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# ASSESSMENT AND STRENGTHENING OF THE GOVERNMENT OF RWANDA'S NATIONAL ACTION PLAN AGAINST HIGH PATHOGENICITY AVIAN INFLUENZA

RAISE SPS Country-Specific Diagnostic Report #15

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## **INTRODUCTION**

In April 2006, Rwanda's Ministry of Agriculture and the Ministry of Health, in coordination with FAO and WHO, developed the National Emergency Plan for the Prevention and Response Against possible Avian Influenza (AI) in Rwanda, which outlines strategies and guidelines for responding to an avian influenza outbreak. RAISE SPS mobilized three consultants (one avian veterinarian, two behavior-change specialists) to work with the Government of Rwanda, USAID, and international organizations to assist with the operationalization of this plan, and to create an addendum addressing potential bottlenecks or gaps. The consultants also assessed Rwanda's overall preparedness for an AI outbreak, with a focus on communications and response capabilities. In order to do this, the following five objectives were identified:

1. Propose an Addendum to the National Plan
2. Simulate test of National Plan
3. Advise USAID and other USG agencies on coordination issues with the Government of Rwanda and other donors
4. Advise on management of national emergency stockpiles for HPAI (consultant will provide training kits to appropriate National Veterinary Lab)
5. Develop a Behavior Change and Communication (BCC) strategy addressing consumers, backyard producers, and the general public, and advise on the use and dissemination of communications.

In this report, for each objective, the consultants' efforts are summarized, and, if necessary, recommendations are provided for obtaining the objectives. This is followed by an assessment of the AI situation specifically addressing response capabilities, human health concerns, and behavior change and communication issues.

A proposed addendum to the national plan is included as an appendix, as well as instructions for personal protection equipment use and for the cleaning and disinfection of premises. Also included as an appendix are a recommended dissemination plan for communications materials, a suggested plan for audience segmentation, and a list of priority actions and next steps for establishing an effective communications strategy.

Several informative background documents are also provided as appendices, including a summary of focus groups and interviews, a list of BCC workshop and simulation participants, a translation of GOR avian influenza outreach materials, and examples of the Academy for Educational Development's avian influenza outreach materials.

## **BACKGROUND**

Although there have been no confirmed outbreaks of HPAI in Rwanda, the presence of the virus in surrounding countries puts Rwanda at a high risk for contracting the disease. In addition to the important role poultry plays in the economic, social, and cultural life in Rwanda, the country is home to a wide variety of wild bird species, which means an outbreak of avian influenza would have serious consequences.

In preparation for a potential outbreak, the GOR formed an Avian Influenza Task Force consisting of representatives from ministries who would be responsible for responding if an outbreak were to occur. The effort is led by the Chairman of the Office of Rwandan Animal Resources Authority (RARDA), a branch of the Ministry of Agriculture addressing both modern and traditional poultry

farming issues. In September 2005, a ban on the importation of poultry was enacted, and the national hatchery was closed.

In April 2006, the AI Task Force developed the National Emergency Plan for the Prevention and Response Against Possible Avian Influenza in Rwanda in collaboration with FAO and WHO. The purpose of the document is to outline a response plan in case of an outbreak of avian influenza, but by early June, the plan had not yet been approved by the government.

The consultants collaborated with the GOR, USAID, and international organizations to develop an operational plan as addendum to the National Action Plan, conducted technical trainings, created management plans for emergency stockpiles, and formulated a communication strategy. In addition to the summary of the technical trainings that were conducted and an outline of the communications strategy, assessments of Rwanda's level of preparedness for response to an outbreak of avian influenza are also provided in this report.

## **OBJECTIVE 1: PROPOSE AN ADDENDUM TO THE NATIONAL PLAN**

A proposed Addendum to the National Plan has been constructed to use as a quick reference when time is of the essence and situations are both hectic and critical. The Addendum is schematic to allow quick access to critical information and quick decisions (see Appendix A).

The National Plan seems sound but the veterinary consultant recommends the following key changes:

### **STAMPING OUT AND SURVEILLANCE ZONES SHOULD BE ENLARGED**

The zones of “stamping out”, surveillance, and ring vaccination should be altered to reflect accepted practices. A one kilometer “stamping out” zone is too small. Some diseases (and possibly this one) can spread out to 1 mile. Based on the closeness of the homes in Rwanda, it is recommended that a “stamping out” zone of 2 kilometers is more appropriate. Surveillance zones are usually twice the “stamping out” zone and therefore should be changed from 2 kilometers to 4 kilometers. A ring vaccination of 2 kilometers is acceptable.

### **VACCINE SHOULD BE USED IN A RING ZONE IMMEDIATELY AFTER DIAGNOSIS**

A decision needs to be made on whether or not to use vaccine. The reluctance for use of vaccine is based on the false premise that “it communicates that the country has decided to live with the disease.” Again, the veterinary consultant feels that, because the response will most likely not be timely and due to the lack of human controls, that ring vaccination is appropriate. This does not communicate that Rwanda is willing to live with this disease and is used in some cases in the United States of America. Vaccination of all of the poultry within a district, province or entire country communicates that it got so far out of hand that there is nothing else left to do. A team different from the stamping out team should be used: one team to start stamping out, and one team to start vaccination immediately after diagnosis.

### **RESPONSE SHOULD BE IMMEDIATE (LESS THAN 48 HOURS) AND DECISIVE**

It is important that the response to an actual case of H5N1 be as swift as possible to prevent its spread by people and other birds. Response from time of death of the bird until beginning of quarantine and start of eradication (“stamping out”) should be within a 24- to 36-hour time period. Quarantine (not allowing animal movement) could start as early as a suspect case (death of a swan, multiple wild ducks or shore birds, death of 40 percent or more of a domestic flock within a 48 hour period) is reported. The current structure of the plan requires a single veterinarian (one of a team of 4 or 5 veterinarian’s from the National Veterinary Laboratory) to go to the site of the bird’s death and either test the bird at that site or take the bird back to the National Veterinary Laboratory (Vet Lab) and test the bird there. Depending on location and availability of a car for hire, that alone could take 6 to 8 hours and waste precious time.

### **TAXIS SHOULD NOT BE USED AS MEANS OF TRANSPORTATION OF DIAGNOSIS, STAMPING OUT AND VACCINATION TEAMS**

The veterinary consultant is concerned about the use of a public vehicle to go to places to investigate a disease of this nature. By hiring a car (taxi) to do this, the government is putting its people (the general population) in an unnecessary disease exposure risk situation.

## **DISTRICT VETERINARIANS OR AG TECHS SHOULD PROVIDE INITIAL DIAGNOSIS**

To greatly reduce the response time, it is suggested that rather than structure the response plan as it currently exists, Personal Protective Equipment (PPE) and Avian Influenza Type A Antigen Detection kits should be distributed to veterinarians in all districts (Ag Techs or vet techs if there is no veterinarian in the district). Once a suspect H5N1 case is identified, the person responsible for testing in that district will go and test the bird at the farm. If further tests (virus isolation) are required, the bird may be packaged (bag inside of bag, see PPE instructions, Appendix B) and sent to the Vet Lab. The only change this would make is that it would require the training and fit testing of those individuals on proper use of PPE and training on performing the rapid test. This training should not be difficult and has already been practiced during the consultant visits. It would be important to stress to the people in the districts that the rapid test should be used on tracheal and oral swabs only and not used on cloacal samples or feces. Those tests would be performed at the NVL.

