owners and masters were holding placards and banners that vividly described the plight of their animals.

About 200 tanga (cart with horse) participated the rally which was about 2 km. long way street. The rally organizers also provided "special lunch" to the horses and donkeys along with their masters for their participation in the rally. The objective of the rally was to deliver animal welfare concept to the owners and farmers, by celebrating WVD. Dr. Grishma Neupane, Dr. Dinesh Tiwary, several paravets and hundreds of farmers and horse owners participated the rally. The vets in the rally emphasized the role of animal welfare and owner's/farmers' responsibility.

### **CLOSING CEREMONY of WORLD VETERINARY DAY 2009**

The final event for the closing ceremony of WVD was organized by NVA at Bharatpur, Chitwan. Just after the rally, the mass participated the formal closing celebration of WVD. The program started from 11 am and end at 4 pm. Altogether, 450 vets, paravets, students, farmers, political leaders, govt. officials, livestock industrialist, media persons, etc. participated the event.

President of NVA Dr. Adarsha Pradhan chaired the formal session. Minister of Science and Technology Hon'ble Ganesh Shah participated the ceremony as the chief guest while the special guests of the session were Hon'ble Ratneshwor Lal Kaystha, member of National Planning commission and Dr. Shubh Narayan Mahato, Chairman of Nepal

Veterinary Council. Other guests were Dr. Neel Prakash Singh Karki, Ex-president of NVA, Mr. Arun Shankar Ranjit, Dy. Director General of Dept. of Livestock Service, Dr. Baikuntha Parajuli, Director, Animal Health Directorate, Dr. IP Dhakal, Campus Chief, Rampur Campus, Rampur.

General Secretary of NVA Dr. Subir Singh delivered the welcome speech to the delegates and guest and also explained the events and aims of WVD. Hon'ble minister lightened the ceremonial candle and also opened the SOUVENIR among all.

The session turn up to wonderful paper presentation session by Dr. S.N. Mahato on "Veterinary Statutory Body of Nepal" and Dr. Baikuntha Parajuli on "Veterinarians and Livestock Farmers - a winning partnership : a road map of success !".

Afterward, the session glows and cheered up to FARMER AWARD session. In this session the leading farmers from all over Nepal were recognized and awarded by "NVA-WVD Farmer Award 2009". The awards were distributed by the chief guest. The name of awarded farmers were:

- a. *Mr. Sanjeeb Kumar Rai, Kulung Swine Farm, Topgachi, Jhapa* : For outstanding performance in swine production.
- b. *Barahi Integrated Agriculture Farm, Sonapur, Sunsari* : For outstanding performance in commercialization of dairy cattle farming.
- c. *Paudar Nagi Joint Chauri Farming Committee, Paudar, Magyadi* : For outstanding performance in production and diversification of Chauri milk.
- d. *Mr. Jeet Bahadur Rajwar, Telpara, Doti* : For outstanding performance in goat farming in hilly remote area.
- e. *Miss Laxmi Rana, Bharatpur, Chitwan* : For outstanding performance in commercialization of poultry farming.
- f. *Mr. Lekh Nath Dhakal, Rupa Tal fish farming cooperative, Rupakot, Kaski* : For outstanding performance in establishing fish farming as national farming commodity and conservation of natural resources.

Similarly, the Hon'ble Minsiter also presented "SRIJANA ROTARY-NVA Award to Sangeet

Lamichane, Jagdish Pandeya and Aruna Shrestha for their outstanding academic performance at 6th semester of B.V.Sc. & A.H. program of IAAS, Rampur.

The prize distribution session end with the distribution of TOKEN OF LOVE from NVA to all the chief guests and guests participating the session. Also all the paper presenters were granted with TOKEN of LOVE from NVA. The financial contributors like BCN, Heifer Nepal, AICP, Kantipur Vet, Nibus International were also thanked and recognized with TOKEN of LOVE. Similarly, DLS, NVC, IAAS, AHTCS, NVSA, etc were the major supporting organizations of the events.

At the mid of this session undergraduate students of IAAS, Rampur, played a drama showing the importance of livestock farming in rural community to reduce poverty, unemployment and malnutrition problems.

The representatives from the award winning farmer, representative from women farmers' cooperatives and poultry industrialist spoke their views on the occasion of WVD. On wards, the guests, special guests and chief guest spoke to the session. Dr. S N Mahato, chairman of NVC, wished and congratulated all the professionals on the occasion of WVD while Hon'ble Ratneshwor Lal Kaystha, member of National Planning Commission appreciated the works of vets done to the country and assured to make an effective implementation of livestock development plan of Nepal. The chief guest Hon'ble minister congratulated all the vets, para-professionals, farmers and students on the eve of WVD and thanks the organizing committee for invitation. He also remarked that the themes of WVD will certainly buildup winning partnership between veterinarians and livestock farmers, the effort of which will lead the livestock development in the country.

Finally, Dr. B N Devkota, president of NVA-Chitwan Chapter delivered vote of thanks and Dr. A. Pradhan, president of NVA and Chairman of the session stated his closing remarks. The gathering turned to reception lunch to all the participants

## VETCON '10 - *Souvenir*

after completion of formal program.

### **Declaration of the WVD Award**

The 2009 Joint WVA/OIE World Veterinary Day Award was decided on April 30, 2009 and presented on May 29, 2009 to Nepal Veterinary Association. The declaration of WVD '09 award lead NVA at international veterinary professional arena. The presentation was made during the 77th Annual General Assembly General Assembly of the World Animal Health Organisation (OIE) in Paris. OIE deligates of Nepal Dr. Prabhakar Pathak (Director General of DLS/Nepal) received the WVD 2009 award on behalf of NVA at Paris Assembly. Nepal Veterinary Association won the \$1,000 award for best promoting the theme "Veterinarians and livestock farmers, a winning partnership."

Around 600 participants, representing OIE Members and intergovernmental (FAO, WHO, World Bank, OMC, etc.), regional and national

organisations, took part in the event. High-ranking authorities, including a numerous Ministers of OIE Members, honoured the Assembly with their presence.

### **Conclusion**

Nepal Veterinary Association celebrated more than 12 remarkable events on the occasion of World Veterinary Day 2009 with full endeavor and potentiality, which ultimately result to win the WVD'09 award. All the above events and celebrations were published at national newspapers, aired by Kalika FM, Synergy FM, Hamro FM, Chitaban FM, Tribeni FM and Kantipur National TV and Avenews Channels broadcasted a special report and news coverage on WVD. We, the Nepalese vets, are proud to compete this global competition and awarded with international token. NVA heartily thanks all its members for all the hard work performed to make the history of such a great magnitude.



**नेपाल भेटेरिनरी एशोसिएसन**  
**नवौँ राष्ट्रिय भेटेरिनरी सम्मेलन २०६७**  
**बैशाख ५-११, काठमाडौँ**

**आयोजन समितिहरू**

**मूल आयोजक समिति**

१	डा. आदर्श प्रधान	संयोजक	१६	डा. दामोदर सेढाई	सदस्य
२	डा. नारायण प्र. घिमिरे	सह-संयोजक	१७	डा. ईश्वरी प्रसाद ढकाल	सदस्य
३	डा. ब्रजकिशोर प्रसाद शाहा	सदस्य	१८	डा. तिलचन्द्र भट्टराई	सदस्य
४	डा. शुभनारायण महतो	सदस्य	१९	डा. जिवनलाल अमात्य	सदस्य
५	डा. निलप्रकाश सिंह कार्की	सदस्य	२०	डा. दिनेश पराजुली	सदस्य
६	डा. पुरुषोत्तम मौनाली	सदस्य	२१	डा. केशव प्रसाद प्रेमी	सदस्य
७	डा. प्रभाकर पाठक	सदस्य	२२	डा. बुद्धिमान खालिङ	सदस्य
८	डा. धनराज रताला	सदस्य	२३	डा. रेबती मान श्रेष्ठ	सदस्य
९	डा. मुक्तिनारायण श्रेष्ठ	सदस्य	२४	डा. नरबहादुर रजवार	सदस्य
१०	डा. दुर्गादत्त जोशी	सदस्य	२५	डा. हर्षरत्न शाक्य	सदस्य
११	डा. बैकुण्ठ पराजुली	सदस्य	२६	डा. सुवर्णलाल श्रेष्ठ	सदस्य
१२	डा. कृष्ण प्रसाद सांखी	सदस्य	२७	डा. श्याम सुन्दर शर्मा	सदस्य
१३	डा. राम कृष्ण खतिवडा	सदस्य	२८	डा. विजय कान्त भ्रा	सदस्य
१४	डा. राम पुकार ठाकुर	सदस्य	२९	डा. सुविर सिंह	सदस्य-सचिव
१५	डा. कृष्ण वहादुर श्रेष्ठ	सदस्य			

**अर्थ संकलन समिति**

**काठमाडौँ**

१	डा. आदर्श प्रधान	संयोजक	१९	डा. शरदसिंह यादव	सदस्य
२	डा. सुरेन्द्र कार्की	सह संयोजक	२०	डा. केदार कार्की	सदस्य
३	डा. देवराज अधिकारी	सदस्य	२१	डा. स्वयं प्रकास श्रेष्ठ	सदस्य
४	डा. रेवतीमान श्रेष्ठ	सदस्य	२२	डा. इन्द्रकान्त भ्रा	सदस्य
५	डा. दिनेश गौतम	सदस्य	२३	डा. भालचन्द्र भ्रा	सदस्य
६	डा. रामकृष्ण खतिवडा	सदस्य	२४	डा. विजयकान्त भ्रा	सदस्य
७	डा. बोध प्रसाद पराजुली	सदस्य	२५	डा. विदुर पाख्रीन	सदस्य
८	डा. केशव प्रसाद प्रेमी	सदस्य	२६	डा. तुलसी श्रेष्ठ	सदस्य
९	डा. सम्फना काफ्ले	सदस्य	२७	डा. प्रतिक मान प्रधान	सदस्य
१०	डा. बुद्धिसागर सापकोटा	सदस्य			
११	डा. विनोद प्रसाद गुप्ता	सदस्य			
१२	डा. सितलकाजी श्रेष्ठ	सदस्य			
१३	डा. प्रदिप चन्द्र भट्टराई	सदस्य			
१४	डा. जिवनलाल अमात्य	सदस्य			
१५	डा. हर्षरत्न शाक्य	सदस्य			
१६	डा. शभ नारायण महतो	सदस्य			
१७	डा. बलराम थापा	सदस्य			
१८	डा. सुरेन्द्र कार्की	सदस्य			

**चितवन**

२८	डा. सुविर सिंह	संयोजक
२९	डा. तेज बहादुर रिजाल	सदस्य
३०	डा. आई. पि. ढकाल	सदस्य
३१	डा. तिलचन्द्र भट्टराई	सदस्य
३२	डा. विष्णु कुमार श्रेष्ठ	सदस्य
३३	डा. अनिल तिवारी	सदस्य
३४	डा. टिकाराम अधिकारी	सदस्य
३५	डा. दिनेश यादव	सदस्य
३६	डा. रेवन्त भट्टराई	सदस्य

**मकरपुर**

३७	डा. हरि सुवाल	संयोजक
३८	डा. किशोर श्रेष्ठ	सदस्य
३९	डा. राम गोपाल कर्माचार्य	सदस्य
४०	डा. उमेश दहाल	सदस्य

**काठ्मे**

४१	डा. हरी प्रसाद मानन्धर	संयोजक
४२	डा. सुदिप हुमागाई	सदस्य

**पूर्वाञ्चल**

४३	डा. काशीनाथ यादव	संयोजक
४४	डा. सदानन्द देव	सदस्य
४५	डा. योगेन्द्र यादव	सदस्य
४६	डा. अजय कुमार शाह	सदस्य
४७	डा. उदय प्रताप सिंह	सदस्य
४८	डा. नविन उपाध्याय	सदस्य
४९	डा. किरण पाण्डे	सदस्य
५०	डा. शंकर यादव	सदस्य

**पश्चिमाञ्चल**

५१	डा. शिव प्रसाद देवकोटा	संयोजक
५२	डा. परशुराम भुसाल	सदस्य
५३	डा. प्रकाश राज श्रेष्ठ	सदस्य
५४	डा. अशेष भट्टराई	सदस्य
५५	डा. दिर्घ कुमार लामिछाने	सदस्य
५६	डा. ग्रीष्म चौपाने	सदस्य

५७	डा. शिवहरी घिमिरे	सदस्य
५८	डा. मानबहादुर पुन	सदस्य

**मध्य पश्चिमाञ्चल**

५९	डा. विष्णु प्रसाद धिताल	संयोजक
६०	डा. डम्बर बहादुर सिंह	सदस्य
६१	डा. अर्जुन तिमिल्सिना	सदस्य
६२	डा. सुरेन्द्र यादव	सदस्य
६३	डा. दीर्घ नाथ ढुंगाना	सदस्य
६४	डा. कृष्ण लाल भट्ट	सदस्य
६५	डा. पुष्प प्रसाद श्रेष्ठ	सदस्य
६६	डा. विनोद बाबु कटेल	सदस्य
६७	डा. फेकन साह	सदस्य

**सुदूर पश्चिमाञ्चल**

६८	डा. कर्ण बहादुर बोगटी	संयोजक
६९	डा. डिकर देव भट्ट	सदस्य
७०	डा. शरण कुमार पाण्डे	सदस्य
७१	डा. कर्ण बहादुर वोगटी	सदस्य
७२	डा. महेश राज विष्ट	सदस्य
७३	डा. राम नारायण मण्डल	सदस्य
७४	डा. जीवानन्द जोशी	सदस्य
७५	डा. मदन सिंह धामी	सदस्य
७६	डा. बसन्त बहादुर सिंह	सदस्य
७७	डा. पान सिंह ठगुन्ना	सदस्य
७८	डा. संजीव ठाकुर	सदस्य

**सल्लाहकार समिति**

१	डा. मकेश्वर नाथ पाण्डे	संयोजक	९	डा. केशव नाथ उपाध्याय	सदस्य
२	डा. तेज बहादुर बस्नेत	सदस्य	१०	डा. नवल किशोर यादव	सदस्य
३	डा. नरेन्द्र बहादुर सिंह	सदस्य	११	डा. धन बहादुर सिंह	सदस्य
४	डा. खड्ग प्रसाद ढकाल	सदस्य	१२	डा. सुन्दरलाल श्रेष्ठ	सदस्य
५	डा. भोला मेहर श्रेष्ठ	सदस्य	१३	डा. पदमनाथ शर्मा	सदस्य
६	डा. लाल बहादुर चन्द	सदस्य	१४	डा. कमान सिंह गुरुड	सदस्य
७	डा. ठाकुर प्रसाद सुब्बा	सदस्य	१५	डा. उदय सिंह	सदस्य
८	डा. भवानन्द ठाकुर	सदस्य	१६	डा. उपेन्द्र मिश्र	सदस्य

**सचिवालय सूचना व्यवस्थापन तथा सुझाव समिति**

१	डा. सुविर सिंह	संयोजक	६	डा. नवीन घिमिरे	सदस्य
२	डा. शितल काजी श्रेष्ठ	सह-संयोजक	७	डा. सुरेन्द्र कार्की	सदस्य
३	डा. उमेश दहाल	सदस्य	८	डा. श्रृजना मानन्धर	सदस्य
४	डा. सुजन राना	सदस्य	९	श्रीमति प्रमिना श्रेष्ठ	सदस्य
५	डा. कृष्ण राज पाण्डे	सदस्य			

