

# QUANG NGAI RURAL DEVELOPMENT PROGRAM (RUDEP) - PHASE 2

## Animal Health Training Activities - First Input



VIET NAM-AUSTRALIA

*Prepared for*

**AusAID**

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URS Sustainable Development  
in association with Kellogg Brown & Root and  
World Wide Project Management Services  
Project Managers and Consultants  
Adelaide Australia

## **DONOR AGENCY**

### **AusAID**

GPO Box 887

Canberra ACT 2601

Ph: +61 2 6206 4769 (Desk Officer), Fax: +61 2 6206 4696

## **LEAD COUNTERPART AGENCY**

### **Department of Planning and Investment**

96 Nguyen Nghiem Street, Quang Ngai Town

Quang Ngai Province, Viet Nam

Ph: +84 55 825701

## **PROGRAM MANAGEMENT UNIT**

93, Le Trung Dinh, Quang Ngai Town

Quang Ngai Province, Viet Nam

Ph: +84 55 816261-6, Fax: +84 55 816260

## **AUSTRALIAN MANAGING CONTRACTOR**

### **URS Sustainable Development**

25 North Terrace

Hackney SA 5069

Ph: +61 8 8366 1000, Fax: +61 8 8366 1001

Program ..... URS Australia Pty Ltd  
Manager: Dee Hartvigsen 25 North Terrace, Hackney  
International Projects Manager South Australia 5069 Australia  
Tel: 61 8 8366 1000  
Fax: 61 8 8366 1001

Program .....  
Director: Ted A' Bear  
Vice President  
Sustainable Development

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## Acronyms

AHWs	Animal Health Workers
CAHC	Commune Animal Health Committees
DVS	District Veterinary Station
EU	European Union
SDAH	Quang Ngai Sub-Department Animal Health
SVSV	Strengthening Veterinary Services in Vietnam
ToT	Training of Trainers
VSCF	Village Savings and Credit Facilities

# 1 Background

Animal Health is an important issue for livestock farmers, as they can suffer high economic losses due to diseases and mortality of their animals. The networks of Animal Health Workers (AHWs) have been established in Quang Ngai but only at lowland communes. The number of AHWs and their training level varies from commune to commune and their knowledge level is heterogeneous. In some upland communes, there are no communal AHWs at all or no para-vets network and the farmers do not know whom to call when their livestock is diseased. In addition, training for AHWs is carried out without any standardised curricula.

A new training approach for AHWs has been set up, tested and refined with in the Field Services and Extension Component of the EU Project “Strengthening Veterinary Services in Vietnam” (SVSV). This approach is based on the participatory methodology and has been developed and implemented successfully by a team of one European Union (EU) Adviser and three Vietnamese Training Matter Specialists for AHWs in Chi Lang district, Lang Son province from May 2000 to July 2001. Then, the AHW Training Manual and Trainer Kit of three volumes have been prepared by the team of trainers with financial assistance from the Commission of the European Communities.

In order to meet strong demands on training for para-vets in Quang Ngai, the Animal Health Training Specialist has conducted some activities as below:

- Meetings with officers of Quang Ngai Sub-Department Animal Health (SDAH) and some Commune Animal Health Committees (CAHC) to collect their technical needs and requirements.
- A one-day workshop for 27 participants (24 members from Quang Ngai SDAH and districts; three members from Department of Agriculture and Rural Development, Extension Centre and Animal Quarantine Station) to introduce them the SVSV AHW Training Manual and its application in Quang Ngai province has been conducted on 26 August, 2003; and
- A three-day training course for 28 participants (26 selected para-vets from five communes belonging to the QNRDP and two members from SDAH) to update their knowledge on diagnosis, prevention and treatment of common animal diseases has been conducted from 27 till 29 August, 2003 at Ninh Tho hotel, Quang Ngai province.