## **N95 MASKS SHOULD BE TESTED FOR PROPER FIT AND PROTECTION BY MINISANTE**

At the time of this report (1 June 2006), there are no Bitrex fit test kits within Rwanda. It is important to realize that N95 masks are not effective unless that have been properly fitted to each wearer. This test will determine whether or not there are leaks in the mask. Wearing a mask that doesn't fit properly poses the danger of having the wearer needless exposed and giving the wearer a false sense of security. These kits have been ordered and will soon be in the country. Dr. Vianney of MINISANTE has agreed to make sure that his group will perform these tests.

## **AI SAMPLES SHOULD BE PACKAGED TO INDUSTRY STANDARD TO ALLOW SHIPMENT VIA AIRPLANES**

Also as of this writing (1 June 2006), there are no Safe-T-Pak shipping containers in Rwanda to train with. These containers are required by members of International Air Transportation Authority (IATA) to ship specimens for OIE laboratory testing for H5N1. In some countries, the lack of these containers has led to the delay of a specific diagnosis of H5N1 avian influenza virus. This confirmation is required by OIE. These packages as well as a training CD have been ordered and will soon be in country.

## **RESPONSES SHOULD BE STREAMLINED TO ALLOW EFFICIENT AND TIMELY RESPONSES**

A complication of the current structure of the National Plan is the involvement of many agencies. To have a rapid response plan, there needs to be a single decision maker. The national plan requires the coordination between, RARDA, MINAGRI, and MINISANTE. In some instances, it requires the traveling of a representative from MINISANTE with the MINAGRI (Vet Lab) representative to the farm to investigate the death of birds. In actuality, this would dramatically increase response time for very little added value. In addition, unless humans are infected, it is wise to limit the number of people to an infected site to a minimum.

## **OBJECTIVE 2: SIMULATE TEST OF NATIONAL PLAN**

Many attempts were made to organize a “table top exercise” where all of the major players and in-country donors were in attendance to test the plan. There was a natural resistance by some to have this take place. A table top exercise, a simulated outbreak, requiring the response of agencies to the occurrence was conducted on Friday, 26 May 2006. There were 11 people in attendance. Those present included four people from MINAGRI (from the Vet Lab), two people from MINISANTE, one person from Parks and Tourism, one person from the Bureau of Standards and two consultants from FAO (see Appendix H for list of attendees). Many of the key players and decision makers were not present. Before the table top exercise, a communications workshop was conducted where the skills for critical Behavior Change and Communication (BC-C) efforts for this disease were discussed and stressed.

After the table top exercise was completed, a functional exercise was offered to the table top exercise participants for the week beginning on 29 May 2006, but it was declined. A functional exercise asks participants to address situations that would actually happen during an outbreak. In other words, they would have to have the contact names, phone numbers, PPE, test kits, methods of quarantine, determination of region to quarantine, stamp out, and vaccinate as well as all materials, contacts, and arrangements to ship specimens to the OIE laboratory for confirmation in place and even pre-drafted press releases. The participants should either already have this material or must get that material soon after the exercise. A train the trainer exercise is scheduled for 2 June 2006 to train district veterinarians, the chief game warden and veterinary assistant at Akagera National Park and the veterinary assistant at Nyungwe National Park. That exercise will train participants on PPE and the rapid antigen test. Please see report below for 2 June 2006 for a synopsis of that training.

### **TRAINING OF RWANDAN PERSONNEL ON PPE AND AVIAN INFLUENZA RAPID TEST**

On Monday, 22 May 2006, the consultants traveled to the National Veterinary Laboratory to evaluate that facility (see evaluation elsewhere in this report). On that day, Dr. Anicet Karatira was trained on proper biosecurity/biosafety procedures using PPE supplied by USAID. Dr. Karatira was then observed training Dr. Thomas Bazarusanga. Dr. Bazarusanga then trained Mr. Ildephonc Gatebara. Mr. Gatebara then trained Dr. Samson. After training on proper PPE procedures, the group was trained how to use Synbiotic’s Avian Influenza Virus Type A Antigen Test Kit supplied by DAI. Once trained on that test kit, Dr. Karatira trained the remainder of the group how to use the test kit.

On Wednesday, 24 May 2006, a group consisting of 7 people was assembled at the MINAGRI for a train-the-trainer session on PPE and the Avian Influenza test kit. Those present were: Dr. Anicet Karatira, Dr. Thomas Bazarusanga, Mr. Ildephonc Gatebara, Mr. Jean Marie V. Twizeyimana from RARDA; Mr. Richard Clive Nkunda Mwesigwa, and Mr. Jean Marie Vianney Uwimama from the MINISANTE; and Dr. Tony Musakikua of ORTPN. Dr. Karatira lead the group by demonstrating the proper procedures of putting on and removing PPE. The group then lead each participant as they repeated the process. Dr. Karatira then lead the group demonstrating the proper use of the Avian Influenza test kit.

It was felt by the consultants that this training needs to continue where district representatives are brought into Kigali or assembled at a mutually convenient place and these trained people should train those representatives. This training needs to take place in a timely manner. It was promised by the RARDA people (namely Drs. Karatira and Bazarusanga) at the table top exercise that this would take place within 1 or 2 weeks from 26 May 2006. The consultant offered to observe that training if they were in country at the time.

On 2 June 2006, another training session was held at MINAGRI's National Veterinary Laboratory in Rubirizi. There were 17 people present. The Chief Game Warden and the Veterinary Warden from Akagera National Park were there. In addition, there were 7 control post technicians from, a technician from the Kibungo satellite veterinary laboratory, 4 technicians from different labs within the National Veterinary Laboratory, and an extension technician. Also present were Mr. Idephonse Gatebara and Mr. Jean Marie V. Twizeyimana from RARDA. Once again, everyone attending was instructed in and required to put on and remove PPE in a safe and effective manner. They were also shown how to perform the rapid Avian Influenza test kit. Mr. Joseph Ingabire, Veterinary Warden from Akagera National Park, was required to train other participants on the proper procedures for PPE. In addition, he was required to successfully perform the rapid Avian Influenza test kit. Following that training, participants were led in a discussion about the response needed to control the spread of H5N1. They were asked to develop methods to control it if it occurred and quarantine, stamping out and vaccination were discussed.

## **OBJECTIVE 3: ADVISE USAID AND OTHER USG AGENCIES ON COORDINATION ISSUES WITH THE GOVERNMENT OF RWANDA AND OTHER DONORS**

### **MONEY FOR INDEMNIFICATION SHOULD BE HELD IN A DONOR AGENCY MONEY BASKET**

One of the most critical points in the National Plan and in response to this disease is indemnification (paying farmers to destroy their birds). It was recently seen in Indonesia that farmers refused to give their chickens to the government for stamping out because the government was not willing or able to pay for them. It is important that donors provide a basket of money with which to do that. The veterinary consultant recommends that the money be kept in an agency other than the government of Rwanda. Too often, “rainy day” funds are spent on items that are more pressing. This would be a critical mistake.