## समाहल/मूलभूत तयारी/स्वयंसेवक परिचालन/व्याटरिङ्ग तथा आन्तरिक व्यवस्थापन समिति

१	डा. सुदर्शन गौतम	संयोजक	८	डा. अर्जुन अर्याल	सदस्य
२	डा. मोहन देव लेखक	सह-संयोजक	९	डा. छवि अधिकारी	सदस्य
३	डा. भिमनाथ चौलागाईं	सदस्य	१०	डा. सूर्य पौडेल	सदस्य
४	डा. प्रमोद राज भट्ट	सदस्य	११	डा. आनन्द सिंह	सदस्य
५	डा. जीवन थापा	सदस्य	१२	डा. सुरज थापा	सदस्य
६	डा. कृष्ण राज पाण्डे	सदस्य	१३	डा. आशा राई	सदस्य
७	डा. विकास मल्ल	सदस्य			

## बसोबास तथा यातायात व्यवस्थापन समिति

१	डा. पूर्णिमा मानन्धर	संयोजक	६	डा. सुरज ढकाल	सदस्य
२	डा. वल बहादुर चन्द	सह-संयोजक	७	डा. शंकर पाण्डे	सदस्य
३	डा. वरुण शर्मा	सदस्य	८	डा. प्रमोद राज भट्ट	सदस्य
४	डा. सुवास शिवाकोटी	सदस्य	९	डा. प्रविन थापा	सदस्य
५	डा. प्रभात भा	सदस्य	१०	डा. नारायण पौडेल	सदस्य

## स्मारिका सम्पादन तथा प्रकाशन समिति

१	डा. विजयचन्द्र भा	प्रधान सम्पादक	५	डा. कृष्ण काफ्ले	सम्पादक
२	डा. सुविर सिंह	सह-सम्पादक	६	डा. किशन चन्द ठकुरी	सम्पादक
३	डा. दोजराज खनाल	सम्पादक	७	श्रीमति प्रमिना श्रेष्ठ	प्रकाशन सहयोगी
४	डा. उपेन्द्र मान सिंह	सम्पादक			

## सहभागी दर्ता तथा समा संचालन व्यवस्थापन समिति

१	डा. नारायण प्रसाद घिमिरे	संयोजक	७	डा. रूपा वास्तोला	सदस्य
२	डा. दिनेश गौतम	सह संयोजक	८	डा. सुस्मिता गौतम	सदस्य
३	डा. राजेश यादव	सदस्य	९	डा. देउती गुरुङ	सदस्य
४	डा. सुलोचना श्रेष्ठ	सदस्य	१०	डा. रजनी प्रधान	सदस्य
५	डा. सलिना मानन्धर	सदस्य	११	डा. नीना अमात्य	सदस्य
६	डा. श्रीजना मानन्धर	सदस्य			

## प्रदर्शनी तथा मेला व्यवस्थापन समिति

१	डा. दिनेश गौतम	संयोजक	४	डा. सुरज ढकाल	सदस्य
२	डा. माधव आचार्य	सह-संयोजक	५	डा. महेश भण्डारी	सदस्य
३	डा. बोलराज आचार्य	सदस्य			

## स्वागत सत्कार समिति

१	डा. आदर्श प्रधान	संयोजक	७	डा. विजयचन्द्र भा	सदस्य
२	डा. पूर्णिमा मानन्धर	सह-संयोजक	८	डा. नारायण बसेल	सदस्य
३	डा. देवराज अधिकारी	सदस्य	९	डा. शर्मिला चापागाईं	सदस्य
४	डा. नारायण प्र. घिमिरे	सदस्य	१०	डा. चन्द्र ढकाल	सदस्य
५	डा. रामपुकार ठाकुर	सदस्य	११	डा. नजुमा जोशी	सदस्य
६	डा. बुद्धिमान खालिङ	सदस्य	१२	डा. श्रृजना मानन्धर	सदस्य

१३	डा. डिकर देव भट्ट	सदस्य	१८	डा. सुविर सिंह	सदस्य
१४	डा. काशीनाथ यादव	सदस्य	१९	डा. उमेश दहाल	सदस्य
१५	डा. बिष्णु धिताल	सदस्य	२०	डा. सुरेन्द्र कार्की	सदस्य
१६	डा. दिनेश गौतम	सदस्य	२१	डा. कृष्ण प्रसाद पौडेल	सदस्य
१७	डा. शिव प्रसाद देवकोटा	सदस्य			

### पुरस्कार वयन समिति

१	डा. मुक्ति नारायण श्रेष्ठ	संयोजक	६	डा. सुवर्ण लाल श्रेष्ठ	सदस्य
२	डा. तुलसी श्रेष्ठ	सह संयोजक	७	डा. आदर्श प्रधान	सदस्य
३	डा. ब्रज किशोर प्रसाद शाह	सदस्य	८	डा. तेज बहादुर बस्नेत	सदस्य
४	डा. दुर्गा दत्त जोशी	सदस्य	९	डा. शुभनारायण महतो	सदस्य
५	डा. दिनेश पराजुली	सदस्य			

### विधान संशोधन तथा सुमगव समिति

१	डा. शुभनारायण महतो	संयोजक	४	डा. केशव प्रसाद प्रेमी	सदस्य
२	डा. बैकुण्ठ पराजुली	सदस्य	५	डा. सुरेन्द्र कार्की	सदस्य
३	डा. नारायण प्रसाद धिमिरे	सदस्य	६	डा. आदर्श प्रधान	सदस्य

### वैदेशिक समन्वय समिति

१	डा. द्रोण प्रसाद रसाइली	संयोजक	५	डा. पवन अग्रवाल	सदस्य
२	डा. ज्ञानेन्द्र नाथ गंगोल	सदस्य	६	डा. बलराम अर्याल	सदस्य
३	डा. विजय अधिकारी	सदस्य	७	डा. अनुप श्रीवास्तव	सदस्य
४	डा. चिन्तामणि लामिछाने	सदस्य			

### सांस्कृतिक कार्यक्रम संयोजक समिति

१	डा. किशोर प्रसाद श्रेष्ठ	संयोजक	४	डा. सुवास चौधरी	सदस्य
२	डा. हर्षरत्न शाक्य	सदस्य	५	डा. उमेश मण्डल	सदस्य
३	डा. सरोज यादव	सदस्य			

### वेबसाइट सुधार समिति

१	डा. सुविर सिंह	संयोजक	२	डा. सितलकाजी श्रेष्ठ	सदस्य
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### औद्योगिक सत्र तथा पार्टनरशीप प्रमोशन समिति

१	नेपाल ह्याचरी उद्योग संघ	संयोजक	७	वन्यजन्तु तथा राष्ट्रिय निकुञ्ज विभाग	सदस्य
२	नेपाल दाना उद्योग संघ	सदस्य	८	पशुपंक्षी प्रति निर्दयिता रोकावट समाज	
३	नेपाल पशुपंछी औषधि व्यवसायी संघ	सदस्य		(SPCA Nepal)	सदस्य
४	नेपाल डेरी एशोसिएसन	सदस्य	९	अण्डा व्यवसायी संघ	सदस्य
५	केन्द्रिय मासु व्यवसायी संघ	सदस्य	१०	डेरी व्यवसायी प्रतिनिधि	सदस्य
६	केन्द्रिय दुग्ध सहकारी संघ	सदस्य			

### निर्वाचन समिति

१	पद्मनाथ शर्मा	निर्वाचन आयुक्त
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**PROGRAM SCHEDULE**  
**9th National Veterinary Conference (April 22-24, 2010)**

**Day I: April 22, 2010**

**Venue: Nepal Academy Hall, Kamaladi**

**INAUGURAL SESSION**

08:00 - 09:00 am	Registration of Participants
09:00 - 09:10 am	Chairing and Batch distribution to the Chief Guest and Guests
09:10 - 09:15 am	Welcome address highlighting the objective of the Conference
09:15 - 09:20 am	Inauguration of the Conference by lighting the lamp by the Chief Guest
09:20 - 09:25 am	World Veterinary Day 2009 award handover to NVA
09:25 - 09:30 am	NVA Life Time Achievement and NVA National Awards Distribution
09:30 - 09:35 am	Message from President of World Veterinary Association
09:35 - 09:40 am	Award Presentation: Industrialists and Entrepreneurs
09:40 - 09:45 am	Awards Presentation: Narendra Memorial Trust Awards, Pasudhan Kaushal Award, Pashudhan Vikram Award and NVA-Rotary-Shrijana Awards
09:45 - 09:50 am	Award Presentation : NVA Service Awards
09:50 - 10:35 am	Inaugural speech, Few Words, and Key note speeches by Guests and Chief Guest
10:35 - 10:40 am	Chairman's Remarks
10:40 - 10:50 am	Vote of thanks & closing of inauguration ceremony
10:50 - 11:50 am	Lunch

**TECHNICAL SESSION**

<b>I. THEME PAPERS</b>		
<b>Chairperson:</b> Dr NPS Karki; <b>Rapporteurs:</b> Dr UM Singh and Dr Rajani Pradhan		
12:00-12:15	Zoonosis and human health: D. D. Joshi	P.-6
12:15-12:30	Food safety and global concern: D. Sedhain and B. Parajuli	P.-6
12:30-12:45	One World, One Health: More cooperation between veterinarians and physicians : S. Singh and S K Shrestha	P.-7
12:45-13:00	Veterinarian's Role in Animal Welfare: N Lee	P.-7
13:00-13:15	National wildlife health management policy: K. Gaire and S. Paudel	P.-8
13:15-13:30	Impacts of climate change on livestock and vice versa: D. R. Khanal, S. P. Shrestha and A. Pradhan	P.-8
13:30-13:45	Status and strategies for the control of major infectious diseases of livestock in Nepal: R. K. Khatiwada, K.C.Thakuri, N. P. Ghimire and S. Karki	P.-9
13:45- 2:15	Discussion and Chairperson's remarks	
2:15-2:30	Tea Break	

**INDUSTRIAL/COMMERCIAL SESSION**

<b>Chairperson:</b> Dr. P. Mainali, Joint Secretary, MOAC; <b>Rapporteurs:</b> Dr. J L Amatya and Dr K Premy		
14:30-15:00	Probiotech Industries Pvt. Ltd.	P.-9
15:00-15:30	Mars India	

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15:30-16:00	Virbac India	
16:00-16:30	Intas Pharmaceutical India	
16:30-17:00	Medivet Pharmaceuticals	
17:00-17:30	Nepal Dairy Association	

**POSTER PRESENTATION**

1	Changes In The Genetic And Biological Characteristics of Recent AIV Subtype H9N2 Isolated In Korea : M. P. Acharya, Hyuk-Joon Kwon, Il-Hwan Kim and Jae-Hong Kim	P.-10
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**Day II: April 23, 2010**

<b>II. RUMINANT PRODUCTION AND HEALTH (HALL:1)</b>		
<b>Chairperson:</b> Dr. SK Shrestha; <b>Rapporteurs:</b> Dr SP Gautam and Dr S Kafle		
9:00-9:10	Genetic improvement of dairy animals to meet farmer expectation for food security : K. P. Paudel and A. Shah	P.-10
9:10-9:20	The effect of medicated and non-medicated urea molasses multi-nutrient block (UMMB) supplement against nematode infection, on milk production and its composition : I. N. Shah and J. L. Yadav	P.-11
9:20-9:30	A clinical study on anoestrus buffaloes in southern Nepal : S. K. Sah and Toshihiko NAKAO	P.-12
9:30-9:40	Utilization of ground bamboo in fattening cattle : R. Pradhan and H. Kumagai	P.-12
9:40-9: 50	Transhumance effect on husbandry practices and basic physiological vitals of chauri, the yak cattle fl hybrid: D. K. Chetri, R. A. Sah, N. R. Devkota and D. B. Nepali Karki	P.-13
9:50-10:00	Discussion	
10:00-10:20	Tea Break	
10:20-10:30	Comparative study on povidone iodine cream and povidone iodine solution against sub-clinical mastitis of dairy cattle under farmer's management in Nepal : S. Thapa and B. R. Joshi	P.-13
10:30-10:40	Sub-clinical bacterial mastitis (scm) in cattle of eastern terai of Nepal : S. Yadav and S. N. Deo	P.-14
10:40-10:50	Early detection of subclinical mastitis among the dairy Buffaloes: C.Dhakal and B. P. Upadhyaya	P.-14
10:50-11:00	Study on the survival of Streptococcus isolated from arthritis cases of lambs under various environmental conditions : R. P. Thakur	P.-14
11:10-11:20	Clinical-laboratory investigation of mouldy maize and fodder poisoning in male goats in Kathmandu valley Nepal : K. Karki, P. Manandhar, S. Manandhar and P. Koirala	P.-15
11:20-11:30	Discussion	
11:30-11:45	Chairperson's remark	
11:45- 13:00	Lunch Break	

<b>III. POULTRY PRODUCTION AND HEALTH (HALL: 1)</b>		
<b>Chairperson:</b> Dr. Tej B Basnet; <b>Rapporteurs:</b> Dr Sulochana Shrestha and Dr B. R. Acharya		
13.00-13.10	Effect of forage peanut meal on the production performance of lohmann layers (Action Research Through System Learning Approach) : B. N. Adhikari, I. P. Dhakal, N. R. Devkota and M. Sapkota	P.-15
13.10-13.20	Biosecurity assessment of commercial poultry farms of Chitwan District : S.C. Chaudhary and S. Singh	P.-16
13.20-13.30	Isolation and identification of salmonella species from the postmortem samples of poultry at Regional Veterinary Laboratory, Pokhara : B. K. Shrestha, P. R. Shrestha and S. P. Devekota	P.-16
13.30-13.40	Seroprevalence of Newcastle Disease (ND) in commercial layers around vicinity of IAAS, Rampur : B. Shrestha and H. B. Basnet	P.-16
13.40-13.50	Molecular characterization of a qtl associated with pulmonary hypertension syndrome in chicken : P. B. Kandel	P.-17
13.50-14.00	Discussion	
14.00-14.10	Surveillance of Avian Influenza In Nepal : L. Shrestha, P. Manandhar, S. Manandhar, S. Manandhar and P. Koirala	P.-18
14.10-14.20	Effect of Aloe vera on immunomodulation, liver function, blood glucose & performance of broiler chickens : D. K. Yadav, D. K. Singh & M. C. Lee	P.-18
14.20-14.30	Enterococcus faecalis and Enterococcus faecium the major cause of weakness and mortality in day old chick : H. B. Basnet, H. J Kwon, S. H. Cho And S.J. Kim	P.-19
14.30-14.40	A case report on Erysipelas in a broiler chicken flock : H. B. Basnet, H. J. Kwon, S. H. Cho, and S. J. Kim	P.-19
14.40-14.50	Studies on counteractive effect of two phyto ascorbic acid products in aflatoxicated broilers : D. Sapkota and M. R. Wade	P.-20
14.50-15.00	Discussion	
15.00-15.15	Chairperson's remarks	
15.15-15.30	Tea Break	

<b>IV. COMPANION ANIMALS AND WILDLIFE MANAGEMENT (HALL: II)</b>		
<b>Chairperson:</b> Dr. MN Shrestha; <b>Rapporteurs:</b> Dr. B R Thapa and Dr Deuti Gurung		
15.30-15.40	Equine population, breeding, health Status and its future in Nepal : S. S. Sharma	P.-20
15.40-15.50	A study of tuberculosis in rhesus macaques: a journey into zoonosis : S. P. Shrestha, S. Thapa, G. B. Girel and B. C. Kunwar	P.-20
15.50-16.00	Effect of atropine sulphate, xylazine and ketamine combination protocol on clincaal, haematological and sero biochemical properties in dog : P. Phuyal And M. K. Shah	P.-21
16.00-16.10	The relationship between blood parameter and mycobacterium culture status in captive elephants of Nepal : K. Giri, G. E. Kaufman And I. P. Dhakal	P.-21
16.10-16.20	Incidence of Venereal Granuloma and its treatment in stray Dogs of Pokhara City, Nepal : H. R. Awasthi	P.-21