## 2 State of Activities

### 2.1 Meeting with Quang Ngai SDAH Officers

Mr Bede Evans gave an introduction to the Program to the Director of Quang Ngai SDAH and his members prior to beginning the meeting. Some findings from the discussion are as follows:

- The number of AHWs in Quang Ngai is different from district to district, from commune to commune. The para-vets network had been established for some years at the lowland communes. There are no AHWs or no para-vets network at some upland communes (such as Nghia Tho commune where the Program demonstrations have been located) and Ly Son island district. At present, only 113/179 Heads of CAHC are given a small allowance of VND 70,000 per month.
- Training level for para-vets varies from commune to commune and their knowledge level is heterogeneous, especially ethnic minorities (H'Re...) in Nghia Tho and Son Hai communes. Most of them do not like to work as a para-vet any more because they have not been paid a suitable allowance. Thus, the participants in training courses in the remote areas are nearly newcomers from year to year.
- Training curricula for AHWs are not standardised and there are no teaching tools to transfer the lectures.
- Lack of trainers: There are only 2 trainers from SAHD (Mr Thuan and Mr Hai) who are responsible for para-vets training for whole the province. The staff of District Veterinary Station (DVS) are only responsible for management training courses that are conducted in their district.
- Technical knowledge of trainers is not updated and they lack extension methodology to transfer the lectures in the field. The SDAH would like very much to be supported on both technical knowledge and methodology for its trainers.
- The SVSV AHW Training Manual is considered great value due to its suitable content. The demands of SDAH for such training material and methodologies to transfer it are very high.
- Too small budget to conduct annual vaccination campaigns for pigs and cattle/buffaloes. There are only VND 120,000/time/commune X 2 time/year, in spite of the fact that vaccines are subsidised by the Government in the remote areas. The state veterinary offices have not covered the vaccination for poultry in the province.
- Veterinary drug shops are not to be set up at the communal level.
- The Director of Quang Ngai SDAH is aware that para-vets and vet networks play an important part in the animal husbandry production for households to generate income. The SDAH will do its best to take part in para-vets training and would like to co-operate with, and be supported by, the Program.
- Some topics, suggested by the Director of Quang Ngai SDAH, should be provided at the training courses in the future:
  - *Disease prevention*: Good husbandry technique, hygiene, vaccination.
  - *Basic pharmacology*.
  - *Poultry*: Newcastle disease, Gumboro, Pasteurellosis, Salmonellosis, Fowl pox, Duck plague, Mycotoxins, Internal and external parasites.
  - *Pig*: Hog Cholera, Salmonellosis, Erysipelas, Leptospirosis, Pasteurellosis, Leptospirosis, Diarrhoea in piglets, Internal and external parasites.

- *Ruminant*: Hemorrhagic Septicaemia, Foot and Mouth disease, Contagious diarrhoea; Blood, external and internal parasites; Floating.
- *Zoonosis*: Anthrax.

## 2.2 Meetings with Commune Animal Health Committees

Meetings with members of some Commune Animal Health Committees (Duc Phong, Tinh Tho and Son Hai communes) to collect their technical needs and requirements have been conducted and some cattle, pig and chicken demonstrations have been visited. Findings from the meetings and visiting are as follows:

- The lack of technical knowledge on diagnosis and treatment of animal diseases is a problem most para-vets mentioned. It is very difficult for them to disseminate technical information to farmers at commune and village level. They desire to be trained and training courses need be frequent.
- Some farmers from the Village Savings and Credit Facilities (VSCF) at Tinh Tho commune show serious concern regarding the level of knowledge and the sense of responsibility of the CAHC. They suppose the service quality is low and the treatment fee is high and prefer requesting para-vets from other communes to treat their sick animal.
- Due to the low awareness of farmers, especially in upland areas, some of them do not want their animal be vaccinated, though vaccines are free of charge.
- There are no facilities to keep vaccines in the cold chain.
- There are no drug shops at communal level and para-vets/farmers have to go to the district at a long distance when they need medicines.

## 2.3 Introductory Workshop on the SVSV AHW Training Manual for the Animal Health Staff from SDAH and Districts

Mr Bede Evans gave an introduction to the Program to the participants prior to beginning the workshop. Some findings from the workshop are as follows:

- Participants of the workshop were aware of the lack of documents and updated-information, thus they were very interested in the content of the Manual, its practical value and suitability to the situation in Quang Ngai province.
- Experience in training AHWs in Lang Son of SVSV Project and others has been shared and attracted the participants' attention.
- The presentation method pleased most of participants of the workshop. All of them paid attention to the presentation and actively contributed with high interest.
- Needs of update on veterinary techniques were a concern to some participants.
- The SDAH are thankful for the Manual and hope, in the cooperation with the Program, to improve the training and para-vets networks activities in the future.