### **INCREASE AMOUNT OF INDEMNIFICATION FROM 2000 TO 3000 RWANDAN FRANCS**

The proposed amount of money paid for indemnification is too low based on the consultants’ experience with buying a chicken in the market. A mature rooster of about 2.5 kg was purchased by one of the consultant’s drivers at a cost of 3000 Rwandan francs. This appears to be a more reasonable amount rather than the proposed 2000 Rwandan francs. Based on the experiences of USDA in their efforts to stamp out Exotic Newcastle Disease in the United States, if you are not willing to pay a fair price, people will smuggle their birds out of the infected area (thus spreading the disease) or they will eat them. If you pay a fair price or a little over what they could get elsewhere, they will gladly surrender their birds.

### **PROVIDE REPLACEMENT OPTIONS TO REPLACE CHICKENS**

In addition to the indemnity, the government should supply the affected farmers with chicks once it is safe to restock the farm. Fertile eggs or one-day-old (newly hatched) chickens can be transported by airplane to Rwanda with a relative guarantee of absence of H5N1. High path avian influenza kills the developing embryo within 72 hours and baby chicks won’t hatch from infected eggs. Fertile eggs should be surface disinfected prior to shipment to Rwanda. The eggs once in Rwanda could be hatched at the MINAGRI hatchery. It would be important for someone from the hatchery facility to take those chicks to the farmer (or exchange them in a neutral area) rather than have the farmer come to the hatchery. This consultant has found that the hatchery manager Mr. Jean Marie Twizeyimana is very aware of proper biosecurity methods to prevent the spread of disease.

It is further recommended that after the migratory waterfowl from Europe that are currently in Rwanda, leave Rwanda to return to Europe, the hatchery and breeding farms should start producing baby chicks for sale in Rwanda. This should most likely be sometime in the month of December 2006. Dr. Tony Musakikua of ORTPN should be consulted for an exact date. Once again, please be reminded that there have been other countries infected with H5N1 through smuggled poultry and poultry products.

## **REENGAGE THE MINISTRIES AT THE TOP LEVELS OF MINAGRI, MINISANTE, AND AI TASK FORCE**

Competing priorities at Ministry levels resulted in the absence of key stakeholders at the comprehensive BC-C strategy workshop and table top simulation. The absence of key staff during this technical assistance trip limited the impact of the team's work. It was necessary to renegotiate the development of a BC-C strategy with RARDA, who was not convinced it was needed. Regular USAID meetings at the appropriate level will ensure progress towards action. USAID may wish to capitalize on GOR presence at the recent OIE meeting in Paris and AI conference in Uganda to bring together a wider GOR/donor meeting to review progress towards putting the National AI Plan into action.

## **CREATE A BC-C SUB COMMITTEE IN THE AI TASK FORCE, COMPOSED OF COMMUNICATION EXPERTS FROM EACH MINISTRY AND OTHER INTERESTED PARTIES**

Private sector advertising agencies, ICT specialists and other IO BC-C experts should be invited to join this sub committee as second tier members.

## **SHARE A SUMMARY OF THE BC-C PLAN AND IEC MATERIALS WITH NATIONAL AND INTERNATIONAL PARTNERS IN COUNTRY**

A "one-voice" BC-C plan with clear goals, objectives and desired behavior changes, common messages, targeted populations/audiences and appropriate channels of communication should be shared with local, national and international organizations in-country. All IEC materials and transcripts of radio spots should also be shared with stakeholders

## **OBJECTIVE 4: ADVISE ON MANAGEMENT OF NATIONAL EMERGENCY STOCKPILES FOR HPAI (CONSULTANT WILL PROVIDE TRAINING AND KITS TO APPROPRIATE NATIONAL VETERINARY LAB)**

### **HOLDING AND DISTRIBUTION OF PERSONAL PROTECTIVE EQUIPMENT**

Reserves of Personal Protective Equipment (PPE) should be kept at donor source offices. Enough PPE should be distributed such that 4 sets of coveralls, boots, gloves, mask goggles are held in each district with the district's contact person. At least 20 sets should be kept at the Vet Lab to provide for a large enough reserve to be able to respond if necessary.

### **HOLDING AND DISTRIBUTION OF AVIAN INFLUENZA RAPID TEST KIT**

A box of 20 tests (20 tests/box) of Synbiotic's Avian Influenza Virus Type A Antigen Test Kit should also be distributed to the responsible person in each district. One box of 20 tests should also be held at the Vet Lab for routine use. In addition, one box of 20 tests should be kept at Akagera National Park (where most of the migratory waterfowl are located) and 1 box of 20 tests should be given to Dr. Tony Musakikwa, Director of Animal Health in Tourism and Parks. The donor should keep enough test kits to allow for replacement if needed (possibly 10 boxes). These kits may be stored at room temperature, as long as it is between 2 degrees C (35 degrees F) and 30 degrees C (86 degrees F). They should also be kept out of direct sunlight.

### **SUGGESTED STOCKPILING OF H5 AVIAN INFLUENZA VACCINE**

It is recommended that one of the donor agencies needs to stockpile at least 10,000 doses of a killed H5 Avian Influenza vaccine. It has been found that in chickens and other birds that the N type is not critical for protection. The H type must match the H type of the wild strain of virus to be protective.



## **OBJECTIVE 5: DEVELOP A BC-C STRATEGY ADDRESSING CONSUMERS, BACKYARD PRODUCERS, AND THE GENERAL PUBLIC, AND ADVISE ON THE USE AND DISSEMINATION OF COMMUNICATIONS**

### **BACKGROUND**

Communication is paramount to minimizing exposure and risk to AI. The general population needs to be informed, understand hygienic practices needed to reduce infection risk, follow bio-security measures and follow safe poultry practices. Effective communication increases information, knowledge and awareness; and will empower the population of Rwanda to practice appropriate behaviors to appropriately prevent, contain and respond to an AI outbreak.

The overall communication strategy needs to engage the leaders of the country, inform and educate the relevant professional and scientific stakeholders, and mobilize and sensitize the community at the household level. The communication tactic needs to be a coordinated multi-sector approach that establishes both vertical and horizontal sharing of knowledge, information, and data, and quick and clear decision-making.

A BC-C (behavior change - communication) workshop with RARDA members resulted in the development of a communication strategy that identified the following needs: (Please see Objective #3 for recommendations on coordination.)

### **DELEGATE INITIAL RESPONSIBILITIES FOR THE LAUNCHING OF THE BC-C SUBCOMMITTEE OF THE AI TASK FORCE TO THOSE MOST INTERESTED IN ITS ESTABLISHMENT.**

Dr. Tony Musakikwa, Director of Animal Health in Tourism and Parks, and Dr. Thomas Bazarusanga, parasitologist, both demonstrated keen interest and abilities in understanding the need for a BC-C strategy and subcommittee. Pairing of one of them with either Mr. Richard Clive or Mr. Jean-Marie from MINISANTE and Mr. Ildephonse Gatebera from MINAGRI would create a nice joint effort. Once launched, a subcommittee head would have to be officially appointed.