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16.20-16.30	Feasibility study on using non-surgical sterilization as a means of street dog population control in Kathmandu, Nepal: M. Bhandari, M. Aziz, B. P. Upadhyaya, J. Lindenmayer, A. Rauch, and G. Kaufman.	P.-22
16.30-16.45	Discussion	
16.45-17.00	Chairperson's remarks	
17.00- 20.00	Cocktail Dinner	

**V. Zoonoses, food safety, food security, herbal medicines, animal welfare and others**

<b>Chairperson: Dr. K P Dhakal; Rapporteurs: Dr. P. Manandhar and Dr Dr. B Sapokota</b>		
9:00-9:10	Sero-prevalence of porcine cysticercosis and human taeniasis/cysticercosis in Nepal: D.D. Joshi, A. Oommen, P. Dorny, P. R. Bista, V. Rajshekhar, J. Vercruysse	P.-22
9:10-9:20	E. coli 0157:H7 infection an emerging threat to public health: its epidemiology, prevention and control: A review : S. R. Aryal	P.-23
9:20-9:30	Prevalence of Taenia solium Cysticercosis in Swine in Kathmandu Valley and Its Impact on Public Health : A. K. Karna and D. D. Joshi	P.-23
9:30-9:40	Epidemiological situation of animal rabies and its control strategy in Nepal : S. Karki and K. C. Thakuri	P.-24
9:40-9:50	Identification of two Rabies Virus lineages of Nepal : G. R. Pant	P.-24
9:50-10:00	Epidemiology of Foot and Mouth Disease in Nepal: R. Giri, P. Parshin and V Makarov	P.-24
10:00-10:10	Discussion	
10:10-10:30	Tea Break	

**Chairperson: Dr. DD Joshi; Rapporteurs: Dr. S Aryal and Dr Dr. R Ghimire**

10:30-10:40	Prevalence of Salmonella in retail meat shops in Kathmandu, Nepal : M. Upadhyaya	P.-25
10:40-10:50	A retrospective study of case flow pattern at HICAST Veterinary Teaching Hospital : P. Sharma	P.-25
10:50-11:00	Evaluation of hepatoprotective activity of Cuscuta reflexa Roxb. (Aakashbeli) stem : P. Alam, M. P. Gupta	P.-26
11:10-11:20	Effect of stinging nettle on productivity and immune status of laying hens: N. Poudel and D. R. Khanal	P.-26
11:20-11:30	Effect of Nyctanthes arbortristis on dextran sulfate sodium-induced colitis : S. Bhattarai and T. C. Bhattarai	P.-27
11.30-11.40	Traditional veterinary medicine practice adopted by the people of Nepalese origin in north eastern India : K. Kaphle and D. Sapkota	P.-27
11.40-11.50	Discussion	
11.50-12.00	Chairperson's remarks	
12.00-13.00	Lunch Break	

**Chairperson: Dr. B. N. Thakur; Rapporteurs: Dr. K Sharma and Dr. G. Panta**

13.00-13.10	Study on Effect of different Fat Levels on the Quality of Chhurpi prepared	
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from Cow and Buffalo milk : D. N. Sah		
13.10-13.20	Climate change: threats and opportunities for livestock development in Nepal : K. Pandey	P.-28
13.20-13.30	Practice of animal welfare education (AWE) in Nepal : B. S. Sapkota, S. S. Singh	P.-28
13.30-13.40	Knowledge and attitude of Nepalese people towards the welfare of farmed animals and assessment of animal welfare during transportation : J. Pandeya	P.-29
13.40-13.50	Health status of equines employed at Lalitpur brick factories: S. Koirala, S. Basyal and P. Thapa	P.-29
13.50-14.00	Community based animal health care for rural livestock development: P S Kushwaha and S. N. Mahato	P.-30
14.00-14.10	Prevalence of helminth parasites of piglet in peri-urban areas of Kathmandu valley: N Baskota and R P Thakur	P.-30
14.10-14.20		
14.20-14.30		
14.30-14.40		
14.40-14.50		
14.50-15.00	Discussion	
15.00-15.15	Chairperson's remarks	
15.15-15.30	Tea Break	

**Day III****Venue:** World Trade Centre**Date:** 2067/1/11 (April 24th, 2010)

08.00-09.00	Breakfast	
09.00-09.30	Constitution Amendment	
09.30-11.00	Tribute to late Veterinarians and General Assembly Meeting	
11.00-11.20	Tea Break	
11.20-11.30	Group Formation for recommendation	
11.30-12.30	Group Discussion	
12.30-01.00	Group Presentation	
01.00-02.00	Lunch Break	
02.00-05.00	Election	
05.00-06.00	Closing Ceremony	

**ZOONOSES AND HUMAN HEALTH**

**D. D. Joshi**

*Executive Chairman, NZFHRC*

Zoonotic diseases are those in which human beings are infected with pathogens carried by livestock. They can be transmitted directly through animal-to-person contact, or indirectly through consumption of contaminated food. Livestock carry potential health hazards, so food animals are an integral part of public health protocols. Hence the myriad of food safety policy legislation found globally. Regarding pigs, classical swine influenza is documented as having been transmitted to people on occasions, as has *Streptococcus suis*, which could be considered an occupational health hazard for those working in the pork industry. The domestic pig is known to be susceptible to several other zoonotic diseases like rabies, leptospirosis, brucellosis, erysipelosis, tuberculosis, Japanese B encephalitis (JE), etc. Pig meat from infected pigs, when consumed raw or inadequately prepared, can transmit a number of pathogens, such as *Trichinella* spp., *Cysticercus* spp., *Salmonella* spp. and *Listeria* spp.; for Taeniasis/cysticercosis inadequate hygiene during meat processing or at home can also be a source of contamination to human beings. In many circumstances, particularly for livestock diseases, the environment in which livestock are kept determines the course and severity of disease expression; a highly contaminated environment for livestock with a weakened immune system often tips the balance and makes a disease clinically epidemiologically. In Nepal so far mostly diagnosed zoonotic diseases are brucellosis, cysticercosis, trichinellosis, tuberculosis, salmonellosis, echinococcosis/hydatidosis, Japanese encephalitis, rabies, streptococcus suis and listeriosis.

**FOOD SAFETY AND GLOBAL CONCERN**

***Baikuntha Parajuli<sup>1</sup> and Damodar Sedai<sup>2</sup>***

*Nepal Veterinary Council<sup>1</sup>, Central Veterinary Laboratory<sup>2</sup>*

Urbanization, globalization, and terrorism have brought the need for a stronger, larger, more diverse, and more competent public health workforce to the forefront of public planning. The present health security challenges include zoonotic diseases, food- or waterborne illnesses, and bioterrorism. The OIE and its Member Countries believe that the concept of veterinarians as professionals who are only concerned with animal diseases should be broadened to include areas of activity that focus on public health outcomes, the control of risks along the food chain, as well as the welfare of animals. The OIE considers Veterinary Services to be a Global Public Good and their bringing into line with international standards (in terms of legislation, structure, organization, resources, capacities, the role of the private sector and paraprofessionals) as a public investment priority. The official agreement signed by the OIE and the World Bank in 2001 supports this view. There has been a renewed focus on the important relationship between public health and veterinary medicine for improving human health, animal health, and food safety. Because veterinarians work at the interface of human, animal, and environmental health, they are uniquely positioned to view health through the lens of public health impact. Changes in land use, creation and operation of large terrestrial and marine food production units, and microbial and chemical pollution of land and water sources, have created new threats to the health of both animals and humans (Zinsstag, Schelling, Wyss, & Mahamat, 2005). In Nepal, very scanty information is available on the incidence, which is being reported either as gastro-enteritis or typhoid and others. The study done by Thakur, 2009 in this sector indicated that 22% of poultry meat samples were found positive for *Salmonella*. Among them 11% was *S. enteritidis*; 5% *S. pullorum*; 4% *S. gallinarum*; 2% *S. typhi*. Antibiotic residues are equally alarming in food chain. A study conducted in milk samples in Kathmandu Valley has indicated that 10.66% were positive for antibiotics (Maharjan, 2009).

**ONE WORLD, ONE HEALTH: MORE COOPERATION BETWEEN  
VETERINARIANS AND PHYSICIANS**

*S. Singh<sup>1</sup> and S. K. Shrestha<sup>2</sup>*

*1. IAAS, Rampur, Chitwan 2. NIMBUS, Kathmandu*

"One World, One Health" indicates that the world has awakened to the link between animal diseases and public health. It has long been known that 60% of known infectious diseases are common to humans and animals (whether domestic or wild); 75% of recent emerging human diseases came from animals and 80% of the pathogens that could potentially be used in bioterrorism are zoonotic. It is also known that human populations need a regular diet of protein particularly from milk, eggs or meat, and that a deficiency can also be a public health problem. Recent outbreaks of West Nile Virus, Ebola Hemorrhagic Fever, SARS, Monkeypox, Mad Cow Disease and Avian Influenza remind us that human and animal healths are intimately connected.

From the animal health perspective, "One World, One Health" should eventually lead all countries to make a firm commitment to establishing mechanisms for the early detection of disease outbreaks, as well as allowing rapid implementation, by veterinarians, of any required preventive or therapeutic measure directed to animals. From the human health perspective, "One World, One Health" should induce all countries to adopt a united approach by veterinarians and human physicians for the control of zoonotic diseases, especially with regard to the prevention and post-exposure treatment of these diseases. On this ground, Veterinary medicine encompasses a majestic array of experts that contribute widely throughout the world working across the entire spectrum of public health around the globe - but more are needed.

**Veterinarian's Role in Animal Welfare**

*N. Lee*

*Veterinary Programmes Manager, Companion Animals and Tertiary Animal Welfare Education, WSPA Asia*

The veterinarian's responsibilities have evolved past treating illnesses, saving lives and stamping out diseases, to a focus on disease prevention and control through communication and education. Vets have become the focal point for animal related advice, and naturally, this includes animal welfare. Therefore it becomes crucial for vets to be knowledgeable about animal welfare so that they are able to provide reasonable advice.

Veterinarians have obligations to various parties: patients, clients, peers, society in general and to themselves. One of the roles of the veterinarian is as an individual member of the profession. This includes providing for the animals' disease treatment and prevention and client education. It is also important for vets to lead this role through practice, as can be seen in the way they handle animals and their communication to the public.

The other is the collective role of the profession, as expressed by the professional bodies. Professional bodies, such as the licensing body or professional associations, have roles to play in implementing ethical guidelines, influencing legislations, commenting publicly on welfare, approving curriculum in vet schools, and developing the veterinary oath.

Vets in practice are obliged to make decisions that are in animals' best interests, while taking into account the interests of the owners and the veterinarians themselves. However, this is not easy to do without logical ethical reasoning. It is not enough to have a general feeling about the situation, although that moral intuition may turn out to be accurate. It is important not to just follow general opinion without reasoned judgement of animal welfare issues.

When making ethical decisions, there are four guiding principles that one can use: non-maleficence, beneficence, autonomy and justice. Non-maleficence is the principle of "first, do no harm" and should be considered before any animal is given treatment. Beneficence is the principle of promoting good. Autonomy is the principle of being self-governing, i.e. allowing animals to make choices and is related to the "Freedom to express normal behaviour". Lastly, justice entails treating people and animals in a fair and equal way. In practice, ethical decisions are made each day. When logical ethical reasoning is applied, there will be greater personal satisfaction that the right course of action has been taken.

Understanding welfare and ethics is in the interest of the veterinary profession, as the veterinary profession is also looked upon increasingly frequent as a valued source of opinion in animal welfare matters.

### **WILDLIFE HEALTH MANAGEMENT IN NEPAL**

*K. P. Gairhe and S. Paudel*

Wildlife disease management in free ranging populations is inherently technically difficult and is frequently a contentious ecological issue when dealing with endemic or indigenous diseases in native species. During the current period of increasing globalization, the emergence of new diseases of wildlife or reemergence of old diseases have been reported. Wildlife is affected with a number of infectious diseases of bacterial, parasitic, viral, rickettsial, chlamydial and mycoplasmal origin. Efficient control of diseases of wild animals and ensuring a particular animal health status require appropriate diagnostic measures. Nepal is a home to a number of endangered species of animals like Royal Bengal Tiger, Great one horned rhinoceros, Asian elephant, snow leopard etc. Various infectious diseases are seen in this wildlife such as Tuberculosis, anthrax, H.S. etc. Among these diseases, tuberculosis (TB) is a current and re-emerging disease of both captive and free-ranging wildlife. Although there are a wide variety of mycobacterial species that are pathogenic in animals, including mammals, birds, reptiles, amphibians, and fish, tuberculosis usually refers to infection with specific organisms of the *Mycobacterium tuberculosis* complex. These include *M. tuberculosis*, *M. paratuberculosis*, *M. bovis*, *M. africanum*, *M. microti*, and *M. pinnipedii*. Currently, 23% of captive elephants of Nepal are infected with tuberculosis. The one phase of treatment of tuberculosis is completed in the government owned elephants in Chitwan National Park. Disease transmission among livestock, other domestic animals, and wildlife is also of great concern. The grazing lands are shared by all these animals, so the opportunity for epidemics in both livestock and wildlife population increases. As there is intermingling of wildlife and domestic animals, so there is a greater potential for transmission of various infectious diseases between these animals that will eventually affect conservation efforts. As a result, viable conservation initiatives can no longer be designed without addressing the health issues of wildlife. The expertise of all relevant disciplines that of health specialists should be employed for better management of wildlife and ecosystems. For effective wildlife health management, the government should establish separate wildlife health unit.

### **IMPACTS OF CLIMATE CHANGE ON LIVESTOCK AND VICE VERSA**

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Of late, impact of global warming on animal agriculture has been a subject of greater concern. Rise in average temperature has profound effect not only on the life cycle of parasites but also on the shifting location of the migratory birds carrying influenza viruses. Very important trend that has been observed in migratory birds is that they need not go to south during chilly winter and instead they are seen even in northern Nepal, Tibet and Japan which were otherwise cold places for them previously. This

sifting distribution of carrier birds has led the outbreaks of avian influenza in previously unknown areas of the world. Besides, the dynamics of emerging diseases in new geographic locations will be highlighted in this paper. An attempt was made on contribution of livestock and poultry industries on the rise in the production of green house gases that ultimately result in global warming and climate change.

#### **STATUS AND STRATEGIES FOR THE CONTROL OF MAJOR INFECTIOUS DISEASES OF LIVESTOCK IN NEPAL**

**R. K. Khatiwada<sup>1</sup>, K.C. Thakuri<sup>2</sup>, N. P. Ghimire<sup>1</sup> and S. Karki<sup>2</sup>**

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Infectious diseases have been considered as the major threat of livestock industry in Nepal. The epidemiological status and trend of major infectious diseases of livestock has been analyzed using secondary data during the period of 2000 to 2009 obtained at Veterinary Epidemiology Center from all 75 District Livestock Services Offices. Foot and Mouth Disease, Peste des petits ruminants, Classical Swine fever, Haemorrhagic Septicaemia and Black Quarter were found to be the most frequently occurring infectious diseases among the top ten reported animal diseases. Emerging epidemics like highly pathogenic avian influenza with serious consequences to food security, food safety, public health and trade owing to huge socio-economic impact had been observed as constant threat in the recent years. Appropriate control strategies including the need for public private partnership, regional cooperation, harmonization and capacity building of National Veterinary Services as per OIE guidelines has been recommended for prevention and control of infectious diseases of livestock in Nepal

## **II. INDUSTRIAL/COMMERCIAL**

#### **LATEST TRENDS IN MANAGING AND TREATING ANIMAL DISEASES AND IMPROVING ANIMAL PRODUCTIVITY - AN INDIAN PERSPECTIVE**

**N. Bhatia**

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In India, Animal Husbandry is the second largest sector after agriculture which provides self employment opportunities for more than 5.8% (23.68 million) of the working population of the country. India is world 3rd largest food producer with world highest livestock population (500million) and a contributor of more than 6% to National GDP, 29% to Agricultural GDP with milk output of 110 MT, Eggs 53 billion, Wool 46 MKg and Meat 2.5MT. India ranks first in respect of cattle and buffaloes, second in goats, third in sheep and seventh in poultry population in the world.