## 2.4 Training Course for Selected AHWs from QNRDP Communes

The new training approach based on the participatory methodology has been presented during the training course. This method makes it possible to teach difficult subjects in an easy way for para-vets:

- A pre-test with 20 questions on specific knowledge has been completed by all participants (26 para-vets and one SDAH staff) before starting the training course to evaluate their technical level. The result showed that their knowledge level is very heterogeneous. The wrong understanding on the preservation, transportation and use of vaccines, characteristics and effects of some veterinary medicines, diagnosis and treatment of some common diseases in animal have been showed clearly. 30% achieved scores that were below average.
- The objective of the three-day short-training course has been well informed and two cadres from the class have been elected to manage themselves. The main contents of the training course are following:
  - Causative agents of disease in animal.
  - Prophylactic measures for animal (consists of hygiene and vaccination measures).
  - Some main characteristics of physiology and practice in anatomy of poultry.
  - Newcastle Disease.
  - Hog Cholera.
  - Hemorrhagic Septicaemia in cattle.
- The lack of technical knowledge on diagnosis and treatment of animal diseases was expressed through the participation. This led their difficulty to transfer technical knowledge and veterinary information to farmers in their local.
- The participants, especially para-vets from the remote communes/ethnic minorities, have been encouraged to take part in the training through discussions both in small groups and all the class to share experience. By using participatory method during the training, most of para-vets showed high motivation in talking, asking and discussing their problems and difficulties facing them in the comfortable and exciting atmosphere.
- Colour photographs in the size of 20x30 cm, real samples, and colour cards have been used flexibly with flipcharts and white board as supportive tools.
- Some of para-vets with the intermediate level expressed that the knowledge gained from this course is really significant for them to have a more in-depth understanding. All of them were very pleased and want to participate in more training courses like this in the future.
- The contents and methodologies used in the training course have made a strong impression on two members from SDAH and they want very much to learn.
- A post-training test with 20 questions has been conducted to evaluate an improvement in their knowledge. The result showed that achievements are considerable. All of them have obtained marks with above-average level, including two H'Re participants.

### 3 Recommendations

Based on the results of the introductory workshop and training course and some findings received through meetings with officials of Quang Ngai SDAH and CAHCs, following issues should be addressed:

- The close co-operation between the Program and the SDAH on veterinary activities is very important. A Training of Trainers (ToT) course in Basic Agricultural Extension Methodologies and the practice of case study should be conducted for the Animal Health staff from SDAH and all of the districts in Quang Ngai province. Some suitable participants should be selected not only from SDAH but also from DVSSs. After participating in the ToT course, they should set up a team of trainers. These trainers should be supported and followed up by a qualified specialist, including in the design of training tools, whenever the team provides training courses in the field. These courses should be carried out at inter-communes in order to be convenient for para-vets.
- Curricula for whole training course and licensing criteria should be set up so that Animal Health Workers could work under the responsibility of a licensed veterinarian.
- Extension training courses should be carried out closer to the farmers at village and commune level to increase their awareness of the vaccination for their animals. The team of trainers should provide the practical oriented hands-on training in the field on the use of Heat-resistant Newcastle Disease vaccine in order that the farmers can then do it themselves.
- As women are the main labour force in agriculture and animal husbandry, the training courses should be opened to more female participants.
- Although achieving some encouraging results, the demonstrations need be better cared for, especially about enough drinking water and good hygiene.
- The close cooperation with SDAH and relative offices in Quang Ngai to follow up trained para-vets, and if available, set up a special policy for veterinary activities in the remote areas.

## **Annex 1**

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### **Agenda for the Introductory Workshop**

## **Annex 1: Agenda for the Introductory Workshop**

*26 August 2003*

<b>Time</b>	<b>Activities</b>	<b>Persons in charge</b>
08.00 – 08.10	Introduction	Trevor
08.10 – 08.40	Main activities of the Program	Bede
08.40 – 09.30	Experience on AHW training of SVSV project	Sinh
09.30 – 09.45	Break	
09.45 – 10.30	Experience on AHW training of SVSV project (cont.)	Sinh
10.30 – 11.00	Introduction SVSV's AHW Training Manual	Sinh
11.00 – 11.40	Discussion	Participants
11.40 – 11.50	Conclusion	Bede

## **Annex 2**

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### **List of Participants at the Introductory Workshop**