### **REGULAR AND CONSISTENT RADIO MESSAGES NEEDED.**

While government officials believe the initial radio spots reached a considerable segment of the population and that awareness of AI is considerable, no base line data or follow-up surveys exist to confirm this belief. The ban on the importation of poultry, instituted September 2005, may have had more of an impact on awareness than any of the other communication channels. Based on informal focus groups, however, segments of the population have heard about AI via government AM radio spots but they have not heard from government officials since funding ran out for the spots. Interviews revealed there is misinformation on symptoms of AI in chickens and there was general lack of knowledge on preventative behaviors such as not sleeping with poultry inside the household. Based on data provided by the Rwandan Census of 2002, radio is the mass media communication vehicle with the widest audience, reaching 68.3% of the population, and should therefore continue to be used as the most effective and efficient means of communication.

## **DEVELOP LEAFLETS WITH BASIC PREVENTION MESSAGES IN KINYARWANDA TARGETED AT LOW-LITERATE POPULATIONS**

Current GOR BC-C/IEC materials (posters and brochures) serve the professional/clinical and more educated audiences. Additional materials should be developed in Kinyarwanda. Prototype designs, already developed by Academy for Educational Development (AED), were shared, discussed and left behind. The development of a new design will be too time consuming, costly, and unnecessary. The AED material may be adapted, if needed (see Appendix J for AED materials).

## **TAKE ADVANTAGE OF EXISTING STRUCTURED MEETINGS, NATURAL GROUPINGS, CAPTIVE AUDIENCES AND COMMUNITY LEVEL ACTIVITIES TO DISSEMINATE INFORMATION AND ENGAGE IN ONE-ON-ONE DISCUSSIONS (SEE APPENDIX D FOR RECOMMENDED DISSEMINATION PLAN).**

Engage community leaders and organizations, such as youth groups, faith-based organizations, and women's groups. Tap natural meeting places, such as food and handicraft markets, schools, world cup soccer match groupings and other sports activities.

Engage community members through Gacaca, required weekly judicial village meetings and Umuganda, select days when the population congregates to volunteer on projects.

## **CULTIVATE RELATIONSHIPS WITH JOURNALISTS AND IMPROVE MEDIA MANAGEMENT.**

Recent newspaper articles have quoted contradictory comments from government officials. RARDA should develop closer ties with the news media with the objectives of educating, providing accurate information and engaging them as a resource in the event of a pandemic. Once the national AI plan is signed, a press release should be issued to include an update on the Rwandan government preparedness e.g. BC-C plan, improved technical expertise, rapid testing capabilities and bio security equipment. A draft press release should be written and approved by the Ministers of Agriculture and Health for dissemination in the event of an AI outbreak.

## **INCORPORATE AI MESSAGES AND PREVENTION PRACTICES INTO CURRENT TRAINING MODULES ON INFECTIOUS DISEASES AND INFECTION PREVENTION.**

MINISANTE should incorporate AI information and prevention messages in the soon-to-be-completed national community health workers manual. In addition, medical and nursing school curricula and in-service training for physicians and nurses at the AO, A1 and A2 levels should address AI infection prevention measures and behaviors.

## **ASSESSMENT OF SITUATION**

### **RESPONSE CAPABILITIES**

The consultants visited the National Veterinary Laboratory to evaluate it and the staff's capability to respond to an H5N1 avian influenza outbreak in Rwanda. The facilities, although old, were functional, well designed and constructed. There appears to be a professional staff of 5 veterinarians, one of whom is the director of the laboratory. They are Dr. Isidore Gafarasi, Director of Diagnostic and Epidemiology Unit; Dr. Anicet Karatira, head of avian influenza task force with a specialty in food safety; Dr. Thomas Bazarusanga, parasitologist; Dr. Samson, pathologist; and Dr. Charles Nkuranga, entomologist. Dr. Gafarsi assured the consultants that all professionals would be involved if there was an outbreak of H5N1 avian influenza. There was one technician, Mr. Ildephonse Gatebera, necropsy and histopathology, who would be responsible for performing the necropsy on suspect birds. There were many technicians in the other laboratories within the Vet Lab.

All suspect birds will be necropsied (autopsied) in a room off of the standard necropsy floor. This room has been used for rabies suspect necropsies and should work for H5N1 avian influenza necropsies. There should only be 2 keys for that room, 1 for the person responsible for doing the necropsies and 1 key for the director of the lab. The door should be locked when performing suspect necropsies to prevent inadvertent entrance while the procedure is underway. Mr. Gatebera was instructed to wear an N95 mask and goggles when performing those necropsies.

While we were there, the people were asked if they wash the surfaces with soap and water and then disinfect areas after performing a necropsy and they responded yes. There was dried blood in at least 2 areas on the large table used to perform necropsies. The floor of the room was clean. There were hose reels (areas to hang up water hoses) near the faucets but no hoses were attached to the faucet or reel. It is important that this laboratory have access to water.

On Tuesday, 23 May 2006, the consultants traveled to the Uganda border to investigate the veterinary post there whose responsibility was to watch for poultry and poultry products being smuggled into the Rwanda. While there, we met Dr. Moses, the border veterinarian. He told us that he was on duty 24 hours a day, 7 days a week, 365 days a year. If that is true, he is definitely over worked. He told of people trying to smuggle chicken meat under ice on the bottom of containers that had ice and fish on the top. He also told of finding a truck trying to smuggle live chickens into Rwanda on one of the back roads away from the border crossing. His detection system included 1 or 2 technicians and was helped by department of revenue employees. Attempts at smuggling poultry and poultry products will increase as we were told that the price of an egg went from 20 Rwandan francs before the hatchery closed to 60 to 80 Rwandan francs now. Since other countries in Asia and in Africa reportedly had outbreaks of H5N1 avian influenza traced to smuggled poultry products from China, an alternative, safe source for chickens and poultry products needs to be identified.

The same day, the consultants went to the market in Kigali. There, chickens, ducks and turkeys were being sold. The driver for the consultants wanted to buy a chicken for supper that evening and the price was 3000 Rwandan francs. The poultry vendor was asked if he knew anything about bird flu. He responded that yes, he had heard about it on the government's radio station and he accurately described the symptoms that infected chickens will have.

On 31 May 2006 the veterinary consultant traveled to Akagera National Park with Dr. Tony Musakikwa, Director of Animal Health in Tourism and Parks. Dr. Tony said that the majority of migratory waterfowl from Europe travel down the Nile river to spend that summer on the lakes and marshes of the southern part of Akagera National Park. There are approximately 40 people who will be involved in performing surveillance in that park. They consist of a chief game warden, other game wardens, 2 veterinary assistants to Dr. Tony and many guides and scouts. In addition, there is a fish camp in the park where people fish on the lake. Dr. Tony and the game warden said that the region where an outbreak could occur is monitored almost on a daily basis. They will be telling their subordinates to report cases of death loss and not to touch dead birds. Dr. Tony said that there are fewer lakes and fewer numbers of migratory waterfowl in Nyungwe National Park in the west of Rwanda. Dr. Tony has a veterinary assistant there as well as other park workers that will serve as surveillance. Dr. Tony has already been trained on PPE and the avian influenza rapid test and on 2 June 2006, the chief game warden and the veterinary assistant from Akagera and the veterinary assistant from Nyungwe national parks were trained on PPE and the avian influenza rapid test.

