

# Zoonoses and Food Hygiene News

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**Email:** [ddjoshi@healthnet.org.np](mailto:ddjoshi@healthnet.org.np), **Website:** [www.nzfhrc.org.np](http://www.nzfhrc.org.np)

*Zoonoses and Food Hygiene News, published four times a year, provides a medium for disseminating technical information on matters related to zoonoses and food hygiene generated in the world, particularly in Nepal. The editors welcome submissions on these topics with appropriate illustrations and references. The views and opinions expressed in the News are those of the authors.*

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## **Free Dog Rabies Vaccination in Dhangadhi Municipality of Kailali District, Nepal**

*D. D. Joshi*

### **Introduction**

It was the first mass vaccination and publicity campaign attempted to cover pet dogs and community dogs and cats of all wards of Dhangadhi Municipality of Kailali district. This vaccination attempt was free of cost supported by Donative Unit for Rabies Vaccine to Nepal (DURVN), Tokyo, Japan. This program was organized jointly by National Zoonoses and Food Hygiene Research Centre, Dhangadhi Municipality, Kailali District Livestock Services Office and Public Health District Office of Kailali to control the rabies cases and awareness among the people about rabies.

### **Objectives**

#### **General Objective**

To control rabies in the stated project area

#### **Specific Objectives**

- a) To vaccinate all pet Dogs and Cats, community dogs and stray dogs against rabies in all wards of Dhangadhi Municipality.
- b) To carry out community health awareness about rabies in humans and animals.
- c) To carryout de-worming of pets brought for vaccination.
- d) To prepare a final report of Dhangadhi Municipality covered in the project.

### **Methodology**

Rabies control project was a preliminary effort towards working out and achieving a large goal-rabies control on a national level with time

and integrated efforts. The program was continuation of similar types of program conducted during the previous years in other parts of the country. This project conducted mass rabies vaccination of dogs and cats in all 14 wards of Dhangadhi Municipality.

### **Project Area and Duration**

Present dog vaccination program was implemented in all the wards of Dhangadhi Municipality. Total of 8 camps Dhangadhi Municipality were organized for dog vaccination. The project was implemented during March-May 2006.

### **Pre-Vaccination Arrangements**

The concerned Municipality was contacted by telephone and visit as well. For the publicity of the program local F.M. were contacted via municipalities' authority. Cable televisions were also contacted for the publicity. All sites were visited by vaccination team one day prior to vaccination with the aim of raising awareness and publicity of the program. Local leaders were fully utilized and in some sites even volunteers of the respective municipality was used.

### **The Vaccination Procedures**

#### **a. Types of Vaccine Used**

**Rabisin**, an inactivated adjuvant vaccine was used for mass vaccination campaign. Each dose of this vaccine contains an inactivated rabies antigen (fixed virus), at least 1IU, Aluminium (as hydroxide), at most 2mg, and Merthiolate, at most 0.1mg.

It is indicated for healthy individuals of all animal species against rabies. It can be administered either intramuscular I/M or subcutaneous S/C route. The recommended:

The recommended age of primary vaccination is at the age of 3 months and revaccination is recommended every 3 years. In Nepal, due to endemic nature of the disease a revaccination is done every year. However, research back the practice has not been done.

The vaccination leads to a high peak of antibody levels within 3 weeks followed by more or less constant level sufficiently high to provide protection for 3 years. The vaccine should be stored between +2<sup>o</sup>c and +8<sup>o</sup>c, protected from light and should not be frozen.

#### **b. Rabies Vaccination schedule**

Given below is the brief information on vaccination dates and number of centers set up in each municipality.

**Table no: 1. Ward wise vaccination Date and Time of Dhangadhi Municipality.**

Ward No.	Date Of Vaccination	Vaccination Time
1.	June 19,2006	7A.M to 12 A.M
2.	June 19,2006	7A.M to 12 A.M
4.	June 19,2006	7A.M to 12 A.M
5.	June 19,2006	7A.M to 12 A.M
2.	June 19,2006	7A.M to 12 A.M
3.	June 19,2006	7A.M to 12 A.M