## Annex 2: List of Participants at the Introductory Workshop

26 August 2003

No.	Name	Position
1	Võ Văn Tân	Director of Quang Ngai SDAH
2	Nguyễn Đức Tú	Member of Quang Ngai Town Veterinary Station
3	Nguyễn Đình Huy	Head of Personnel Department, SDAH
4	Nguyễn Văn Thuận	Head of Techniques Department, SDAH
5	Dương Văn Hải	Member of Techniques Department, SDAH
6	Lê Thị Thanh Lâm	Member of Techniques Department, SDAH
7	Nguyễn Phương	Tra Bong DVS
8	Lê Văn Đông	Binh Son DVS
9	Nguyễn Thị Liên	Son Tinh DVS
10	Lê Văn Dương	Son Tinh DVS
11	Nguyễn Văn Tấn	Head of Quang Ngai Town Veterinary Station
12	Võ Thân	Tu Nghia DVS
13	Nguyễn Hai	Tu Nghia DVS
14	Nguyễn Minh Thư	Mo Duc DVS
15	Phạm Anh Tuấn	Mo Duc DVS
16	Trần Thị Tơ	Duc Pho DVS
17	Nguyễn Văn Ba	Duc Pho DVS
18	Phạm Văn Thu	Ba To DVS
19	Trương Thị Nhu	Nghia Hanh DVS
20	Võ Văn Ngọc	Nghia Hanh DVS
21	Phan Huy Anh	Mình Long DVS
22	Trần Quý	Son Tay DVS
23	Nguyễn Nhịp	Son Ha DVS
24	Nguyễn Văn Thảo	Son Ha DVS
25	Nguyễn Văn Sáu	Animal Quarantine Station
26	Nguyễn Hữu Nguyên	Head of Animal Husbandry Dep., Agricultural Extension Center
27	Đỗ Văn Chung	Department of Agriculture & Rural Development

## **Annex 3**

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# **Agenda for the AHWs Training Course**

## Annex 3: Agenda for the AHWs Training Course

27-29 August, 2003

Time	Content	Persons in charge
<b>27 August</b>		
08.00 – 08.10	Introduction	Bede
08.10 – 08.30	Ice breaking	Sinh
08.30 – 09.00	Pretest	Participants
09.00 – 09.30	Causative agents of disease in animal	Sinh
09.30 – 09.45	Break	
09.45 – 11.30	Causative agents of disease in animal ( <i>cont.</i> )	Sinh
13.30 – 15.00	Prophylactic measures for animal	Sinh
15.30 – 15.45	Break	
15.45 – 17.00	Prophylactic measures for animal ( <i>cont.</i> )	Sinh
<b>28 August</b>		
08.00 – 09.30	Some main characteristics of physiology of poultry	Sinh
09.30 – 09.45	Break	
09.45 – 11.30	Some main characteristics of physiology ( <i>cont.</i> ) and anatomy of poultry	
13.30 – 15.00	Newcastle Disease	Sinh
15.30 – 15.45	Break	
15.45 – 17.00	Newcastle Disease ( <i>cont.</i> )	Sinh
<b>29 August</b>		
08.00 – 09.30	Hog Cholera	Sinh
09.30 – 09.45	Break	
09.45 – 12.00	Hog Cholera ( <i>cont.</i> ) and Hemorrhagic Septicemia	Sinh
13.30 – 15.00	Hemorrhagic Septicemia ( <i>cont.</i> )	Sinh
15.00 – 15.15	Break	
15.15 – 15.40	Post-training test	Participants
15.40 – 16.15	Discussion	Participants
16.15 – 16.30	Conclusion	Bede

## **Annex 4**

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### **List of Participants at the AHWs Training Course**