Newer concepts of feeding bypass fats, protein, formulating the diet as per the animal stage of pregnancy, use of feed alkalisers, growth promoters, productivity enhancers. Inclusion of synbiotics in the diet of animals is yet another growing trend to improve animal productivity. Metabolic disorders are a major concern for the dairy animal in reduced productivity and Veterinarians today pay due attention to prevention of post partum complications especially milk fever via use of dietary cation anion balance (DCAB) for animals pre-partum.

Prevention and effective treatment are becoming a pre-requisite of the industry as the farmer has accepted that prevention is better than cure. Vaccination of herds for commonly reported bacterial/ viral diseases viz FMD, HS, Brucellosis and use of latest farm disinfectants e.g Sodium dichloroisocyanurate tablets for better sanitation and farm health is a common practice in organised dairy farms and the concept is stirring for medium sized farmers also. Use of milk buffers like tri sodium citrate, antioxidants and immunopotentiators for the treatment of sub clinical mastitis is an upcoming trend, as it reduces on the

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use of antibiotics. Dry cow therapy is also receiving positive response from Veterinarians and the farming community as it prevent chances of post partum mastitis.

Blood protozoal Infections are on a rise because of crossbreds in decreased indigenous gene pool and diseases like Theileriosis which were rare earlier are commonly observed in farm animals. The author also believes that crossbreeding would although improve productivity but also decrease individual resistance to diseases. Global warming and other factors would also promote the need for effective care and prevention of infectious diseases with effective hygiene and germ free environment.

### III. POSTER

#### **Changes in the genetic & biological Characteristics of recent AIV subtype H9N2 isolated in Korea Madhav Prasad Acharya<sup>1</sup>, Hyuk-Joon Kwon<sup>2</sup>, Il-Hwan Kim<sup>1</sup>, Jae-Hong Kim<sup>1,2</sup>**

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Low pathogenic avian influenza (LPAI) caused by an Avian Influenza virus (AIV) subtype H9N2 has occurred nationwide in this country since 1996. Therefore, to lessen the economic losses of the disease, vaccination policy using a H9N2 oil vaccine has been adopted since 2007. We have isolated two AIVs from field cases in chicken farms, SNU KBNP-0028 and SNU 8011 before and after the application of H9N2 vaccine in Korea, respectively, and have tried to compare the biological characterization and genetic analysis. In Cross haemagglutination inhibition (HI) test, isolate SNU 8011 showed higher HI reactions with homologous and heterologous anti-sera to H9N2 AIVs. Comparison of virus shedding from cloaca and oropharynx revealed that both isolates could be readily isolated from upper respiratory tract (90-100 percent) than gastrointestinal tracts (10-60 percent). Moreover, Isolate KBNP-0028 was recovered from all organs tested including bone marrow, heart, brain and kidney indicating higher ability for broad tissue dissemination than recent isolates with higher viral titer. Growth kinetics among two isolates and a vaccine strain, isolates KBNP-0028 was replicated earlier with higher titer than others. Full length nucleotide sequences of NA gene and partial sequence of HA gene of a recent isolate SNU 8011 were determined. Genetic analysis results revealed that Haemagglutinin cleavage site amino acid motif was I-S-G-R and amino acid residues at receptor binding site at 226 was found Q. Furthermore, absences of Glycosylation site at 158 N Glycan and a deletion of 24 amino acids in the NA stalk region was meaningful changes in SNU 8011 isolate. This suggests that despite higher HA and HI activity and higher replication in allantoic fluid of 10 days old ECEs recent isolate 8011 have a weak potential for tissue replication which might be due to NA deletion that adversely affects the enzymatic activities of virus. This result indicates that there might have been considerable changes in tissue tropism, virus replication and genetic mutation in AIV H9N2 isolates recently.

### IV. RUMINANT PRODUCTION & HEALTH

#### **GENETIC IMPROVEMENT OF DAIRY ANIMALS TO MEET FARMER EXPECTATION FOR FOOD SECURITY**

**K. P. Paudel<sup>1</sup> and A. Shah<sup>2</sup>**

<sup>1</sup>Veterinary Private Practice Promotion Specialist, National Consultant, FAO Technical Assistance for CLDP and <sup>2</sup>Chief, Livestock Development Farm, Lampatan, Pokhara

Genetic improvement with increased milk productivity of dairy animals is one of the permanent

changes that farmer can achieve for ensuring food security. This paper reviews past efforts undertaken in Nepal for genetic improvement of dairy animals and analyzes the prevailing breed improvement programs. Introduction of high yielding breeds of cattle in Nepal can be traced back as early as 150 years ago. Artificial insemination (AI) program using liquid semen began in the year 1962 (2018 B.S.). Adoption of breed improvement programs, based on scientific principles, for three decades could have adequately substantiated some genetic improvement in milk productivity. However, the genetic improvement is not substantial. The annual growth of milk production of about 3.06% is attributed to increase in number of crossbred cattle and buffaloes. There is no evidence to support the fact that productivity of dairy animals has increased over years. Developed countries achieved exceptional increase in milk productivity through adoption of 1) permanent and unique identification of the animals, 2) parentage recording, 3) recording of milk yield and other traits of economic importance, 4) artificial insemination, and 5) statistically advanced genetic evaluation and selection based on the performance. Same scientific principles are applicable also in Nepal to achieve genetic improvement. From past efforts, some of the positive developments so far include creation of infrastructure for semen laboratory, acceptable level of improvement in conception rates from AI, execution of Dairy Cattle Improvement Project and increasing involvement of private sector in the delivery of services. Important issues of lack of clear policy on dairy animal breeding, use of breeding stock of inferior genetic merit, more focus on AI ignoring selection of sires, lack of breeding plans, and lack of resource centers have retarded genetic improvement. Similarly, inefficient mechanism for distribution of semen and liquid nitrogen and ignorance of farmers' role in the management of the institution responsible for breeding management are also important issues discussed. Based on farmers' preferences It is recommended that a major revamping is necessary to transform National Livestock Breeding Center into a financially sustainable autonomous corporate body with involvement of farmer representation in its organizational management.

**THE EFFECT OF MEDICATED AND NON-MEDICATED UREA MOLASSES MULTI-NUTRIENT BLOCK (UMMB) SUPPLEMENT AGAINST NEMATODE INFECTION, ON MILK PRODUCTION AND ITS COMPOSITION**

*I. N. Shah and J. L. Yadav  
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An experiment was conducted for 4 weeks on cross-breed lactating cattle at IAAS livestock farm to find out the effect of medicated and non-medicated Urea Molasses Multi-nutrient Block (UMMB) supplementation on nematodes load, milk yield and milk composition. Eight cross-breed cattle of 3rd to 4th parity and between 2nd to 3rd months of lactation were selected and were divided into four equal groups. Group A was kept as control (on routine feeding), Group B was supplemented with plain UMMB 400gm/cow/day for 28 days, Group C with medicated pineapple UMMB @200mg/kg body wt. on 1st day and same as group B on rest of the days and Group D with medicated albendazole UMMB @7.5mg/kg body wt. on 1st day and same as group B on rest of the days. The blocks were prepared manually by hot method. The ingredients were 40% molasses, 10% urea, 4% mineral mixture, 6% mustard cake, 4% salt, 14% cement and 22% rice bran. At the end of experiment, nematodes load decreased by 92.85%, 77.77% and 25% in albendazole, pineapple and plain UMMB group respectively. Milk yield was found to be increased by 12.19% in plain UMMB group, 13.81% in pineapple medicated UMMB group, 16.66% in albendazole medicated UMMB group and decreased by 6.25% in control group. Similarly, milk fat, SNF, lactose and protein was found to be increased by 24.32%, 2.93%, 2.57%, and 3.77% respectively as compared to control group. There was no significant change in milk composition between medicated and non-medicated groups.

### **A CLINICAL STUDY ON ANESTRUS BUFFALOES IN SOUTHERN NEPAL**

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Anestrus is one of the most important reproductive disorders in dairy buffaloes. The objectives of this study were to describe the causes of anestrus in buffaloes and their reproductive performance after treatment under the field condition in southern Nepal. Of 135 anestrus buffalo cows, 61.4% had true anestrus with ovarian dysfunction and 33.3% had silent ovulation. In 111 buffalo heifers, 76.6% were in true anestrus and 18.9% had silent ovulation. Duration of anestrus after calving was longer than 6 months in 83% and 61.5% of the cows had durations longer than 10 months. The interval between the last breeding and diagnosis of anestrus was more than 5 months in 67.4% of cows and heifers. Treatment of anestrus with prostaglandin F<sub>2</sub> in cows and heifers with the corpus luteum resulted in a higher pregnancy rate within one (P<0.01) and two months (P<0.05) after treatment as compared with treatment with vitamin/mineral mixture. Buffalo cows and heifers with inactive ovaries bearing a dominant follicle were also successfully treated with gonadotropin releasing hormone, resulting in a pregnancy rate of within one month after treatment (P<0.05). In conclusion, predominant causes of anestrus in dairy buffaloes in this region was true anestrus with inactive ovaries, and the duration of anestrus after calving as well as breeding was extremely long. Routine reproductive examination and adequate hormone treatment is recommended for improving reproductive performance of these buffaloes.

### **UTILIZATION OF GROUND BAMBOO IN FATTENING CATTLE**

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The study was conducted to evaluate the effect of ground bamboo feeding on intake, performance and blood constituents in finishing steers and heifers. The experiment was carried out using ten Cross-bred cattle (F1: Japanese Black x Holstein) six heads of steers and four heads of heifers (average BW: 445.7± 32.0 kg), born in Hiroshima University Experimental farm and age of cattle was 15 to 20 months. Cattle were divided into control group (5) and treatment group (5). Control group was provided with ad libitum Italian straw (IS) whereas treatment group was provided with 50% IS and 50% once ground bamboo (GBI). Concentrate (TDN: 74%, CP: 12%) was provided ad libitum to both groups. Body weight and orts were measured once in two weeks and blood samples were taken at the age of 13 months, before GBI feeding and 16 and 20 months, after GBI feeding. Cattle were kept in the same condition before and after GBI feeding. Inclusion of GB by the finishing stage of cattle had no significant effect in daily gain, concentrate intake and feed efficiency ratio (P>0.05). Even though, total roughage intake was significantly (P<0.05) higher in control group than in treatment group in steers and heifers (0.72 vs. 0.52 kg/day, 0.97 vs. 0.43 kg/day), no significant difference in total DMI was observed. The height of steers was taller than heifers at 16 months of age in heifer whereas hip width was higher in control group than in treatment group in steers. There were no significant differences in blood metabolites (albumin, non-esterified fatty acids, plasma urea nitrogen, T-cholesterol and glucose) even though GBI was added in the diet. In conclusion, addition of 50% GBI in the diet of finishing heifers and steers had no adverse effect in daily gain, concentrate intake, total DMI and in blood metabolites. Therefore, 50% GBI can be added in finishing diet of fattening steer and heifers.



**TRANSHUMANCE EFFECT ON HUSBANDRY PRACTICES AND BASIC PHYSIOLOGICAL VITALS OF CHAURI, THE YAK-CATTLE F1 HYBRID.**

***D. K. Chetri, R. A. Sah, N. R. Devkota, and D. B. Nepali Karki***

An experiment was conducted in Dhunche and Syaphru VDCs of Rasuwa district, Nepal from September, 2008 to March, 2009 on 28 chauries aged 3 to 16 years to evaluate the dynamics in husbandry practices and physiological vitals during transhumance. Physiological vitals were evaluated by 2x4 Factorial Completely Randomized Design with two levels of altitude (high- 3300 masl and low- 1655 masl) and four levels of age group (G1- up to 6 yrs, G2- 7 to 9 yrs, G3- 10 to 13 yrs and G4- above 13 yrs); information regarding husbandry practices were gathered from herders (n=60) using purposefully prepared semi-structured questionnaire and analyzed by SPSS 16.0. The physiological vitals were recorded from two different altitude pastures (3300 masl vs. 1655 masl). From these data, Dairy Search Index (DSI) for each animal was determined. Almost all animals (86.67%) were managed for generation back (98.33%) on absolute grazing on open roof system (93.33%) without any supplementation but in lean period, almost half (46.67%) herders were found to supplement their milking animals with locally available alternatives. Average first calving age was observed 3.07 years (85%); lactation length of 6-7 months (58.33%); calf weaning age of less than 15 days (46.67%); calving interval of 13-14 months (91.67%); average herd size of 23.1 (7-50) animals and milk production of 2-4 L/day (48.33%). Almost two third herders (65.00%) had basic knowledge on common diseases; advantages of anthelmintics (88.33%) and acaricides use (50.00%), despite having higher faith on traditional healers (58.33%) and almost none (91.67%) were found vaccinated. Pasture deterioration and increasing disease prevalence (40.00%) were the major constraints of chauri keeping. Physiological vitals of chauri varied greatly during transhumance. Rectal temperature, respiration rate, pulse rate and DSI showed significant variation ( $P < 0.01$ ) with significantly larger values when animals were at low altitude pasture, suggesting low altitude environment atypical to animal's physiology. But, no such responses ( $P > 0.05$ ) were evidenced in all these parameters with respect to age. Interestingly, despite huge dynamics, they all were found to be within the normal physiological range as referenced for bovine species. Thus, findings of this study demonstrated that transhumance, the rule of chauri management, is herders' rational farming approach to make use of pastures available at different altitudes and have a distinct impact on animals' physiology and production parameters.

**COMPARATIVE STUDY ON POVIDONE IODINE CREAM AND POVIDONE IODINE SOLUTION AGAINST SUB-CLINICAL MASTITIS OF DAIRY CATTLE UNDER FARMER'S MANAGEMENT IN NEPAL**

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A field study conducted on lactating dairy cattle in Piple and Thakre village development committees of Dhading district showed that both cream based and solution based preparations of Povidone Iodine were equally effective in reducing the level of sub clinical mastitis in dairy cows. This was clearly evident by significant reduction in somatic cell counts in both groups as compared to the control animals. Furthermore, the somatic cell count decline was not different between cream based application and solution based application (teat dipping) of Povidone Iodine, which suggests that ointment based application was also equally effective as the Povidone Iodine teat dips against sub clinical mastitis of dairy cattle. The cream based application would be easier for use in the field conditions as it will minimize the

problem of spilling over, regular topping up and irregular and insufficient application of the chemical for teat dipping. As compared to dipping, ointment based preparation would be cheaper, easier to handle and transport and compatible to the traditional practices of small holder dairy farmers, thus would be helpful to reduce the prevalence of clinical and sub-clinical mastitis of dairy animals under Nepalese farming system.

### **SUB-CLINICAL MASTITIS (SCM) IN CATTLE OF EASTERN TERAI OF NEPAL**

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This study was conducted from October 2006 to March 2007 in Regional Veterinary Laboratory, Biratnagar, Nepal to investigate the incidence of sub clinical mastitis (SCM) in Biratnagar sub-metropolitan city and nearby villages of Morang and Sunsari district. Altogether 190 lactating crossed bred cattle were selected on random sampling basis. After testing the milk sample of 190 cattle (760 quarters), by California Mastitis Test (CMT) and Modified White side Test (MWT) 13.6% animals and 5.9 % quarters were found to be affected sub clinically. Staphylococci (37.7%) were the most prevalent bacterial isolates found during the culture of positive samples. Enrofloxacin (88%) was found to be the most potent antibiotic in antibiotic sensitivity test.