4.	June 19,2006	7A.M to 12 A.M
1.	June 20,2006	7A.M to 12 A.M
8.	June 20,2006	7A.M to 12 A.M
14.	June 20,2006	7A.M to 12 A.M
5.	June 20,2006	7A.M to 12 A.M
6.	June 20,2006	7A.M to 12 A.M
9.	June 21,2006	7A.M to 12 A.M
10.	June 21,2006	7A.M to 12 A.M
14.	June 21,2006	7A.M to 12 A.M
11.	June 21,2006	7A.M to 12 A.M
12.	June 21,2006	7A.M to 12 A.M
3.	June 22,2006	7A.M to 12 A.M
4.	June 22,2006	7A.M to 12 A.M
13.	June 22,2006	7A.M to 12 A.M
7.	June 22,2006	7A.M to 12 A.M
8.	June 22,2006	7A.M to 12 A.M
12.	June 22,2006	7A.M to 12 A.M

## Results and Coverage of Vaccination Campaign in Kailali District

*D. D. Joshi*

### Dhangadhi Municipality

Dhangadhi Municipality has 14 wards. We set up eight-vaccination camp to cover the 14 wards. 1, 2, 3, 4, 5, ward cover the urban area of Dhangadhi municipality and other 6, 7, 8, 9, 10, 11, 12, 13 and 14 wards cover semi-urban and remote area. Before this type of program was not organized their. From our vaccination camp many people were aware about the dog vaccination. Unfortunately some day ago 4 people were dead from the rabies. So people were little bit conscious about rabies.

A total 1117 dogs and cats were registered and vaccinated in Dhangadhi Municipality. Among them 1060 were dogs, 53 were cats and 4 other animals were vaccinated. In remote area cat vaccination range is higher than the urban area. In other animals 1 monkey and three rats were vaccinated.

### Center, Age and Sex wise Distribution

As shown in the table no. 5.2 there are more vaccinated male than the females in all the age categories. Total categories the percentage of males vaccinated range from 4 to 26 percent and female 2 to 23 percent. During the vaccination we found that the people like to keep male dogs than the female dogs

**Table no. 5.2: Age and Sex wise distribution of dogs and cats vaccinated against rabies**

Age Category	Total	Sex Group			
		Male	%	Female	%
3m. - <2yr.	546	357	65.38	189	34.61
>2yrs - <5yrs	394	259	65.73	135	34.26
>5 yr.	177	133	75.14	44	24.85
<b>Total</b>	<b>1117</b>	<b>749</b>	<b>67.1</b>	<b>368</b>	<b>32.90</b>

## Food Safety and Hygiene Training Workshop Report

*D. D. Joshi*

### Summary

Under urban ecosystem health project phase – II, two days training workshop was organized 28-29 Nat 2006 by NZFHRC with the support IDRC for the stakeholders of small teashop, hotel and restaurant along with street vendors. The overall objective of the

training was to provide the knowledge and upgrade the skills of participants to use the experience and practices on Food hygiene, food mixture and rule and regulation. More specifically followings were the objectives: to create awareness on food preservation, diseases that transfer due to polluted food in human beings; to know the importance of food preservation, the way of polluting the food and the process of transferring into human beings; to know the food act, Government rule and regulation and the role of government in protecting consumer rights; to test the food mixture.

The training program methodology was based on Participatory learning method in the context of their practices. More specifically it was based on following methodologies; Group work and discussion; Brainstorming; Experience sharing; Lecture and Buzz group.

The training course content mainly focused on understanding and improving the knowledge/skills of the participants on edible and food act. The following were the major course content: food mixture and food Rule and regulation of Nepal; food hygiene and preservation; way to examine food mixture and demonstration; hygiene and quality of Street food; water purification/Treatment and Hygiene; importance of Hygiene in Met and selling Meat Products; storage of foods

### The following questions were asked by the participants:

1. What is Food Preservative?  
The substance uses to maintain its original stages and to show good is called food preservative.
2. Why to do food processing?  
To export the food production from the production place to another place or market in a safe way.
3. What is Food mixture?  
If some one wants to decrease the quality of food and mix some other food or substances which affect the human health is called Food mixture.
4. Is there is any way that we could test weather the produced food has been produced without chemical fertilizer?  
Yes there is provision in our central lab that we could check such production if you bring it to our office.
5. How food item become polluted?  
There are different ways that food could be polluted, in one way either mixing something else, in other way due to rotten and thirdly due to attack of fungus, virus and bacteria
6. Why the biscuits become soft during the rainy season?  
During the rainy season there is lots of moisture causes attack of fungus and hence become soft.
7. If there are bugs in the rice then it s called food mixture or not?  
If there is bugs found I the rice it is not called mix food but low quality.
8. How to find the quality of rice?  
We take 200 grams of rice as sample and if we found more than 2% rice are bad then it is low quality of rice.
9. If some one came with some food item to test, do you test it or not?  
Yes we test the food after having some fixed fees, but if there is some short of recommendation from ward office or government institution, we test it free of cost.
10. What are the causes of milk mixture?  
The main mixtures in milk are water and micro bacteria