## Annex 4: List of Participants at the AHWs Training Course

27-29 August, 2003

No.	Name	Commune/ office	Age	Gender	Edu. level	Technical level	Exp. In vet. (years )	Ethnic
1	Nguyen Duy Phuong	Son Hai	49	Male	9/12	Primary	1	Kinh
2	Dinh Van Ben	Son Hai	22	Male	5/12	Primary	1	H'Re
3	Dinh Van Ban	Son Hai	22	Male	5/12	Primary	1	H'Re
4	Lam Van Sau	Duc Phong	50	Male	6/12	Primary	25	Kinh
5	Le Quang Chi	Duc Phong	42	Male	12/12	Intermediate	17	Kinh
6	Nguyen Thanh Quang	Duc Phong	35	Male	12/12	Intermediate	12	Kinh
7	Pham Doi	Duc Phong	35	Male	12/12	Intermediate	13	Kinh
8	Le Minh Dung	Duc Phong	34	Male	12/12	Primary	12	Kinh
9	Van Xuan Phan	Duc Phong	37	Male	9/12	Primary	10	Kinh
10	Nguyen Ban	Duc Phong	37	Male	12/12	Primary	12	Kinh
11	Le Quang Lanh	Duc Phong	33	Male	10/12	Primary	2	Kinh
12	Nguyen Duc Mau	Tinh Tho	50	Male	6/12	Primary	26	Kinh
13	Ha Duc Thang	Tinh Tho	48	Male	9/12	Intermediate	27	Kinh
14	Nguyen Minh Ha	Tinh Tho	43	Male	9/12	Primary	18	Kinh
15	Tran Xuan Linh	Tinh Tho	43	Male	11/12	Primary	7	Kinh
16	Tran Van Thanh	Hanh Phuoc	47	Male	10/12	Primary	20	Kinh
17	Phan Van Thanh	Hanh Phuoc	28	Male	10/12	Primary	4	Kinh
18	Cao Van Thang	Hanh Phuoc	37	Male	12/12	Intermediate	9	Kinh
19	Pham Huu Ngan	Hanh Phuoc	46	Male	12/12	Primary	9	Kinh
20	Nguyen Van Trieu	Hanh Phuoc	32	Male	12/12	Intermediate	10	Kinh
21	Pham Xuan Khanh	Hanh Phuoc	59	Male	10/12	Primary	28	Kinh
22	Nguyen Minh Chung	Pho Chau	46	Male	9/12	Primary	16	Kinh
23	Nguyen Dien	Pho Chau	42	Male	12/12	Intermediate	17	Kinh
24	Vo Thanh Tuan	Pho Chau	37	Male	12/12	Primary	8	Kinh
25	Mai Van Bo	Pho Chau	38	Male	10/10	Primary	5	Kinh
26	Nguyen Duc	Pho Chau	36	Male	12/12	Primary	9	Kinh
27	Duong Van Hai	SDAH	41	Male	10/12	BSc	17	Kinh
28	Le Thi Thanh Lam	SDAH	39	Female	12/12	BSc	17	Kinh

**Annex 5**

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**AHW Pre-Test Questionnaires**

## Annex 5: AHW Pre-Test Questionnaires

**1. Please write for each of the following disease if it is caused by parasites, virus or bacteria.**

- Hog Cholera
- Erysipelas
- Newcastle Disease
- Trypanosomiasis
- Duck plague
- Hemorrhagic Septicaemia
- Rabies
- Pasteurellosis in poultry
- FMD
- Worms in calves
- Gumboro
- Salmonellosis in pig

**2. What are the common causes of diarrhoea in piglets?**

.....

**3. What is meant by “Incubation period”?**

.....

**4. How to disinfect veterinary equipment? (tick the right answers as many as required)**

- Wash by clean water
- Boil 30 minutes
- Boil 15 minutes
- Dip in boiling water
- Disinfect with formol

**5. How to disinfect a stable? (tick the right answers as many as required)**

- Apply concentrated lime solution
- Spray and wash with clean water with high pressure
- Use Chloramin 2%
- Use Formol 2-5%

**6. What is the purpose of vaccination?**

- To treat diseases
- To prevent diseases
- To stimulate growth in livestock

**7. How to store vaccines correctly?**

- Store the vaccine in the refrigerator at 2-8° C
- Store the vaccine in the freezer compartment of the refrigerator
- Store the vaccine in a cooling container with ice
- Transport the vaccine in a cooling container with ice
- Transport the vaccine in a cooling container without ice
- Keep it on a shelf together with drugs

**8. Should the syringe and the needle be disinfected with alcohol before using them for vaccination?**

Yes  No

**Why?** .....

**9. Write up the normal body temperature of following animals:**

- Buffalo.....
- Cattle.....
- Pig.....
- Piglet.....

**10. In order to be able to make a good diagnosis of a diseased animal, we need to:**

*(tick the right answers as many as required)*

- Ask the farmers questions about the diseased animal
- Ask the value of the animal
- Observe the animal
- Take the body temperature of the animal
- Inject it with antibiotics

**11. List the clinical signs of Hog Cholera?**

.....

**List the lesions** .....

**Can Hog Cholera be treated by antibiotics?**

Yes  No

**12. List the clinical signs of Trypanosomiasis in cattle/buffalo?**

.....

**How do you treat Trypanosomiasis?**

.....

**13. List the clinical signs of Newcastle disease?**

.....