### **EARLY DETECTION OF SUBCLINICAL MASTITIS AMONG THE DAIRY BUFFALOES**

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A total of 162 milk quarters were sampled from buffaloes in order to study the prevalence of subclinical mastitis in dairy buffaloes using electrical conductivity technique. The mean electrical conductivity of milk in different SCC threshold showed a continuous increase with increasing SCC threshold. Both the parameters studied, SCC and EC, were found to be more elevated for mastitic quarters containing major and minor pathogens than those in the quarter with no growth of organism. Infected quarters had significantly higher mean values for the SCC ( $P < 0.001$ ) and EC ( $P = 0.001$ ) than those of non-infected quarters. Staphylococcal infection had significantly higher mean values of SCC ( $P < 0.01$ ) and EC ( $P = 0.019$ ) than for minor pathogen. The minor pathogen had also significantly ( $P = 0.014$ ) higher mean SCC, higher mean EC than normal quarters but the difference was non significant (0.127).

### **STUDY ON THE SURVIVAL OF STREPTOCOCCUS ISOLATED FROM ARTHRITIS CASES OF LAMBS UNDER VARIOUS ENVIRONMENTAL CONDITIONS.**

**R. P. Thakur**

Arthritis is a serious problem in Lambs in Nepal and also other parts of the world. There are many causes of arthritis however Streptococcus dysgalactiae Sps. is consider to be main cause of arthritis in Lamb. While studying the epidemiology of the disease, it is necessary to study the environment where sheep and lambs are kept. Hence, an experiment was conducted at Royal College of Veterinary Science, London to determine the survival of Streptococcus dysgalactiae of arthritis of lambs in different materials in the sheep's environment. The organism was obtained from a natural outbreak of streptococcus arthritis

in lambs. The organism did not survive for more than five weeks in most of the materials used in the experiment, except dry straw and fleece. and broth culture on which it survived more than five weeks. It is likely that the *S. dysgalactiae*, that may be shed in vaginal discharges, can survive for long enough on dry straw for a lamb of the carrier ewe to acquire infection via the nares by lying on the infected bedding. The organism survived for fewer days (17 days) in wet straw bedding, as compare to dry straw (more than five weeks). Similarly, the Organism survived for fewer days in soiled bedding that had even more moisture than wet straw. The survival of *S. dysgalactiae* on wooden materials was unexpectedly short (less than one hour) in wooden poles kept in sunlight. Similarly, the bacterium survived 16 hours on a metal hurdle kept in sunlight, compared to 26 hours without sunlight. The sunlight seems to have considerable effect on survival of the organism. The organism seems to tolerate ambient temperature and relative humidity at which the trial was conducted.

#### LABORATORY INVESTIGATION OF MOULDY MAIZE AND FODDER POISONING IN MALE GOATS IN KATHMANDU VALLEY NEPAL

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An outbreak of a syndrome of unknown etiology associated with the feeding of mouldy maize grain, fodder was reported in male goats in a herd of 2000 meant for sale for Dashahara festival during the month of October 2008 in Kathmandu valley. A total of 52 goats suddenly became ill with symptoms of anorexia, depression, diarrhea and ruminal stasis. Based on history and clinical examination these goats were tentatively diagnosed as the case of moldy corn/fodder poisoning. The goats were treated with liquid Toxol™, Immolyte™ and Liquid Promin™. Despite of treatment, 34 male goats died. Necrosis of the fore stomach mucosa was the most characteristic gross pathological change. Clinical pathological findings included mild focal erosions to severe, diffuse, coagulative necrosis of the mucosa in the rumen, reticulum and omasum and congestion and hemorrhages in the abomasums, liver with shrunken appearance pale to yellowish discoloration with distended gall bladder, pin point hemorrhage in kidney and small intestine with excessive mucus. Laboratory examination of tissue samples from dead goats revealed *Aspergillus*, *Penicillium spp* and *E.coli*.

### V. POULTRY PRODUCTION & HEALTH

#### EFFECT OF FORAGE PEANUT MEAL ON THE PRODUCTION PERFORMANCE OF LOHMANN LAYERS

*B. N. Adhikari, I. P. Dhakal, N. R. Devkota and M. Sapkota*

A study based on field situation analysis by employing System Learning Approach (SLA) was conducted during August, 2008. Experiential Learning, system analysis and Participatory Rural Appraisal (PRA) tools were used to explore and identify the key researchable issues related to poultry production focusing on feeding component and the nutrition of laying hens. Need of exploration of alternative protein feed source through possible legume forages was the key researchable issue identified through the SLA works. Incorporation of forage peanut (*Arachis pintoi*) meal at different proportions to study its effects on the performance and egg quality characteristics in the layer's diet for a period of two months (25 to 33 weeks age) were investigated. It was concluded that system's approach was a valid tool to explore and analyze key researchable issues pertinent to poultry production. Incorporation of forage peanut meal at 2-5% level in the diet of layers would result optimum production. However, use of forage peanut meal in the layer's ration needs further research.

**BIOSECURITY ASSESSEMENT OF COMMERCIAL POULTRY FARMS OF  
CHITWAN DISTRICT**

**S.C. Chaudhary & S. Singh**

*IAAS, Rampur, Chitwan*

A study on biosecurity measures adopted by various commercial poultry farms was conducted from April to August, 2009, at Chitwan district of Nepal. Biosecurity is a set of management practices which, when followed, reduce the potential for the introduction or spread of disease agents onto and among site. A questionnaire was designed to obtain information regarding biosecurity on commercial broiler and layer farms by direct interview with the farm staffs/owners and also by assessing the farm facilities. About 56.7% of the respondent expressed that they knew about biosecurity but the adoption was quite poor. 50% of the farms were in between 200 - 400 meter and 53.3% had only shed fence. Only 23.3% had disinfectant footbath and sprayer at the farm gate and 43.3% had only footwear for entering the shed. 36.7% kept lime dust at shed gate and only 46.7% clean-up poultry sheds and equipments before arrival of new flock. Thus, from this study it was concluded that biosecurity adoption by most Chitwan's poultry farms is inadequate and needs effective implementation.

**ISOLATION AND IDENTIFICATION OF SALMONELLA SPECIES FROM THE POSTMORTEM  
SAMPLES OF POULTRY AT REGIONAL VETERINARY LABORATORY, POKHARA**

**B. K. Shrestha<sup>1</sup>, P. R. Shrestha<sup>2</sup> and S. P. Devkota<sup>3</sup>**

*<sup>2</sup>DLSO, Kaski, <sup>3</sup>RVL, Kaski*

The study was conducted from March to July 2009 at Regional Veterinary Laboratory, Pokhara with attempts to find out the prevalence of salmonellosis in poultry; isolate and identify Salmonella species in post mortem samples and perform the antimicrobial sensitivity tests of the Salmonella isolates. 181 live birds brought at Regional Veterinary Laboratory were tested by rapid plate agglutination test using Salmonella pullorum colour antigen, out of which 61 (33.70%) showed positive reaction. A total of 64 samples (liver, Spleen, heart, lungs, gallbladder and intestine) were collected from the post mortem cases of the positive reactors and from other cases with lesions suspected to be positive for Salmonella infection for the isolation of bacteria in different media, and identification was performed based on the staining, cultural and biochemical properties of Salmonella species. Out of 64 samples, 17 (26.56%) isolates of Salmonella species were isolated. The isolates were subjected to antimicrobial sensitivity test for different antimicrobials using disc diffusion method which revealed enrofloxacin (100%) to be most sensitive antimicrobials followed by gentamicin (94.11%), cotrimoxazole (94.11%), chloramphenicol (88.23%) and doxycycline (76.47%). Tetracycline (58.82%) was moderately sensitive, cefotaxime (29.41%) was least sensitive and ampicillin was found insensitive. The study showed that the prevalence of Salmonella in Kaski district was high and the most commonly used antimicrobials in poultry were found sensitive in vitro study.

**SEROPREVALENCE OF NEWCASTLE DISEASE (ND) IN COMMERCIAL LAYERS AROUND  
VICINITY OF IAAS, RAMPUR**

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The research was conducted at the veterinary teaching hospital, Department of Microbiology and Parasitology, IAAS, Rampur. A total of serum 1170 samples of were collected from commercial layers and 45 from backyard birds. In layers, the samples were divided into three age groups as: 4-20 wks(315

samples), 20-40wks (450 samples) and 40-above (405 samples). The samples then were tested serologically by HA and HI test (Allan and Gough, 1974) by using F1 vaccine (manufactured by Tripureshwor Laboratory, Nepal) as an antigen. Out of these samples, 1041 were found positive for seroprevalence and 1153 for specific immunity to NDV with overall positive percentage of 88.97 and 98.54 respectively in commercial layers. While in backyard birds, 15 were found positive for seroprevalence and 22 for specific immunity to NDV with overall positive percentage of 33.33 and 48.88 respectively. It was concluded that the prevalence of NDV in commercial layers is high (29% in 1999 and 40.35% in 2000 in Chitwan (Dhakal, 2002), and are under high risk for ND outbreak in future as there was less specific immunity percentage in free ranged backyard birds. At the time of study there was an outbreak of ND in most of village around vicinity of IAAS. It is therefore recommended that proper vaccination and improved management practices as mean of prevention against ND before the period of outbreaks should be instituted.

### **MOLECULAR CHARACTERIZATION OF A QTL ASSOCIATED WITH PULMONARY HYPERTENSION SYNDROME IN CHICKEN**

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Marker assisted selection (MAS) speeds up selection response and preferable in selection against complex disease trait. To improve on diseases resistant, it would be advantageous to identify quantitative trait loci (QTL) associated with disease, resequencing of genes within QTL and select animals carrying the desirable alleles. Direct markers (loci that code for the functional mutation) are preferred for effective implementation of MAS. In this study, we characterized a QTL, on chromosome 3: 91.2-91.4 Mb and resequenced genes within this QTL associated with pulmonary hypertension syndrome (PHS) in chicken. Within this QTL, 3 genes (ANG2, AGPAT5 and MCPH1) were located and resequenced the all encoding regions, upstream and downstream regions of ANG2 and AGPAT5 by Sanger sequencing. Around 85% of the targeted sequences of ANG2 and AGPAT5 genes were properly sequenced. Three haplotypes (1 for diseases susceptible and 2 for disease resistance) were compared for polymorphisms. 37 polymorphisms in ANG2 (1 SNP in coding region, 11 SNPs in upstream region, 8 SNPs and one insertion in intronic region, 3 SNPs in UTR regions and 13 SNPs and one insertion in downstream region) and 26 polymorphisms in AGPAT5 (3 SNPs in encoding region, 10 SNPs and one insertion in upstream regions, 8 SNPs on intronic regions and 4 SNPs in downstreams regions) were found. The polymorphisms found in upstream region of AGPAT5 include one SNP in predicted Transcription factor binding site (NF-E4). To conclude on polymorphisms, we didn't found nonsynonymous SNPs in coding regions of both ANG2 and AGPAT5 genes which could directly associated with PHS. Though synonymous SNPs found in coding regions and SNPs and Indel found in transcription factor binding site, upstreams, intronic, untranslated and downstreams regions could have important in PHS association, we could not associate directly with PHS resistance or susceptibility. Further validations like gene expression studies and functional characterization will be required to associate these synonymous SNPs and SNPs and Indel in non-coding regions to PHS in the studied haplotypes.

### **SURVEILLANCE OF AVIAN INFLUENZA IN NEPAL**

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Avian influenza is an inapparent or nonclinical viral infection of birds caused by type A influenza viruses. The disease occurs worldwide, and all species of birds are thought to be susceptible to it. In case of Nepal, no outbreaks of AI have been detected so far, but, there is greater possibility, so, Nepal is at the risky level. In order to monitor the status of AI, surveillance programs should be regularly carried out. Hence, this research was proposed. This study was conducted at the Central Veterinary Laboratory from July to November 2007. Different types of avian swab samples received from various districts of Nepal were tested for the virus. The total number of specimens being 1000, among which 640 were tracheal swabs, 252 cloacal and 108 were fecal swabs. Firstly, all specimens were tested using kits (Synbiotics, USA) and those showing positive results were further confirmed by isolation of virus in embryonated eggs and also by HA and HI tests. In addition, the isolates were further passaged into one more batch of eggs as the confirmatory tests. This study was conducted to find out the prevalence of AIV in poultry and wild bird populations in Nepal. Among the tested specimens, only 6 tracheal swabs were found to be positive on rapid tests (0.6%). Those isolates were collected from poultry (0.93%) and received from Chitwan (0.72%) and Nuwakot (6.89%) districts. Among the 6 isolates, hemagglutinating activities were detected in 4 of them (66.66%) and they were also found to be H9-positive (100%). However, none of the isolates showed positivity for H5 and H7 subtypes. Furthermore, molecular diagnosis based on Taq Man Assay, RT-PCR was carried out in CSIRO-Gelong Australia, identified those isolates as Influenza-A or Flu 'A' viruses. Thus, it can be concluded that low-pathogenic strains of AI were detected in poultry samples, and wild birds being free from the virus.

### **EFFECT OF ALOE VERA ON IMMUNOMODULATION, LIVER FUNCTION, BLOOD GLUCOSE AND PERFORMANCE OF BROILER CHICKENS**

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A study was conducted to characterize the immunomodulation, effect on liver, hypoglycemic effect; morphological changes in organs like bursa, spleen and thymus, and growth performance in commercial broiler chickens following experimental feeding with commercial available Aloe vera juice. A total of 225 birds were divided into 5 treatment groups with three replications each, a replication containing 15 birds. Treatments were comprised of two different doses of Aloe vera juice at the rate of 5 ml per 2 litre and 10 ml per 2 litre with two time duration of 15 days and other 42 days each. One group getting no aloe vera served as control. Significantly higher ( $p < 0.05$ ) log<sub>2</sub> HI titre against ND with high globulin levels and moderately higher level of lymphocyte counts were recorded in all the treatment groups as compared to control group. The difference within the treatment groups was not significant. There were no significant changes in liver enzymes and blood glucose levels in the treated groups as compared to the control group. No microscopic changes were found in the liver of either treatment or control groups except fatty lipidosis. The ratio of bursa, spleen, thymus to body weight was significantly higher for treatment groups as compared to the control but nonsignificant for 2nd, 3rd, 4th, 5th and 6th week. The bursal atrophy was significantly higher in control group after hot IBDV vaccine challenge as compared to treatment groups, but the lesion score was not consistent for all the samples. The weight gain was nonsignificantly higher and FCR was significantly lower for treatment groups as compared to control

group with a high level (15.56%) of mortality in the control group as compared to treatment groups. Result thus suggests that feeding aloe vera juice to broiler chicken has an immunopotentiating effect and has beneficial effect on overall performance without any adverse effect on liver and blood glucose levels.

### **ENTEROCOCCUS FAECALIS AND ENTEROCOCCUS FAECIUM THE MAJOR CAUSE OF WEAKNESS AND MORTALITY IN DAY OLD CHICK**

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A total of 96 liver and 75 yolksacs from 118 day old dead chicks, were examined for the presence of bacterial and mycotic infection. Each sample was inoculated in TSA, EA & sabouraud dextrose agar to observe different types of bacteria as well as fungi. Enterococci were positive in 30.4 % liver samples & 27.1% of yolk sac samples. In the same way 145 unpipped embryos were tested for where 20% of embryos were found to be infected with enterococci. No mixed infection was observed in both dead day old chicks and dead embryos. Only 2 species of enterococci were detected from liver and yolk sac representing 86.9% *E. faecalis* and only 13.1 % *E. faecium*. Prevalence of *E. faecalis* found to be 89.6% in dead chicken embryos and remaining 10.4% with other species of Enterococci. During pathogenicity test with *E. faecalis*, a maximum of 45% of embryos found to be unhatched & unpipped and almost 32% of the hatched chicks were weak & 78.6% of weak chicks died within 48 hours of chicks' life and from 90.9% of dead chicks *E. faecalis* were re-isolated. This study revealed *E. faecalis* and *E. faecium* were major causes of weak chicks, early chick mortality as well as *E. faecalis* as major cause of embryonic death.