### The basic things needed for Food Hygiene:

- \* Need to special attention on personal hygiene
- \* Uses of pure water
- \* Use of soap for cleaning the utensils
- \* Do not sale the food items in open space and foot path
- \* Cover the cooked food properly
- \* Do not use the inedible color
- \* Protect the food from Pet animals, flies and insects

After discussing the point he added we may affected by different diseases by ignoring the importance of food hygiene causes we may get Food Poisoning.

There are three types of Food poisoning:

- \* Chemical Food Poisoning
- \* Biological Food Poisoning
- \* Bacterial Food poisoning

### Ways to protect Food Poisoning:

- o There is need of clean environment
- o All the person who are in touch of food must be healthy
- o Food items should be properly cooked
- o Do not allow the unhealthy person in the kitchen
- o The toilet should located at least 100 meter from the kitchen
- o Kitchen worker should be healthy

**Following should be followed while producing and processing the food items:**

- \* Washing hands
- \* Do not spit and coughing
- \* Do not smoke
- \* Open the outside cloth
- \* Wear the apron
- \* No entrance for the people suffering from soar
- \* Cut the nail
- \* Do not use ornaments
- \* Do not take part the people suffering from diarrhea

### STORAGE:

#### Ways of Storage

- \* Evaporate the water by electric and solar Drier
- \* Use of chemical such as Potassium metabisulphide, Sodium benzoate and acidic acid
- \* Uses of sugar and salt
- \* By cooling through Refrigeration and freezing
- \* Uses of Bacteria
- \* Uses of temperature through low and High temperature by pasteurization and heating

### Things to be remember by the Meat Seller:

- \* Primary observation and Health checkup of animal to be slaughter should be done
- \* The equipments (knife, gram bells, hooks rails etc.) should be clean
- \* Postmortem should be done after slaughtering
- \* Store the food with the help of oil, salt,  $KNO_3/NaNO_2$

### SPECIAL ATTENTION FOR MEAT PROCESSING:

- Do not give physical tension, take it away with care
- The meat processing room should well managed in terms of
  - Water
  - Sufficient light
  - Cleanliness
  - White tiles on the walls and floor
  - Freezing
  - Good outside environment
  - Workers have proper dress and but
  - Do not allow to freeze the blood inside the room
- Separate place for cleaning the inner parts
- Proper arrangement to rinse the meat
- The weapons/Tools should be rinse with chlorination or soap water before and after the slaughtering
- Worker should be well trained

### Things to be remember for Hotel Owner:

- \* Special attention on Personal Hygiene
- \* Tools should be clean
- \* The cutter should be clean
- \* Keep the meat in Freeze after buying
- \* Thaw the meat keeping out from the freeze
- \* Keep in the refrigerator below  $5^{\circ}C$  after cooking
- \* Keep separately the cooked and uncooked meat
- \* Heat properly while serving to the clients

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## Third Year Annual Progress Review Workshop Report

*Minu Sharma*

### Summary

The first phase (1999 – 2002) of urban ecosystem health project team together with the various stakeholders concluded that there should be a follow-up work to build on the project outcomes. First, the detailed information on the ecosystem and public health status of the communities living in the inner city of the Kathmandu Metropolitan City (KMC) generated by the project was widely shared for planning at various levels including community, NGOs, government, KMC and other development agencies. Second, there was a need to support local community based organizations and stakeholders to implement their action plans and participatory research activities. There was a need to continue technical research; monitoring and support on water quality, epidemiological problems, zoonotic disease control and slaughtering to effectively combine the scientific technical work and local capability to address the issues. Third, the project team stressed that, special emphasis was placed to address the problems of poverty and powerlessness of urban poor, especially renter population, unorganized wage laborer and the sweepers (especially the women at the bottom of the sweeper hierarchy) impinging upon the ecosystem health. Fourth, the project had extended and further developed innovative methodology tested during previous project on ecosystem approach to human health.