## **HUMAN HEALTH CONCERNS**

Although not part of the scope of work, information gathered from MINISANTE representatives revealed that that ministry has PCR capability in place for HIV/AIDS. They don't however have the necessary probes to detect H5N1 Asian strain of avian influenza. It is recommended that probes for

that virus be obtained from either CDC or WHO to provide that capability within Rwanda. As it currently exists, the rapid influenza test could be used to detect type A influenza in humans BUT seasonal influenza in humans is also a type A influenza. The only way to tell if a human has the H5N1 strain is with the PCR test. If a human can be rapidly diagnosed with H5N1 (use of PCR), the treatment regimen will be more aggressive and there will be a better chance at survival. It is also recommended that a stockpile of Tamiflu or Relenza be obtained to protect those workers who will be involved in the stamping out process and as a reserve for laboratory workers in the case of illness.

## **BEHAVIOR CHANGE AND COMMUNICATIONS**

### ***Background***

In April 2006, MINAGRI and MINSANTE, in coordination with FAO and WHO, developed a draft National Emergency Plan for the Prevention and Response against AI in Rwanda. This plan recommends strategies and guidelines for processes, decision making, information dissemination and training to address a possible outbreak. As of May 2006, the plan had not yet been approved by the Cabinet and President Paul Kagame.

### ***Review***

The BC-C consultant conducted the following tasks:

- Reviewed the communications materials already prepared by RARDA. The materials consist of a poster and pamphlet, each containing the same messages. The materials are written in the local language (Kinyarwanda) at the level of an educated and literate population, and describe AI and its global status, symptoms in birds and humans, prevention behaviors, and basic hygiene practices. (See Appendix I for a translation and pictures of the materials.). RARDA reproduced 10,000 copies each of the poster and pamphlet with 9,000 each yet to be disseminated. RARDA also produced a radio spot broadcast on government radio by a popular radio talk show host. The spot was broadcast for two weeks, three times per day. A Q&A 30 minute radio program also took place on a RARDA radio station.
- Conducted five informal focus groups and interviews held with: 1) group of 20-25 young men at the Rwandan border with Uganda; 2) group of 5 men and women at Rwandan border with Uganda; 3) group of 6 women at Kigali food market; 4) car and taxi drives in Kigali; 5) hotel staff at Intercontinental Hotel.
- Met with MINAGRI/RARDA and MINISANTE, together with USAID, to renegotiate the importance of holding a BC-C strategy workshop. This strategy was not a priority for the ministries. The original one-day strategy workshop was reduced to half a day. The communication professionals were not available to participate.
- Met with FAO, Intrahealth and Population Services International (PSI). Intrahealth is focused on decentralization and training activities. PSI is responsible for social marketing of contraceptives.
- Conducted a BC-C workshop with AI task force participants and the two FAO consultants who assisted with the development of the national plan (see Appendix H for list of participants).

## **FINDINGS**

The Republic of Rwanda, specifically RARDA, is not ready to communicate decisively, accurately and in a coordinated fashion in the event of an outbreak. Dissemination of awareness creating materials is minimal and geared towards a literate population although over 50% of the population is functionally illiterate. A strong operational leader within RARDA is needed to spearhead the BC-C initiatives identified during the BC-C workshop. The following data, analyses and outcomes of the BC-C recommendations, as well as the information contained in the Appendices, will help move the GOR towards improving preparedness, containment and response.

Current data and focus groups sessions indicate:

- Radio is the most relied on source for information on Rwanda and international news (68.3%)
- Authorities are the second most reliable source of information (20.3%)
- 49% of the population cannot read or write in at least one language
- With a population of 8.2 million people, the population density is more than 300 people per square km
- Segments of the general population have heard about AI through radio spots and know it is dangerous but basic prevention behaviors, such as not sleeping with poultry and basic hygiene practices are not in place
- Women need to be reached through established women's community groups and natural gathering places such as markets and tea-weighing stations

### **BC-C WORKSHOP**

A BC-C workshop was conducted on 26 May 2006 with members of the AI task force but based on a decision by RARDA's Acting Chair, participants did not include BC-C experts from the ministries. Participants were the same as for the table top exercise. The overall objectives of the BC-C workshop were to:

- Develop an overall communication/behavior change framework;
- Capture the work and materials already produced;
- Identify additional issues, behaviors and messages that needed to be addressed; and
- Develop next steps and actions

The workshop reviewed international best practices for the following elements:

- Behavior change process
- Behavior gaps
- Development of appropriate Information, Education and Communication (IEC) materials
- Development of BC-C objectives

Small groups worked on:

- Audience Segmentation

- Messages and pre-testing
- Gender differences in exposure, perception and interpretation of messages
- Communication channels

During report out to the larger group, actions and next steps were identified and, to the extent possible, leads and responsibilities were established (see Appendix F).

## **ANALYSIS OF KEY BARRIERS TO CHANGE**

Two important changes in behavior—not sleeping with poultry inside the household, and washing hands with soap and water, as a general rule, but particularly after touching an infected bird—are behaviors that will be difficult to change unless the root causes are studied and addressed. Unless these behaviors are modified, the population of Rwanda remains at risk of infection.

The practice of bringing in poultry into the household overnight is well-established in Rwanda as a means of securing an important asset to the household. Poultry is a means of income as well as protein (eggs) and food. Poultry remains inside the home to protect them from thieves, predators and simply from running away. To change the behavior and have the population leave the poultry outside, one must ensure their safety. While not a practice in Rwanda, many backyard poultry households in other countries construct cages with local products such as wood. The general population in Rwanda, though, does not have the financial means to construct such cages.

**Recommendation:** GOR should consider announcing a “Umuganda” project around the construction of cages. During these once-a-month volunteer days, agriculture students could train community volunteers on how to gather and construct these cages. Students from the school of public health or veterinary sciences could also volunteer to assist. Flyers designed for semi or illiterate populations will reinforce the use of cages through depictions and drawings (example was left behind).

Washing hands with soap and water after touching an infected bird will be difficult because of lack of clean water and availability of soap, not only within the general population but also in hospitals and health clinics. A Rapid Facilities assessment conducted in January 2006 by Twubakane, a USAID bilateral, found that 40% of health centers have no functional running water. In hospitals and clinics, 28% have no disinfectant and 33% no soap for basic hand washing.

**Recommendation:** Weak infection prevention practices in the health area will be addressed by Twubakane and other programs. In the meantime, not touching birds should be stressed, keeping children away from poultry and developing community norms around using well water to wash hands. Private sector soap manufacturers (national and international) may be interested in funding radio and TV campaigns stressing basic hygiene practices. Delivery of soap products could be negotiated as part of their social corporate responsibility programs (Unilever in Indonesia is an example of this).