### **A CASE REPORT ON ERYSIPELAS IN A BROILER CHICKEN FLOCK**

**H. B. Basnet<sup>1</sup>, H. J. Kwon<sup>1,4</sup>, S. H. Cho<sup>1,4</sup> and S. J. Kim<sup>1,4</sup>**

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*Erysipelothrix rhusiopathiae* (formerly *E. insidiosa*) is a small gram-positive rod that causes erysipelas mainly in swine and turkeys and less frequently in other birds and humans. The major symptoms in chickens are weakness, depression, diarrhea and sudden death and gross lesions are related to septicemia including petechial hemorrhages and congestion in various tissues. Stunted growth of about 30% of chicken was reported in a broiler farm; dead birds were consigned for diagnosis. Sample from liver & lungs were taken for bacteria isolation. BGN, MacConkey and Blood Agar were used for bacteria isolation & Gram staining, catalase test & GPI Vitek card were used for bacteria identification. Embryo inoculation & PCR was performed with specific primer to diagnose ND, IBD, AI & IB. Serological survey of broiler breeder & broiler was done from 58 serum samples. Gross lesions were general congestion, petechial hemorrhages in internal organs, especially kidney, and pneumonia. From lung sample non-hemolytic dewy, pinpoint colonies were isolated on sheep blood agar. The isolated bacterium was Gram-positive rod and catalase negative. According to the result of Vitek GPI card it was identified as *E. rhusiopathiae* by 99% accuracy. Therefore, it was reported as the first case of erysipelas in broiler chickens in Korea. Because erysipelas is important in food safety and public health, further study for prevalence of erysipelas in chicken flocks is required in the near future

## STUDIES ON COUNTERACTIVE EFFECT OF TWO PHYTO ASCORBIC ACID PRODUCTS IN AFLATOXICATED BROILERS

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The economic losses to poultry industry due to aflatoxicosis are calculated to be over Rs. 500 million every year [1]. The present investigation was undertaken to evaluate the effect of feeding two phyto-ascorbic acid products (A and B) developed by M/s. Natural Remedies, Bangalore, India; in counteracting aflatoxicosis of broilers. A total of 288 day-old broiler chicks were taken, divided into 8 treatment groups containing 36 chicks in each. A control ration (T1) was prepared with aflatoxin-free conventional feed ingredients. An experimental diet (T2) was prepared mixing aflatoxin B1 (300 ppb) with T1. From T2, six diets were prepared by mixing synthetic ascorbic acid @ 100 ppm (T3) or @ 200 ppm (T4), by mixing Product A phyto-ascorbic acid @ 100 ppm (T5) or @ 200 ppm (T6) and by mixing Product B phyto-ascorbic acid @ 100 ppm (T7) or @ 200 ppm (T8). The feeding trial was accomplished in triplicate containing 12 Nos of chicks, in each subgroup. The data were subjected to analysis of variance under CRD [2]. On 6th week both the phyto-products at higher dose showed significant ( $P < 0.05$ ) improvement in body weight of aflatoxicated broilers ( $1311.64 \pm 6.44$ ,  $1795.67 \pm 11.62$  and  $1773.00 \pm 12.20$ g for T2, T6 and T8, respectively). Among aflatoxicated groups the dressing yield was significantly ( $P < 0.05$ ) highest in T8 group ( $90.31 \pm 0.70\%$ ) as compared to the aflatoxin alone fed group ( $86.84 \pm 0.44\%$ ). Economic analysis showed that the Product B (200 ppm) fed birds were most economic among all the groups. In general, the higher dose (200 ppm) yielded significantly better result, irrespective of the feed additives used. It could be concluded that synthetic ascorbic acid could be used for ameliorating aflatoxicosis and both the phytoproducts were equally good in partial counteracting the ill effects in broilers.

## VI. COMPANION ANIMALS & WILDLIFE MANAGEMENT

### EQUINE POPULATION, BREEDING, HEALTH STATUS AND ITS FUTURE IN NEPAL

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The main equine population in Nepal comprise of mules, pony horses and imported breeds of horses such as Thoroughbred, Androlusian, Marwari, Percherian and German Suffolk. There is gradual decline in equine population in Nepal due to urbanization and construction of roads. There is some demand for riding class horses in tourism, private sector and government organizations. There is prevalence of various diseases in equines caused by bacteria, viruses, fungi and parasites. There is an urgent need for implementing policy and actions for conservation of indigenous and other breeds of horses and mules in Nepal for better utilization in tourism, Government and private sectors as well as in education and research.

### A STUDY OF TUBERCULOSIS IN RHESUS MACAQUES: A JOURNEY INTO ZOONOSIS

*S. P. Shrestha, S. Thapa, G. B. Girel and B. C. Kunwar*

Tuberculosis (TB) is considered to be one of the most important bacterial diseases of macaques because of its frequency of occurrence, its ability to spread rapidly, its high fatality rate and its zoonotic potential. TB in macaques is most often caused by the same organism that causes TB in human- *M. tuberculosis*- and the diseases spreads from simian to man and vice versa. The second most common type of TB in nonhuman primates, accounting for about 15% of cases is due to *M. bovis* that is also transmissible to and from human and / or other animals.



**EFFECT OF ATROPINE SULPHATE, XYLAZINE AND KETAMINE COMBINATION  
PROTOCOL ON CLINICAL, HAEMATOLOGICAL AND SERO BIOCHEMICAL  
PROPERTIES IN DOG**

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The purpose of this study was to evaluate the effect of Atropine sulphate and Xylazine-Ketamine combination protocol on various clinical and laboratory parameters of the dogs. The study was carried out from March to July 2009 in 20 dogs (male: female = 1:1). All the dogs were subjected to anaesthesia after 12 hrs of food withholding. Premedication was done with Atropine sulphate @ 0.05 mg kg<sup>-1</sup> IM just 5 minutes prior to intravenous administration of Xylazine-Ketamine combination (1:2 v/v). Heart rate, respiratory rate and rectal temperature were recorded before, 15 minutes and 30 minutes after anaesthesia. Blood sample was also collected at the same time interval for haematology (RBC, WBC, PCV and Hb) and serobiochemical study (glucose and total TP). Heart rate, respiratory rate, RBC, WBC, PCV showed significant decrease ( $P < 0.01$ ) from initial value. There was significant decrease ( $P < 0.05$ ) in total serum protein and Hb. Pre-surgical evaluation of clinical, haematological and sero-biochemical parameters need to be performed to assess the physiological condition of animal.

**THE RELATIONSHIP BETWEEN BLOOD PARAMETER AND MYCOBACTERIUM CULTURE  
STATUS IN CAPTIVE ELEPHANTS OF NEPAL**

**K. Giri, G. E. Kaufman and I. P. Dhakal**

A study was conducted to investigate the prevalence of tuberculosis among 108 Asian captive elephants (*Elephas maximus*) of Chitwan National Park and its bufferzone. The association of blood parameters with Mycobacterium culture status was also examined by the Chi square test and Relative Risks (RR) analysis. The prevalence of *Mycobacterium* infection by trunk wash culture was found to be 9.25% and that of *Mycobacterium tuberculosis* infection was found to be 3.7% higher than the prevalence (3%) reported in North America. Higher prevalence was found in males (20%) and elephants aged 1-9 years (16.66%). The study did not show significant association based on p value ( $p > 1.0$ ) between haematological and serum biochemical parameters and *Mycobacterium* culture status study. However, RR analysis indicated an association (value  $> 1$ ) between all parameters under study with culture except for TLC, MCHC, Hb, PCV, glucose, total protein, albumin, globulin and A/G ratio, to have a greater probability of varying from normal in TB positive elephants. TB positive elephants were found to have 3.93, 1.47 and 2.85, 11.9 times greater probability of having elevated PCV, glucose, total protein and globulin respectively. While haemoglobin, MCHC, albumin and A/G ratio were shown to have 1.17, 1.14, 1.54 and 1.77 times greater probability to have decreased levels in TB positive elephants, respectively. There is no significant influence of *Mycobacterium* infections on blood parameters and serum biochemical parameters although trends were seen based on relative risk that may be useful in leading to a diagnosis.

**INCIDENCE OF VENEREAL GRANULOMA AND ITS TREATMENT IN STRAY DOGS OF  
POKHARA CITY, NEPAL**

**H. R. Awasthi, HART, Pokhara**

A total of 1628 stray dogs were examined between Sept. 2009 to March 2010 at HART, Pokhara accounting 2.02% incidence of venereal granuloma. Among total adult dogs, 9 females suffering from venereal granuloma were treated with vincristine sulphate @ 0.025 mg/kg body weight I/V. Three injections of vincristine sulphate were given by slow I/V route at weekly intervals. In most of the cases bleeding was

stopped after first injection. The response to treatment was evaluated on the basis of regression of the growth and there was complete regression after third dose of Vincristine sulphate injection. During whole treatment period no side effect of Vincristine was recorded.

#### **FEASIBILITY STUDY ON USING NON-SURGICAL STERILIZATION AS A MEANS OF STREET DOG POPULATION CONTROL IN KATHMANDU, NEPAL**

*M. Bhandari, M. Aziz, B. P. Upadhyaya, J. Lindenmayer, A. Rauch, and G. Kaufman*

Both poisoning and surgical sterilization have been used in Kathmandu, Nepal in attempt to reduce the street dog population. The aim of this study is to analyze the feasibility of using an alternative method of population control, non-surgical sterilization, in Kathmandu, and to explore potential societal challenges during the introduction of this novel control method. A survey with a total of 60 community and 20 veterinary questionnaires was conducted to collect data on the social attitude towards the street dog population and its control methods in Kathmandu. Although respondents expressed general acceptance and support for non-surgical sterilization, the study identified multiple concerns that must be addressed if a non-surgical sterilant is to be introduced in Kathmandu sooner or later. Lack of community awareness regarding canine overpopulation as well as lack of government activities in dog population management indicate an alarming need for a government-led policy on rabies and dog population control that also includes public awareness. The data collected in this study will facilitate future implementation of non-surgical sterilization of canines in Kathmandu, and it may also serve as a model for potential implementation of non-surgical methods in other developing countries.

### **VII. ZONOSSES, FOOD SAFETY, FOOD SECURITY, HERBAL MEDICINES, ANIMAL WELFARE AND OTHERS**

#### **SERO-PREVALENCE OF PORCINE CYSTICERCOSIS AND HUMAN TAENIASIS/CYSTICERCOSIS IN NEPAL**

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The problem of cysticercosis is now considered arising after introducing intensive pig farming system in the rural and periurban settings of farming during past decade under poverty elevation programme of the government. Previous baseline epidemiological study has detected the high evidences of porcine cysticercosis and human taeniasis/cysticercosis. The research project aims to provide the evidence based on the presence and impact of *T.solium* infection. A sero-epidemiological prevalence cross-disciplinary approach method was used to tackle the problem. Surveys conducted simultaneously in humans and animals from the same environment to correlate data on an epidemiological level would enable a comprehensive and accurate approach to study the transmission and the burden. So far 100 pigs serum samples and 18 human serum samples were collected and tested by Enzyme-linked Immunosorbent Transfer Blot Assay (EITB) techniques. About 320 pig carcass were examined for taenia cysts of which 23 (69.69%) pigs had found positive. Out of 18 human serums tested 8 (44.44%) have shown immunoblot positive bands for taeniasis.

**E. COLI 0157:H7 INFECTION AN EMERGING THREAT TO PUBLIC HEALTH: ITS  
EPIDEMIOLOGY, PREVENTION AND CONTROL: A REVIEW**

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Escherichia coli are normal and usually harmless inhabitants of the intestinal tract of man and animals. However, a few strains are pathogenic and cause distinct diarrheal syndromes. The four main categories of pathogenic E. coli include enteropathogenic E. coli (EPEC), enteroinvasive E. coli (EIEC), enterotoxigenic E. coli (ETEC) and enterohemorrhagic E. coli (EHEC). E. coli 0157:H7 has been recognized as a widely emerging food borne pathogen since it was first implicated in food borne disease in 1982, which produces enterohemorrhagic type of diarrheal syndrome of wide range of virulence mechanism. The organism produce potent cytotoxins referred to as Shiga Like Toxin (SLT) or verotoxin (VT) which causes the disease. Even though infection is mainly described from developed countries it occurs in other countries of the world. Illness caused by this organism can range from self-limiting, watery and bloody diarrhea to life-threatening manifestations. Mode of transmission is primarily through food, however, person to person transmission have also been implicated. Cattle are the major reservoir of the E. coli 0157:H7; however, it has been also isolated from other animals. Proper cooking can kill the E. coli 0157:H7.

**PREVALENCE OF TAENIA SOLIUM CYSTICERCOSIS IN SWINE IN KATHMANDU VALLEY  
AND ITS IMPACT ON PUBLIC HEALTH**

**A.K. Karna and D. D. Joshi**

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There has been an increase in the pig production and pork consumption in Nepal during last decade. With an increase in pigs and consumption by small holder, there have been problems with zoonotic parasitic diseases especially porcine cysticercosis. A study was conducted among 200 pigs from nine different slaughter slabs from Kathmandu valley during June to August 2009.

The objectives of this study were to determine prevalence of Taenia solium, cysticercosis in swine by lingual, carcass examination and ELISA, collecting data retrospectively on episode of Taeniosis and epilepsy/Neurocysticercosis (NCC) in humans in major hospitals of Kathmandu valley, and to analyze the questionnaires for the possible risk factors and public health impact. The prevalence rate of cysticercosis by lingual examination, carcass examination and ELISA was found out to be 0.0%, 0.005% and 35.5%, respectively. The collected cysts were confirmed as Taenia solium cyst by the histopathology and microscopic examination. The overall rate of NCC patients was found to be 9.8% (179) of 1839 epilepsy patients from the survey of five hospitals of Kathmandu valley viz. TUTH, Bir, Patan, Norvic and NMC. The age wise distributions of NCC patients were 55.63%, 24.02% and 22.35% for 15-35 yrs, 0-14 yrs and above 35 yrs, respectively. Sex wise distribution of NCC in male and female was 66.5% and 33.5% respectively. It is recommended strongly to enforce the meat inspection act for the prevention of meat borne zoonoses in Nepal.

## EPIDEMIOLOGICAL SITUATION OF ANIMAL RABIES AND ITS CONTROL STRATEGY IN NEPAL

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Rabies is an acute, fatal, preventable viral disease of mammals most often transmitted through the bite of a rabid animal and impacts public health, livestock, and wildlife. Rabies is endemic in Nepal and is maintained in two interrelated cycles namely urban and sylvatic. With more than 200 people dying in Nepal annually, rabies is a serious public health concern. The animal rabies situation from 2000 to 2009 was analyzed and control strategy has been proposed on the basis of the epidemiological analysis. Large ruminants were found to be the highest number dying among the animals clearly indicating the economic importance of Rabies in Nepal. Hills were found the most affected among the eco-zones while month-wise, February showed the highest number of cases with Jhapa district being the most affected. Mass vaccination of the dog with effective management of dog population in community participation, public awareness and effective epidemiological surveillance backed by legislation shall have positive impact in reducing the cases of Rabies both in livestock and human.