This methodological approach was incorporated gender-sensitive participatory methods and an integrated, systemic view of sustainability, to understand the health of the ecosystem. Human populations to select appropriate interventions for improving and to establish mechanism for monitoring of the situation. Based on the above background, a three-year (October 2003- September 2006) follow-up project on Urban Ecosystem Health Phase-II with communities in the Kathmandu city was proposed. The follow-up project was now started and implemented primarily in the inner city neighborhood within ward 19 and 20 where previous project was implemented.

Drawing from experience of working collaboratively in the past years, the project was implemented by National Zoonoses and Food Hygiene Research Centre (NZFHRC). NZFHRC has a history of conducting epidemiological research on human and animal health in urban areas and expertise in Echinococcosis and urban ecosystem health approach. It has strengthened its sociological aspect of research in social mobilization for ecosystem health. The primary beneficiaries of the project are the men, women and children, with particular focus on the marginalized poor including renter population, day wage laborer, and sweeper women of Wards 19 and 20. The project has placed greater emphasis on understanding and improving situation of urban poverty in relation to ecosystem health. The stakeholders had involved in developing the plan and the tools to monitor the progress of their plan. A variety of alternative skills to intervened or made improvements on their urban ecosystem, which was shared with a view to, enable them to act on their own initiative.

**Recommendation:**

- Upgrade the ongoing program
- Continuity of the program in the near future
- Further guidance and recommendations
- More skillful trainings to the stakeholders
- More refresher training related to food and hygiene should be provided
- More training on awareness raising should be given
- Only those activities should be included which can be completed
- The ICC meeting should be held every month
- Regular Monitoring has been done and the staffs of NZFHRC have to visit regularly to the stakeholders
- NZFHRC will continue such type of program on regular basis and that will be very helpful and the best wishes for the progress of NZFHRC
- The club will carry over the entire left program next year and will be moiré serious regarding the activities.
- Due to changes of staffs at KMC, it is difficult to construct the biogas due to lack of releasing of fund in time
- Find also some other donor for the rest work to construct the biogas
- The program should be modified and lunch in an effective way
- Relevant training should be provided to the related stakeholders
- To get success NZFHRC have to restructure in its organizational management
- Need more coordination with other organizations

- People centered program has been conducted so that it will create pressure on those people who escape from the program
- Given more focused to mobilize the local human resources
- A week or 10 days advance information about the program organized by NZFHRC
- More interactions between NZFHRC and Stakeholders
- Adequate advise should be provided to the stakeholders after interactions program
- The program should be launch in more participatory way
- More leadership training should be provided
- The program is not limited to ward 19 & 20, but it should be implemented to other backward wards of KMC
- The involvement of intellectuals should be increased
- The facilities should be increased at Laboratory
- The program implemented in an more effective way launched by NZFHRC

**NEWS:**

Dr. Durga Datt Joshi, Executive Chairman NZFHRC has participated in IDRC activities at the 11th World Congress on Public Health. Joint paper title "**An Urban Ecosystem Health Approach to Make a Cleaner City and Better Health in Kathmandu, Nepal**" was presented by Dr. Joshi "Rio de Janeiro, Brazil. August 21st-25th 2006.

Dr. Durga Datt Joshi, Executive Chairman NZFHRC has participated in International Conference on "Implementing Global Campaign for Combating Cysticercosis". He presented two following papers:

- Impact Assessment and Control of Cysticercosis in Nepal
- "Opportunities for Effectively Improving Pork Inspection and Control in Nepal: A Case Study"

This conference was organized by: Rockefeller Foundation and DVL Denmark, Rockefeller Foundation Conference Centre Italy". 19-21 September 2006

**K.D.M.A. Research Award for the year 2063 (2007)**

*Please kindly submit your research work paper on allergy for trust award consideration by the end of May 2007 to KDMART office Chagal, G.P.O. Box 1885, Kathmandu, Nepal, Phone: 4270667 and Fax 4272694. This award was established by Dr. D.D. Joshi in 2049 B.S. on the memory of his wife, the late Mrs. Kaushilya Devi Joshi. The award includes a grant of NRs. 10,001 with certificate.*

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**From: Zoonoses & Food Hygiene News, NZFHRC  
P.O. Box 1885, Chagal, Kathmandu, Nepal.**

**TO:**

**Dr/Mr/Ms .....**

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