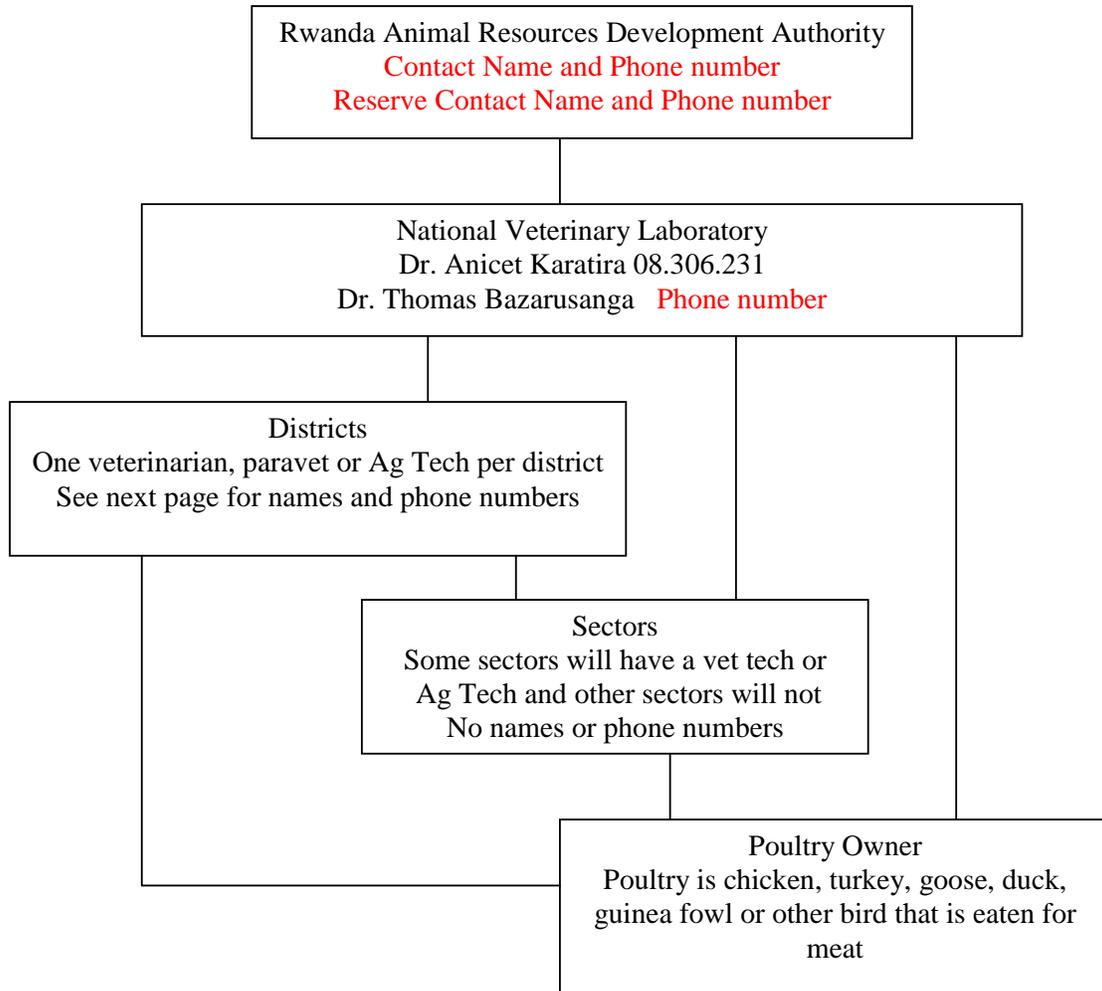
# **APPENDIX A: ADDENDUM TO NATIONAL PLAN**

Addendum to the

**NATIONAL EMERGENCY PLAN FOR THE PREVENTION AND RESPONSE AGAINST  
AVIAN INFLUENZA IN RWANDA**

Kigali, 2 June 2006

**SCHEMATIC OF AI RESPONSE PLAN IN ANIMALS**

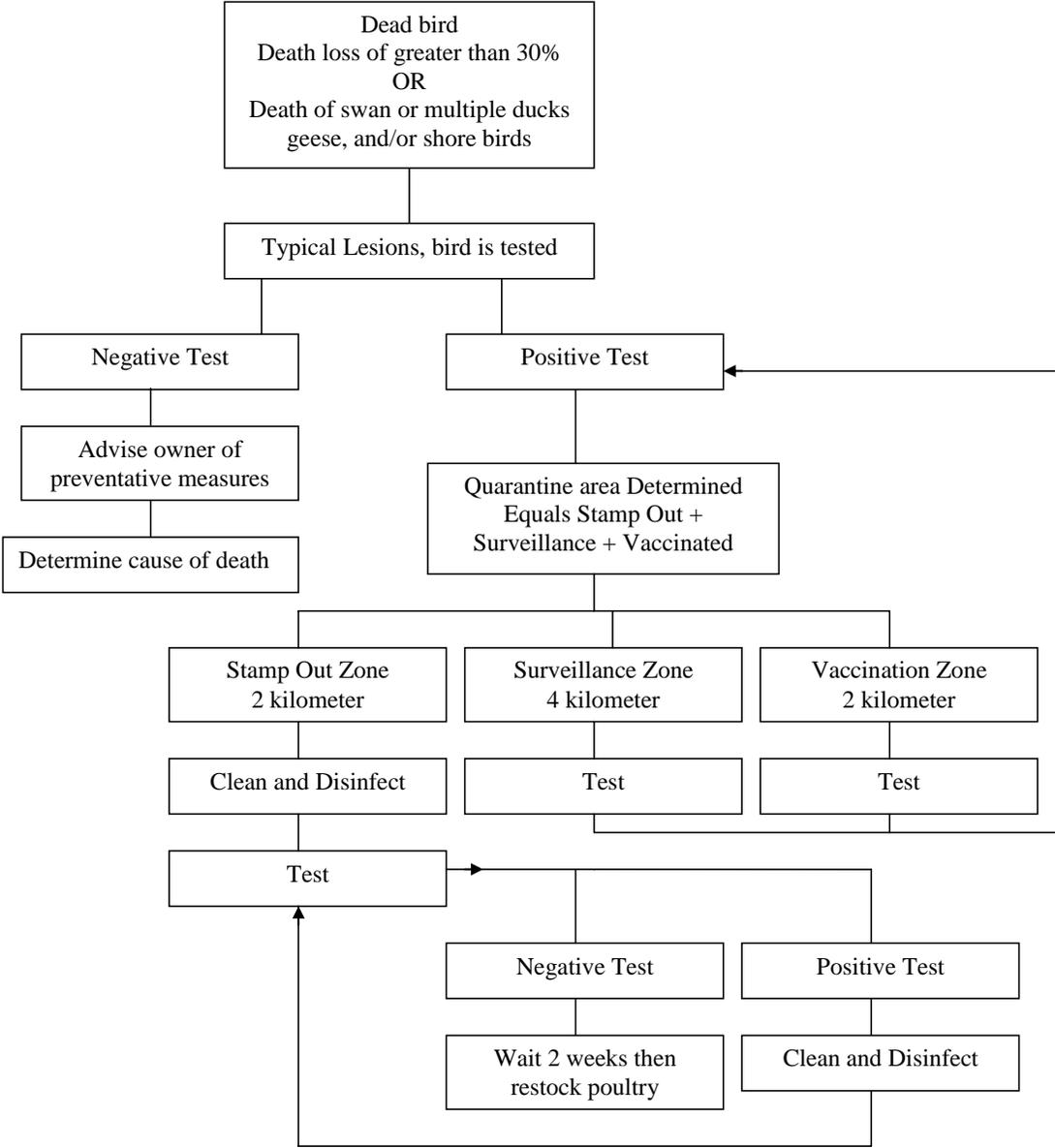


Solid lines indicate lines of communication if a dead bird is observed.