## IDENTIFICATION OF TWO RABIES VIRUS LINEAGES OF NEPAL

*G. R. Pant*

*Rabies Vaccine Production Laboratory, Tripureshwor*

A study was performed to identify the Rabies Virus genomes circulating in Nepal in 2009. Three brain samples, collected from carcass of buffalo, human and dog infected with Rabies were sent to Pasteur Institute, in France for molecular characterization and identification. The entire nucleoprotein genes (NG) of these samples were sequenced and analyzed phylogenically. Sample from buffalo was identified as Indian subcontinent lineage where as samples from human and dog were identified as Arctic lineage of Rabies virus.

## EPIDEMIOLOGY OF FOOT AND MOUTH DISEASE IN NEPAL

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Foot and Mouth Disease (FMD) are endemic in Nepal. The spread of FMD in animals of different species was studied by seasons, of the year, regions, ecozones, and virus serotypes. This study was carried out using monthly epidemiological reports of 2000 to 2007 received from 75 districts to Veterinary Epidemiology Centre, Directorate of Animal Health, Kathmandu, Nepal. The results were processed and analyzed with the use of the computer program Microsoft Office. FMD was ranked first in terms of the number of outbreaks, the number of affected and dead animals in the structure of the major infectious and invasive diseases in Nepal. The predominant serotypes responsible for epidemic outbreaks of FMD in Nepal were O, Asia-1 and A, which are identical to other countries in South Asia. Cattle and buffaloes were the most susceptible animals sps. whereas goats and sheep were relatively less susceptible. Hill and Terai (Plain) ecozones of Nepal are the most stressful areas for the disease. Far-west and Central regions were the most vulnerable. Although the outbreak of FMD is being reported all the year round, high incidence of FMD was noticed twice a year: in April-June and December (the movement of animals in previous religious activities). We recommend to launch 100% vaccination of susceptible animals at first in Far-western development region adding other regions in the next years using trivalent vaccine, containing virus serotypes O, A and Asia-1 to acquire the herd immunity for successful FMD planning.

**PREVALENCE OF SALMONELLA IN RETAIL MEAT SHOPS IN KATHMANDU, NEPAL***M. Upadhyaya*

A cross-sectional study was conducted from November 2008 to May 2009 to estimate the prevalence of Salmonella in retail meat shops in Kathmandu. The methods followed were ISO 18593:2004 for swab sample collection, ISO 6579:2002 for Salmonella isolation and manufacturer's instruction (SIFIN®, Germany) for serotype identification. A questionnaire was used to collect information on some of the risk factors of shops likely to be associated with Salmonella identification. A total of 492 environmental swab samples (164 chopping board samples, 164 knife samples and 164 table samples) from 82 retail meat shops were analyzed. The prevalence of Salmonella positive shops was 40.2% (95% CI: 29-51). The isolation rates of Salmonella from chopping boards (36.0%), knives (32.9%) and tables (25.0%) were not significantly different ( $p > 0.05$ ). Retail meat shops were 1.9 times more likely to yield Salmonella in the evening (38.2%) as compared to the morning (24.4%) ( $p = 0.001$ ). *S. Typhimurium* (54.5%) was the most common serotype found in retail meat shops followed by *S. Enteritidis* (16.9%), *S. Haifa* (13.6%), *S. Virchow* (10.4%), *S. Agona* (3.9%) and *S. enterica* (0.6%). Among the risk factors examined, "hygiene status of shop", "type of shops", "number of person handling meats", "number of knives used", "number of kinds of meat sold" and "number of kinds of meat sold using different numbers of knives" were individually significantly ( $p < 0.05$ ) associated with Salmonella contamination in the retail meat shops. After univariate analysis of these risk factors, a final logistic regression model with Salmonella yes or no category of shops as outcome variable identified 4 significant predictors. Odds ratios, indicating the likelihood increase of a shop to achieve Salmonella positivity status were 10.17 for multiple persons rather than a single person involved, 7.66 for open rather than closed type shops, 9.44 for use of several rather than one knife and 5.18 for single kind of meat using several knives. The results of this investigation revealed that retail meat shops to a noticeable extent are Salmonella contaminated, with a considerable degree of cross-contamination between meats, personnel and equipment used during a day in processing of meats.

**A RETROSPECTIVE STUDY OF CASE FLOW PATTERN AT HICAST VETERINARY TEACHING HOSPITAL***P. Sharma**Department of Surgery and Theriogenology, HICAST, Gatthaghar*

A retrospective study of case flow pattern at HICAST Veterinary Teaching Hospital was done from January 2007 to December 2009, to identify the number of cases brought from different areas of Thimi municipality, their types and occurrence at this interval. Poultry cases were also recorded. Data were assembled and analyzed. Finding shows that there was gradual increasing in the number of cases every year and it was by 13.90% in 2008 and by 17.05% in 2009. Cases of general treatment were maximal and cases of euthanasia were minimal. Cases from Gatthaghar were maximal and cases from Bode were minimal and this variation was around 95%. Incidence of diseases was more during April and low during October and Canine cases were more compared to that of Feline. In poultry bacterial and viral diseases were recorded highest at Thimi municipality. It can conclude that general cases of canine from Gatthaghar during April are the major cases at HICAST, Veterinary Teaching Hospital.

**EVALUATION OF HEPATOPROTECTIVE ACTIVITY OF CUSCUTA REFLEXA ROXB.  
(AAKASHBELI) STEM**

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The methanolic extract of the stem of *Cuscuta reflexa* Roxb. (Convolvulaceae) was evaluated for hepatoprotective activity in Wistar albino rats with carbon tetrachloride-induced liver damage. The extract at the oral dose of 100 mg/kg and 500 mg/kg exhibited significant ( $P < 0.05-0.01$ ) reduction in total Bilirubin and serum glutamate pyruvate transaminase (SGPT). These reductions in biochemical parameters were supported by histopathological examination of liver sections. Moderate protection of histo-architecture of hepatocytes with treatment of extract at 500mg/kg indicated dose dependent hepatoprotective activity of *Cuscuta reflexa* Roxb. stem extract.

**EFFECT OF STINGING NETTLE ON PRODUCTIVITY AND IMMUNE STATUS OF  
LAYING HENS**

**N. Poudel and D. R. Khanal**

A 10 week long research was conducted at AHRD, NARC to explore the effect of stinging nettle supplementation on productivity and immune status of laying hens. A total of 80 laying hens and eight cocks of Black Australorp breed birds were grouped into four treatment groups T1 (Induced Molting by feed restriction method), T2 (6% nettle supplementation twice weekly), T3 (12% nettle supplementation once weekly) and C (Control), each group consisting of 20 laying hens and two cocks. Parameters for egg productivity, egg quality and immune status were recorded. Weekly egg production was recorded to determine productivity. Eggshell thickness, egg calcium content and egg albumin height of seven eggs from each group were measured by using Gauge spherometer to determine the egg quality. On 4th week, ten eggs from each treatment groups were taken and stored at room temperature for 5 weeks after which the internal quality of eggs was observed. The birds were vaccinated on 7th week with live B1 strain of New Castle Disease (ND) vaccine. Blood samples were collected on first day of trial and on day 28 post. Differential leukocyte count (DLC) and antibody level against ND were determined to know the immune status of birds. The egg production of the four treatment group was not significantly different but egg shell thickness and calcium content of eggs were higher in T2 (0.34 mm and 1.21%) followed by T3 (0.3 mm and 1.13 %), T1 (0.28 mm and 1.01%) and Control (0.27 and 1.02%) while albumin height was highest for T3 (7.09mm) followed by T2 (6.59mm), C (5.72mm) and T1 (5.02mm). Data on antibody titer and DLC were also higher for T3 and T2 than T1 and Control. These findings indicated that nettle supplementation increases the egg quality and immune status of laying hens.

**EFFECT of *Nyctanthes arbortristis* ON DEXTRAN SUFLATE SODIUM-INDUCED COLITIS****S. Bhattarai and T. C. Bhattarai<sup>1</sup>***Institute of Agriculture and Animal Science, <sup>1</sup>President, WPSA, Nepal*

*Nyctanthes arbortristis* (Parijat in Nepali) is used by ethnic people for inflammation and pain especially exterior part of the body. The protective effect of *N. arbortristis* leaves extract was evaluated in the mice model of experimental colitis induced by oral administration of 5 % dextran Sulfate Sodium (DSS), 5 % DSS for 7 days induced distal colitis and bloody diarrhea in control mice. Beneficial effect of leaves extract was measured by disease activity index (DAI), which indicates three major clinical signs like weight loss, diarrhea and rectal bleeding. The DAI was calculated by using a formula: DAI= Weight loss+ Diarrhea score + rectal bleeding score. The *N. arbortristis* leaves extract given orally at 100, 200 and 400 mg/kg body weight dose dependently improved the DAI. Further, the functional activity of the colon was tested by recording the spontaneous contraction of colon by using isolated distal colon preparation with help of the isometric force transducer. The impaired spontaneous contraction was brought near to normal dose dependently with the treatment of *N. arbortristis* leaves extract. The above mentioned highest dose also did not show any observable clinical sign of toxicity. These results suggest that the *N. arbortristis* leaves extract has protective effects against the DSS-induced colitis. Further extensive research should be conducted to find out to know its mechanism of action and toxicological effect before using this plant massively.

**TRADITIONAL VETERINARY MEDICINE PRACTICE ADOPTED BY THE PEOPLE OF NEPALESE ORIGIN IN NORTH EASTERN INDIA****K. Kaphle<sup>1</sup> and D. Sapkota<sup>2</sup>**<sup>1</sup>*Department of Theriogenology, Vet Teaching Hospital Complex, IAAS, Veterinary Faculty, Rampur,*<sup>2</sup>*Department of Poultry Science, College of Veterinary Science, Assam Agricultural University, Khanapara, Guwahati-781022*

The North Eastern India has been the home to a large community of people of Nepalese origin (PNO). They migrated there before the British-era, maximum during British colonial times. This region is rich in its traditional heritage and natural resources. The ethnic communities among whose midst the PNO have set their identity is evident in the agrarian way of life these famed Gorkha descendents have continued. The region is supported in its food production by the PNO, who have taken up livestock farming as major occupation contributing significantly, primarily in dairy production. Likewise, the rural setting and the farming way of life for many PNO communities have reflection in ethnoveterinary medicine which, if documented is enriching source for Traditional Veterinary Medicine (TVM). Practice of witchcraft in form of Dhamis, Jhakris, Amchis, and use of herbs as medicine is a common practice. Practices like blood letting, and other physical intervention are also practiced in the treatment courses. The TVM of this region has strong influence of the dominating human civilizations like those from the Brahmaputra plains to highlands which are abode of the ethnic communities. The cultures and practices of Mongoloid are similar to that of PNO. Likewise, plain Asamese, Bengalese, Biharis and other communities have practices that reflect that of Aryan societies. In this context with the influence of such diverse human races with Aryan, Mongolian and Tibeto-Burmese origin, the TVM of this region have evolved in its distinctive way. The need to document the practices and compile in a regional context of the PNO is a huge challenge. Current situation with the documentation of some prevalent practices of TVM, efforts to generate scientific evidences and logics behind their use is encouraging and intended to be shared in this talk. In context of ever growing population pressure and the need to sustain life in the fragile ecosystem, rural sustainable animal farming practices supported by the need tailored ethnoveterinary practices seems inevitable for Nepal and knowledge from that region will be helpful. This talk aims to present the current picture of TVM practices adopted by the PNO from North eastern India.

**STUDY ON EFFECT OF DIFFERENT FAT LEVELS ON THE QUALITY OF CHHURPI  
PREPARED FROM COW AND BUFFALO MILK**

**D. N. Sah**

*Directorate of Livestock Services Training and Extension*

A study was carried out to standardize the method of manufacturing of Chhurpi based on the fat level of cow and buffalo milk. On the basis of market survey, three different combinations of recipes for cow milk (0.20, 0.50, and 0.80) and for buffalo milk (0.20, 0.50, and 0.80) were selected for optimizing the process for preparation of Chhurpi. The Chhurpi preparation included skimming of milk, pasteurization, cooling to 820C, inoculation of citric acid using 2% and coagulation occur until clear whey obtain at 15-20 minutes. The one third whey was drained after coagulation and filtering using a muslin cloth. The curd was cooked for 15 minutes, wrapped in muslin cloth. The curd was pressed over night and dried in a room temperature on shade for 14 days. The process optimized product was selected on the basis best sensory scores by using 9-point Hedonic rank sum method. The experimentally prepared processed optimized Chhurpi analyzed in laboratory and compare its quality with control product. Parameters used to monitor to the quality of Chhurpi were chemical (moisture%, fat%, protein%, total ash%, lactose%, acidity %) and microbial quality (yeast and moulds). The physicochemical parameters showed that there was significant ( $p < 0.05$ ) variation in moisture, fat, protein and total ash and lactose were non-significant ( $p < 0.05$ ). The yeast and mold count in process optimized product and control product of cow and buffalo milk Chhurpi did not showed significant ( $p > 0.05$ ) difference in the initial and final count of yeast and molds. The product yield obtained was higher in more fat concentration i.e. 3.98% and 4.05% of cow and buffalo milk prepared Chhurpi, respectively. The higher percentage yield occurred to the cow and buffalo milk having high percent of fat. The average selling price of process optimized Chhurpi was found Rs.206.56 per kg and average market price of Chhurpi was found Rs.210 per kg in the study area.

**CLIMATE CHANGE: THREATS AND OPPORTUNITIES FOR LIVESTOCK  
DEVELOPMENT IN NEPAL**

**K. Pandey**

*Regional Directorate of Animal Services, Biratnagar*

Nepal is extremely vulnerable to the impacts of climate change owing to its fragile mountain ecosystem, diverse nature of climate, weak geological condition and feeble institutional economic and technical capacity to deal with climatic uncertainties. Livestock, specially, the ruminants and their rearing system play an important role in climate change by emitting three major green gas namely carbon dioxide, methane and nitrous oxide accounting 9, 35-40 and 65 percentages respectively of global anthropogenic emissions. Livestock contributes almost 27 percentages to the national GDP and is the major source of income of most of the rural farming families. In Nepalese context, wide use of organic manure, deforestation, continuous degradation of pasture lands, poor quality feeds and forages and traditional farming system have caused continuous increase in carbon and nitrogen emission in the environment. The mitigation measures to prevent further increase in temperature through controlled green house gas emission bring some opportunities for livestock development in Nepal. Development of transgenic animals, pasture land management and development, intensive study on disease epidemiology, commercial farming, energy conservation through biogas plant establishment and enhanced livestock production value chain are some of the sectors which would benefit from the efforts to fight against increase in temperature.



**PRACTICE OF ANIMAL WELFARE EDUCATION (AWE) IN NEPAL****B. S. Sapkota<sup>1</sup>, S. S. Singh<sup>2</sup>**<sup>1</sup>HICAST, *Bhaktapur*, <sup>2</sup>IAAS, *Chitawan*

Animal welfare is one of the very important issues in current situation all over the world. Animal welfare is not incorporated in veterinary curricula in many developing countries yet. Delegates from WSPA, which is identified as an enforcing/facilitating authority of AWE by OIE visited veterinary institutions in Nepal first time in 2007. WSPA identified two key educators of AWE one each from IAAS and HICAST in 2008. Five years strategic plan/ log frame has been developed to incorporate and enhance AWE in Nepal. Developments in particular are students' projects, workshop for Vet faculty, collection of teaching resources, collaboration and coordination with welfare organizations, formation of AWE Asia online network, integration of Concepts of Animal Welfare (CAW) topics in existing vet curricula. These important efforts will pay a successful path to incorporate AWE as a core subject in veterinary curricula in near future and Nepalese veterinary students will also be able to acquire the knowledge and skills of animal welfare.