**List the lesions** .....

**14. What do you use antibiotics for?**

- Disease prevention
- Treatment of viral diseases
- Treatment of bacterial diseases
- Treatment of parasitic diseases

**15. What is the minimum duration of an antibiotic treatment?**

- 1 day
- 2 days
- 3 days
- 1 week

**16. Identify from the following list, drugs that are antibiotics with an “A” and those that are antiparasitics with a “P”.**

- Penicillin
- Levamisol
- Ampicillin
- Trypamidium
- Streptomycin
- Analgin
- Tetracyclin
- Mebendazol
- Dexamethasone

**17. What is important for the use of antibiotics?**

- To know the body weight of the animal
- To know the age of the animal
- To know the sex of the animal
- To gradually increase the dose
- To combine at least 3 antibiotics

**18. What is the purpose of the Iron Injection for piglets? At what age do you usually inject?**

.....

**19. Why and when are vaccines not effective? (tick the right answers as many as required)**

- Bad quality
- Cold chain not maintained
- Expired
- Injection needle is too short for IM injection
- Vaccination has been done during incubation time
- The vaccine dose was not enough
- Wrong sex of the animal

**20. True or false?**

- Prevention is better than cure
- After examining a group of pigs with Hog Cholera it is **not** necessary to disinfect your hands/shoes before going to another pig farm
- Newcastle disease is an infectious disease, causing high mortality in chicken, duck, goose
- Calves should not be fed colostrums

It is important to vaccinate all **sick** pigs in an outbreak of Hog Cholera.

**Annex 6**

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**AHW Post-Test Questionnaires**

## Annex 6: AHW Post-Test Questionnaires

**1. What is the most dangerous causative agent of animal disease?**

*(tick the right answers as many as required)*

- Bad management
- Toxics
- Germs
- Bad weather

**2. What is the danger of microorganism?** *(tick the right answers as many as required)*

- Too small to see
- Quickly reproduction, cause the epidemic easily
- Cause infectious diseases
- Diseases caused by bacteria can be treated by antibiotics
- Cause parasitic diseases

**3. Which causative agents can be transmitted?** *(tick the right answers as many as required)*

- Bad management
- Toxics
- Parasite
- Micro organism

**4. What are prophylactic measures for animal?** *(tick the right answers as many as required)*

- Only good hygiene
- Only vaccination
- Both good hygiene and vaccination

**5. How to store and transport vaccines correctly?** *(tick the right answers as many as required)*

- Store the vaccine in the freezer compartment of the refrigerator
- Store the vaccine in the refrigerator at 2-8° C
- Dry it in the sun
- Store the vaccine in a cooling container with ice
- Keep it in the pans pocket during the transportation

**6. How to use of vaccines correctly?** *(tick the right answers as many as required)*

- The syringe and the needle should be disinfected with alcohol before using them for vaccination
- Let the syringe and the needle get cold before using them for vaccination
- Do not vaccinate for sick animal
- Vaccinate with high dose as much as possible

**7. How to disinfect veterinary equipment?** *(tick the right answers as many as required)*

- Boil 15 minutes
- Dip in boiling water
- Boil 30 minutes

**8. What measures could be done in case outbreaks occur?** *(tick the right answers as many as required)*

- Inform immediately to the higher vet office and the People's Committee of Commune
- Burn and bury dead body of animal
- Sell sick animal as quick as possible
- Disinfect a stable carefully

**9. True or false?** *(tick the right answers as many as required)*

- Newborn animal can be immunated if their mother vaccinated
- Calves should be fed colostrums as soon as possible
- Calves should not be fed colostrums
- Animal vaccinated with one kind of vaccine can be immunated for all diseases

**10. What is the cause of Newcastle Disease?** *(tick the right answers as many as required)*

- Virus
- Bacteria
- Parasite

**11. List the clinical signs of Newcastle disease**

.....

**12. List the lesions of Newcastle disease**

.....

**13. How to dilute Newcastle disease vaccines?** *(tick the right answers as many as required)*

- Distilled water
- Natri chlorua 0.9%
- Warm water

**14. What kinds of animal can be infected with Newcastle disease?** *(tick the right answers as many as required)*

- Poultry
- Water-birds
- Chicken
- All kinds of livestock

**15. What is the characteristic of Heat-resistant Newcastle Disease vaccine?**

- Can resist at very high temperature
- Heat-resistant only when vaccine is still freeze-dried
- Diluted vaccine can be used for the next day

**16. How to use Newcastle disease vaccine of Muktevar type?**

.....

**17. How to use Lasota vaccine?**

.....

**18. What is the danger of Hog Cholera?**

.....

**19. List the clinical signs of Hog Cholera**

.....

**20. List the lesions of Hog Cholera**

.....

### **Limitations**

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