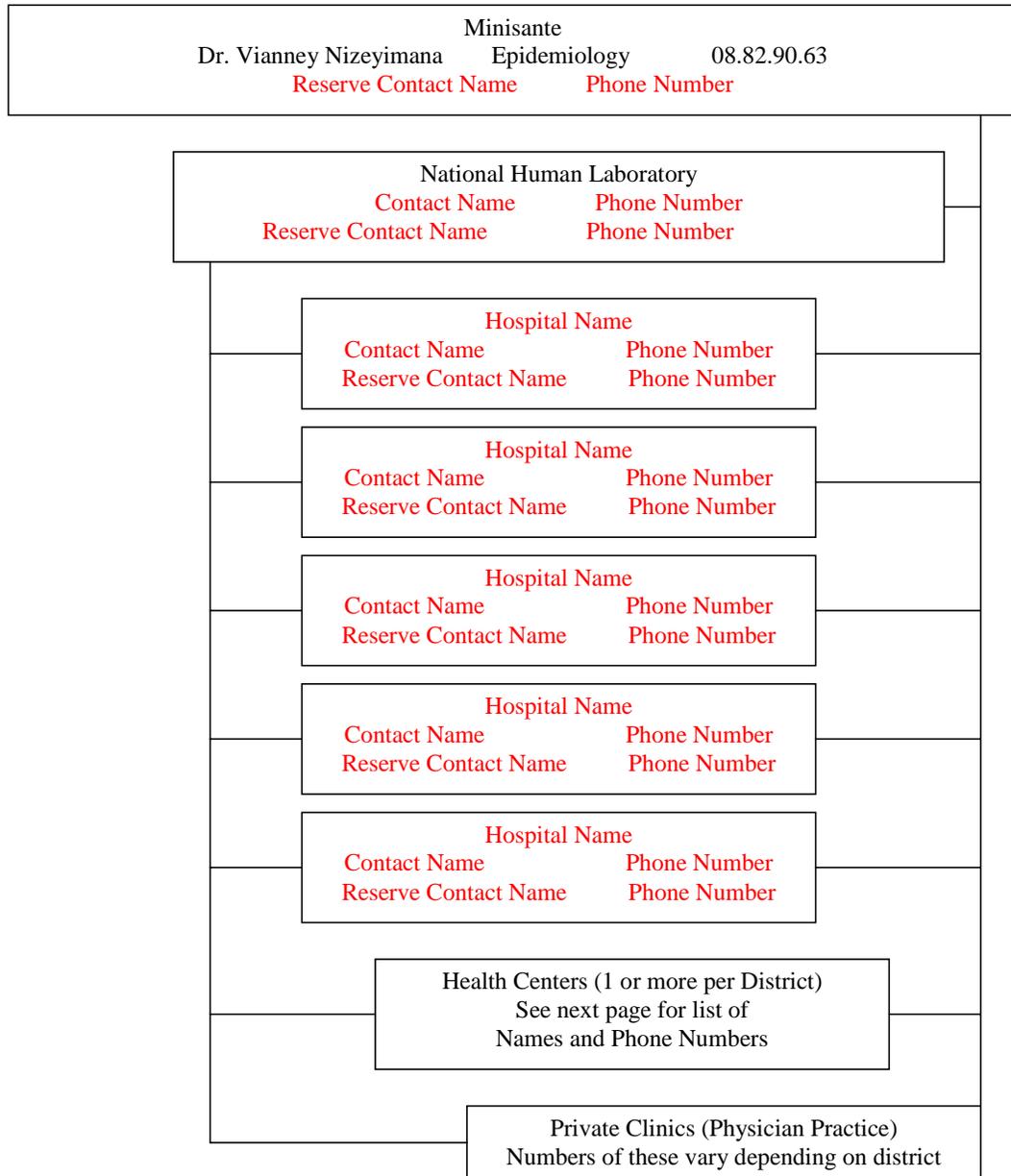
Reports of dead birds are to go directly to Dr. Anicet Karatira of the National Veterinary Laboratory



**ANIMAL - SCHEMATIC OF ACTION PLAN FOR AVIAN INFLUENZA**



**HUMANS - SCHEMATIC OF ACTION PLAN FOR AVIAN INFLUENZA**



Lines on left illustrate direct reporting of human suspect cases of Avian Influenza to National Laboratory



## **APPENDIX B: PERSONAL PROTECTIVE EQUIPMENT**

### **Biosecurity and Biosafety when picking up suspect AI birds**

#### **Personal Protective Equipment (PPE)**

##### **Equipment needed:**

1. Mask, N95, must be fit to wearers face and tested to provide protection.
2. Goggles, must fit face
3. Tyvek (waterproof) coveralls with hood (or can use cap) and attached boots
4. Disposable boots
5. Waterproof disposable apron (wear if stamping out birds)
6. Gloves, disposable – if concerned about puncture, should wear 2 pair of gloves
7. Biohazard or other bag to collect birds or samples
8. Large plastic bags (or large containers with tight fitting lid that can be disinfected)
  - a. For putting birds or samples in (must place the “dirty” bag with birds in a “clean” plastic bag that was not taken onto the farm)
  - b. For putting used already bagged PPE into to transport back to lab (used PPE should be placed in a bag and then put into a “clean” plastic bag that was not taken onto the farm)
9. Spray bottle of 70% Ethanol

##### **Method of Putting On and Taking Off of Personal Protective Equipment**

It is best to work with a partner or more people so you all can review the method that you use to put on and take off PPE. It may help you be safe.

Arrive on the farm in an automobile. Do not park the car where poultry have been and away from where the poultry are. People going on to the farm should be showered and wearing laundered clothing. Wear shoes that have not been around other poultry.

1. While seated in the car, remove watches, rings and any jewelry (including earrings).
2. Put on mask. Make sure that top strap is above ears and bottom strap is below ears.
3. Pinch metal nose piece to form a tight seal
4. Put on goggles. Make sure there are no gaps around the edges or at the nose (you may have to tighten straps to get them to fit correctly)
5. Swing your left leg out of the car and put a disposable boot on your left foot. **DO NOT PUT YOUR FOOT BACK INTO THE CAR**
6. Swing your right foot out of the car and put a disposable boot on your right foot. **DO NOT PUT YOUR FOOT BACK INTO THE CAR**

**ONLY SHOES WITHOUT BOOTS ARE ALLOWED INTO THE CAR AFTER THIS POINT**

7. Stand up on the ground beside the car.
8. Grab coveralls and put them on.
9. Put hood or cap on your head
10. Put on gloves. Sleeves of coveralls should go inside of gloves. No exposed skin.
11. Grab supplies for sample or bird collection
12. Put “clean” bag for collected birds in trunk of car and a “clean” bag for PPE in the back seat.

## COLLECT SAMPLES OR BIRDS

If swabs of birds are taken, they should be put in a clean plastic bag for transport to the car for testing or to the lab.