**KNOWLEDGE AND ATTITUDE OF NEPALESE PEOPLE TOWARDS ANIMAL WELFARE****J. Pandeya**

A study was conducted based in Chitwan valley, the center and hub of livestock trade in Nepal. The survey pertaining to animal product consumption, farm visit and consensus regarding purchase as revealed by this study shows that only 1-2% people have positive attitude. Regarding the views and attitudes towards five freedoms, pre-slaughter handling facilities, certain general practices (castration without local anesthetic, forced molting/beak trimming of hens etc.) most of the respondents (>80%) have positive attitude. Similarly views regarding animal welfare friendly products only a few proportions is ready to pay a little more price and most were agree with conditional option. The finding from our study on transportation indicates that the person involved in inhumane transport mostly think as these animals are ultimately for slaughter purpose hence doesn't matter the way of transportation be applied and regarding their knowledge which is negligible about animal welfare and animal rights. They are unaware of loading, unloading, preslaughter handling and transportation stress has serious impact on quality and quantity of food from animal origin. Therefore this particular study revealed that knowledge and attitudes about animal welfare differs according to level of educational status and engaged work of population. Appropriate body condition score, improved health status, cleanliness of animal and barn, housing factor (adequate space etc.), stockman's relation with animals are the main criteria to judge the better welfare condition. Thus, animal welfare and transportation is one area that needs vast improvement to enhance the food obtained from these animals are safe to consume and the attitude of the populace become more humane. In conclusion, state of animal welfare in Chitwan, at various activities are only routine observation with no scientific study yet done. This study brings in preliminary status finding as a benchmark for further research in this direction; education, strict legislation and implementation seem to be the urgent need.

### **STATUS OF EQUINE HEALTH AT LALITPUR BRICK FACTORIES**

***S. Koirala, S. Basyal and P. Thapa***

In 2009-2010 a survey was carried out by Animal Nepal to assess the conditions of working equines in 10 brick kilns of Lalitpur district. Personal /group interaction, interviews with brick kiln owners and questionnaires were used to collect data and to find out the major problems faced by working equines. In total, 450 equines were counted and observed, of which 62% are donkeys, 22% were mules and 15% were horses. The vast majority of the equine owners were from Banke District while around 5% were from India. The equine owners had limited awareness about health care and general management. A very limited number of working equines were found to be healthy. General health problems included nutritional deficiency, parasitic infestations, colic, lameness, dystocia, saddle/harness wounds and eye problems. Generally painful traditional medicinal practices were used while overloading, beating, poor housing, inadequate feeding practices and a lack of preventive measures further worsened the conditions. Animal Nepal (AN) has introduced basic rules on equine welfare. Since December 2008 this organization has introduced outreach services in the ten surveyed brick kilns.

### **COMMUNITY BASED ANIMAL HEALTH CARE FOR RURAL LIVESTOCK DEVELOPMENT**

***P. S. Kushwaha and S. N. Mahato***

*HEIFER International Nepal*

Availability and access to veterinary service is one of the limiting factors to get optimum production and profit from livestock in rural community. Physical and social distance limits availability as well as accessibility of such service. Existing network of veterinary service basically operates to provide clinical services. An additional community based animal health care system can be established to supplement existing network of veterinary service. Such animal health care system can prepare animal epidemiological data base at community level to plan and execute preventive measures. A trained animal health worker at community level can facilitate community to learn feeding, breeding, housing and marketing of livestock in a participatory way in addition to primary animal health care. This paper describes about different aspects of community based animal health care system as experienced during implementation in field. Experiences using this system in field are suggestive of using this system for increasing animal production and profit in rural community.

*Bird Conservation Nepal (BCN)*

*would like to*

*congratulate*

*Nepal Veterinary Association*

*for the celebration  
of*

*Ninth Veterinary Conference Day*



BCN is dedicated to conservation of birds, their habitats and overall biodiversity through people's participation, benefiting the people themselves."

One among various conservation activities of BCN is Vulture Conservation Programme. Different Projects under the Vulture Conservation Programme:

- Prediction and Management of Potential Declines in Gyps species vulture
- Vulture Conservation and Breeding Centre, Kasara, Chitwan National Park
- Community Managed Jatayu Restaurant: Pithouli, Nawalparasi; Gaidahwa Lake, Lumbini; and Kalika Community Forest, Lalmatiya, Dang
- Jatayu (Vulture) Safe Landscape

The catastrophic collapse of Gyps vulture population with the use of veterinary drug Diclofenac on animals has become an issue of considerable concern as vultures are the key species to ascertain a balanced ecosystem. Thus use of safer drug Meloxicam as a replacement of Diclofenac is highly necessary to remove this looming threat. We seek greater concern and cooperation from all levels to hold these species back in the nature in a huge number like it was before.

*Declaration of Diclofenac Free Zone (DFZs) in various districts of Nepal would highly ascertain for safe environment of vultures. This is a joint initiative of various concerned government and Non-government organization.*

*Let us co-operate/participate for declaring and maintaining DFZs for our side.*



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पशु पंक्षीको उमेर, अवस्था, उत्पादन, लगायत मध्यपरिचमान्चल क्षेत्रको उच्च तापक्रम लु देखि सीतलहरको समयमा कुखुरापालनमा हुने तापक्रमको असरलाई समेत दृष्टिगत गरी, गुणस्तरीय कच्चा पदार्थको प्रयोगमा, आवश्यक पौष्टिक तत्वहरुको सन्तुलनगरी तयार पारिएको कर्णाली फिड इण्डस्ट्रिज प्रा.लि. बाट उत्पादित पशुपंक्षीहरुको गुणस्तरीय दाना प्रयोग गरी व्यावसायबाट अधिकतम् फाइदा लिनुहोस् ।

**हावा उत्पादनहरु :**

१ ब्रोइलर प्रीस्टार्टर (B-0)	५ लेयर्स स्टार्टर (L-1)	५ किड स्टार्टर (बास्त्रा)
२ ब्रोइलर स्टार्टर (B-1)	६ लेयर्स ग्रोअर (L-2)	१० बास्त्राको दाना
३ ब्रोइलर फिनिसर (B-2)	७ लेयर्स ग्रोअर (L-3)	११ गाई/भैसीको दाना
४ ब्रोइलर फिनिसर (B-3)	८ बंगुर (क्रिप फिड)	१२ बंगुर (उत्पादन)



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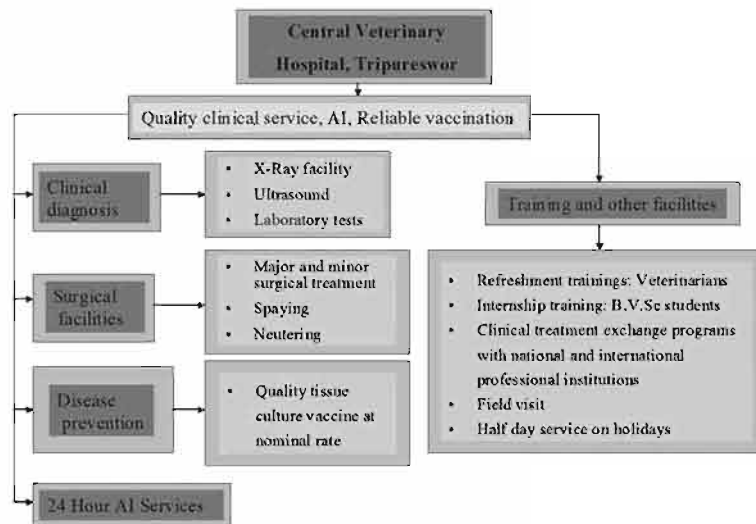
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- भाइरस आइसोलेसन तथा आइडेन्टीफिकेशन
- ब्याक्टेरिया आइसोलेसन तथा आइडेन्टीफिकेशन
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**परिश्रमी हातहरूलाई  
मेहेनत अनुसारको फल  
दिने Cobb 500 जातका  
ब्रोइलर चल्लाहरूको लागि  
सम्पर्क गर्नुहोस् ।**



**जि.जे. पोल्ट्री फार्म**

जगाती, भक्तपुर

फोन नं. ६६९००३४, ६९९४७७७

इमेल: balaram@info.com.np

**गुणस्तरीय दाना, उच्च बश्लको Cobb र  
Hubbard जातको एक दिने ब्रोइलर चल्ला  
तथा Brown Bird जगतमा विश्वविख्यात  
मेदरल्याण्डबाट आयातित लेयर्स चल्ला,  
ब्रोइलर कुखुरा, अण्डा, माछा र घामलको  
लागि सीध सम्पर्क राख्नुहोला ।**



**रोहिणी पोल्ट्री फिड,**

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**भक्तपुरको स्वच्छ ताना, अण्डा खाऔं,  
शरिरको अंग, अंग तन्दुरुस्त गरौं ।**

**शुभकामना**

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राष्ट्रिय सम्मलेन तथा विश्व भेटेरिनरी  
दिवस २०१० को सफलताको लागि  
हार्दिक मंगलमय शुभकामना  
व्यक्त गर्दछु ।**

**प्रो. रोशन आचार्य**

५८५९०४९८७९

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फोन नं.: ६६११२८७, ५८५१०३५५१६

हाम्रो ह्याचरीबाट उत्पादित उच्च नश्लको, कम मृत्युदर हुने नेपालको माटो सुहाउँदो हुर्कने, कम दानाबाट बढी मासु उत्पादन हुने **HUBBARD** र **COBB** जातको एक दिने ब्रोइलर चल्ला तथा रातो कुखुरा जगतमा विश्वविख्यात देश नेदरल्याण्डबाट आयातित Hisex Brown लेयर्स चल्ला बिज्रगी वितरणको लागि सम्पर्क गर्नुहोला ।

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मो.: ९८५१०५४३६२

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भक्तपुर ।

फोन नं. ०१-६२२२४३४, ६६१८०८९ (अफिस), ०१-६६१०८८२ (घर), ६६१०२२३ (फिड), ६६१६३३३५  
धनगढी, कैलाली ०९१-५२१७१७७, ९७४९५०२३५७, ईमेल: sbpf@enet.com.np

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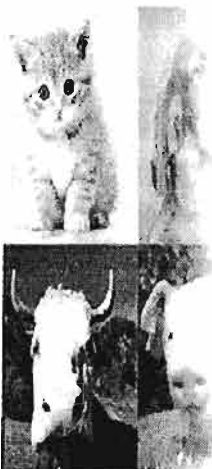
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राष्ट्रिय सम्मलेन तथा विश्व भेटेरिनरी  
दिवस २०१० को सफलताको लागि  
हार्दिक मंगलमय शुभकामना  
व्यक्त गर्दछौं ।

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देवकोटा एग्रोमेट सेन्टर  
तुलसीपुर, दाङ्ग  
फोन: ०८२-५२९४९२  
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बी.पी. चोक, तुलसीपुर, दाङ्ग  
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फोन: ०८२-५२२५६९

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पि.पि.आर. रोगबाट आफ्ना भेडा बाख्रालाई कसरी बचाउने

- ❖ आयात गरिएका भेडा बाखा मार्फत पि.पि.आर. रोग भित्रिन सक्ने संभावना भएको हुँदा त्यस्ता पशुहरूको क्वारेन्टाइन जाँच गराएर मात्र पैठारी गर्ने
- ❖ रोगको शंका लागेका स्थानबाट पशुको आवत जावत तथा विक्रि वितरण कार्य तुरुन्त बन्द गर्ने
- ❖ रोगी पशुलाई वथानबाट अलग्गै छुट्टाएर राख्ने
- ❖ आफ्ना भेडाबाखाहरूलाई नियमित रूपमा पिपिआर विरुद्धको खोप लगाउने
- ❖ रोगी भेडा बाखाहरूको सम्पर्कमा आएका वा प्रयोगमा ल्याईएका सबै सर सामानहरू नष्ट गर्ने
- ❖ रोग लागेको शंका लागेमा नजिकको पशु सेवा केन्द्र/उपकेन्द्र/जिल्ला पशु सेवा कार्यालयमा जानकारी गराउने वा सम्पर्क गर्ने

नेपाल सरकार  
पशु सेवा विभाग  
पशु स्वास्थ्य निर्देशनालय  
त्रिपुरेश्वर, काठमाण्डौ  
फोन : ०१४२६१५६९/०१४२६११६५

**खेर गर्नुको जग्गा, बारी, डिल, कान्जामा  
उन्नत बहुवर्षिय घाँस, डाले घाँस लगाई पशु  
आहार आपूर्ति गरेर उत्पादन लागत  
कम गरौं ।**



**विस्तृत जानकारीको लागि सम्पर्कः  
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नेपाल कृषि अनुसन्धान परिषद, खुम्लटार, ललितपुर । फोन : ५५२३०३८**



नेपाल सरकार  
कृषि तथा सहकारी मन्त्रालय  
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हरिहरभवन, ललितपुर

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### उद्देश्य:

- प्राकृतिक श्रोत साधनको समुचित सदुपयोग र नविनतम प्रविधि, ज्ञान तथा सीपको प्रयोगबाट पशुपक्षीको उत्पादन तथा उत्पादकत्वमा गुणात्मक सुधार गरी गरिबी न्यूनीकरण तथा खाद्य सुरक्षामा सहयोग पुऱ्याउने ।
- पशुपक्षी, पशुजन्य पदार्थ तथा पशु उत्पादन सामग्री सम्बन्धी व्यवसाय प्रबर्द्धनको लागि अनुकूल वातावरण सृजना गर्न आवश्यक आधारभूत संरचना निर्माण समन्वय गर्ने ।

दूध फुल मासुको सेवन ।

स्वस्थ तन प्रसन्न मन ।

उन्नत जातको माई भैंसी पालौं ।

दूध उत्पादन बृद्धि मरौं ।

घाँसमा आधारित पशुपालन मरौं ।

उत्पादन लागत घटाई आम्दानी बढाऔं ।

प्रजनन मराउने बोका १५ वर्षमा परिवर्तन मरौं ।

स्वस्थ पाठा पाठी उत्पादन मरी नाफा कमाऔं ।

## स्वस्थ पशुपंक्षी पालनबाट दुध, फुल, मासु उत्पादन गरी आम्दानी बढाऔं ।

**दुध, फुल, मासु उत्पादन लामत घटाई आम्दानी बढाउम -**

- ▶ उन्नत र पौष्टिक घाँस विकास गरि घाँसमा आधारित पशु पालन गरौं ।
- ▶ उन्नत जातको पशुपंक्षी पालन गरि उत्पादन बढाऊ ।
- ▶ स्थानीय गाई भैसीमा उन्नत जातको साँढे, राँगोको वीर्यबाट कृत्रिम गर्भाधान गराई सन्तानबाट दुध उत्पादन बढाऔं ।
- ▶ हाडनाता पर्ने भाले जातको पशुबाट प्रजनन नगराऔं ।
- ▶ व्यवसायिक पशु पालन गरौं ।
- ▶ समय समयमा विभिन्न रोग विरुद्ध खोप लगाऔं ।
- ▶ समय समयमा जुका नाम्ले विरुद्ध औषधि खुवाऔं ।
- ▶ गोठ सुधार गरौं ।

**स्वच्छ र सफा दुध सेवन गरी स्वस्थ र निरोगी बनौं ।**

**स्वच्छ पद्धति अपनाई दुधको गुणस्तर बढि मर्न -**

- ▶ स्वस्थ र सफा गाई, भैसी, व्यवस्थित र सफा गोठ, सफा दुध राख्ने भाँडो तथा व्यक्तिगत सरसफाईमा ध्यान दिऔं ।
- ▶ छिटो, छरितो संकलन गरी दुध संकलन केन्द्र/सहकारी संस्थामा पुऱ्याऔं ।
- ▶ दुग्ध व्यवसायबाट हुने आम्दानीमा महिलाहरूको पहुँच र नियन्त्रण बढाऔं ।

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Prevention of Ketosis

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