13. Return to car and put “dirty” bag containing birds or samples into “clean” bag inside of trunk.
14. Wash hands if possible or use alcohol or disinfectant wipe to wash gloved hands
15. Tie the top of “clean” bag.
16. Without getting into the car, remove coveralls and attached boots by only touching the out side of the coveralls with gloved hands. The inside of the coveralls can only be touched with ungloved hands.  
**TAKE COVERALLS OFF, BUT LEAVE OTHER BOOTS, MASK AND GOGGLES ON IF TESTING SWABS ON THE FARM. SEE INSTRUCTIONS BELOW\***
  - a) If boots not attached to the coveralls start to come off or you remove them at this time, sit down on the car seat
  - b) If the boots not attached to the coveralls stay on, stand outside of car until you take them off
17. Make sure that you remove gloves with the coveralls by grasping the glove cuff and pulling down. Gloves should come off inside of coverall sleeves.
18. Remove goggles and clean them inside and out with an alcohol wipe. Don’t forget to clean the strap.
19. Remove mask by grasping the straps. **DO NOT TOUCH THE OUTSIDE OF THE MASK.**
20. Put the mask inside of the small bag with the coveralls
21. Sit down in car.
22. Take off boots and swing feet into the car. **ONLY SHOES WITH NO BOOTS SHOULD BE IN THE CAR.**
23. Tie small bag and place this “dirty” bag inside of the “clean” plastic bag kept in the back seat.
24. Spray hands with 70% alcohol and rub hands together. Spray alcohol in your hand and rub it on the alcohol bottle and spray handle to disinfect that outside surface of the alcohol bottle. Let the alcohol dry on your hands.

### **\*IF SWAB TESTING IS DONE ON THE FARM**

You should still be wearing the goggles and mask as well as the boots that were inside of the coveralls. With disinfected hands, retrieve a clean pair of gloves from inside of the car and the test kit. Put the test kit on top or hood of the car. Put on clean gloves before handling swab samples. Open bag containing swabs and remove them. You may use up to 5 swabs per test tube and strip. Perform the Avian Influenza test outside of car. When completed, remove those gloves and put them in the bag with the coveralls. Clean hands with 70% alcohol and then spray the outside of the kit box with 70% alcohol and place it in the car. Go to step 18 and complete the list.

### RETURN TO LAB

25. When at the lab, open sample bag in an area where people are wearing N95 masks (to be protective, N95 masks must be properly fitted and tested for each person wearing them).

Appropriate samples for virus isolation are trachea, lung and ilealcecal junction.

The Synbiotics Avian Influenza Virus Type A Antigen Test Kit is not valid for cloacal swabs without using BHI (Brain-Heart-Infusion) broth to dilute the sample.

Up to 5 birds per swab may be used for 1 test strip.

## APPENDIX C: CLEANING AND DISINFECTION OF PREMISES

### Cleaning and Disinfecting Procedures

1. All people working on this task should wear all of their Personal Protective Equipment.
2. Make sure that all domestic birds (chickens, turkeys, ducks, geese, guinea fowl, pigeons) on the farm or home area are euthanized (stamped out) and disposed of properly.
  - a. All dead animals should be buried deep enough to prevent wild or domestic animals from digging them up. This requires a minimum of 70 centimeters of dirt covering the birds.
3. Begin by brushing down the ceiling, exposed rafters and walls on to the floor. The material (dust, feathers) that is recovered from this process may be placed into the pit containing the birds prior to covering them with dirt.
4. With soap, water and brushes, all building where birds were found should be scrubbed and left to dry.
5. Once dry, disinfectant may be mixed with water in a hand-pump sprayer at the dilution written on the label directions. The best disinfectants to use under these conditions are those classified as phenol or cresylic acid based disinfectants.
6. The disinfectant is allowed to dry.
7. After a period of 2 weeks following disinfection, the home or farm may be swabbed and tested with the Synbiotic Avian Influenza Type A Antigen detection test strips. The swabs may be pooled of up to 5 swabs per test. It is important to use the technique for testing pooled cloacal swabs which uses BHI (Brain-Heart-Infusion) broth for this type of sample. False positive tests may result if this method is not used.
8. If the swabs are negative, birds that are free of avian influenza may be placed back on the farm.



## APPENDIX D: RECOMMENDED DISSEMINATION PLAN

### DISSEMINATION AND ACTIVITY RECOMMENDATIONS

#### Analysis

Audience segmentation was a new subject for most of the participants in the workshop. It led to an understanding of the need for different messages and channels to reach target audiences and the importance of reaching out to illiterate populations in rural areas as well as barriers to change. Based on the relatively small size of the country, density per square kilometer, the influence and reach of radio and community leaders, the population's exposure to AI information so far, and the cost involved in delivering separate communication efforts for multiple audiences, the communication consultant recommends that the audiences above be classified into six groups for behavior change messages, dissemination and activities:

- Urban (Kigali and environs)
- Rural (less literate or illiterate)
- Leaders (national, sector, district, cell, Umudugudu, religious)
- Journalists
- Human Health Care Providers
- Poultry Producers and Veterinarians

Most can receive the same general messages but channels of communication will differ. Others will receive tailored messages in addition to general messages.

#### Recommendations

##### Urban:

1. Disseminate existing posters and pamphlets to hospitals, clinics, restaurants, bars, schools, police stations, military posts, parks and lakes, and tea factories.
2. TV viewership will increase around the World Cup games starting June 9. While a second priority because of time and cost, the government could play public health announcements during the games.
3. Disseminate at Gacaca meetings and Umudugudu activities.
4. Send materials to Provincial and District levels.
5. Ensure specific women's groups and natural gatherings are targeted. For example, food markets; widows' associations; Profemme; SWAA, which focuses on girls' education; and FAWE, which focuses on gender issues and girls' schooling.
6. Engage existing groups such as Health Animators, community health workers under the MOH, and the four Dushishoze Youth Centers (PSI), to act as natural disseminators of information to reach hard to reach populations.

##### Rural: (In addition to above)

1. Translate both AED posters (with minor modifications if necessary) and disseminate to district levels and same spots as #1 above in rural areas as well as parks, lakes, and tea factories. Maintain same color scheme as existing posters and pamphlets to create one "brand."
2. District levels will send materials to sector, cell and Umudugudu levels.
3. Veterinarians stationed at border posts should hand out flyers to populations.

4. Community and religious leaders should be sensitized through one-on-one RARDA training. In turn, the leaders should encourage discussion about AI prevention and containment measures.
5. Tap rural chapters of established women's groups and female role models.

Leaders: national, district, sector, cell, Umugudus, religious (in addition to above)

1. Radio continues to be the top source of local and international information and the government's AM broadcast has the highest country coverage. Popular radio show host, MUKESHABATWARE Dismas, should continue to inform the population on status of AI in country and in region, prevention and containment measures especially the importance of washing hands with soap and water and not sleeping with poultry in the house. The government's 30-minute Q&A discussion should also continue to discuss AI and dispel rumors.
2. The Catholic Church and community leaders continue to be a strong force in influencing community opinions. They should be directly and continuously engaged.
3. Government officials are the second highest source of trusted information. The Minister of Agriculture should speak during the regularly scheduled RARDA talk shows to increase public support for changes.
4. Finalize and disseminate compensation plan to all levels of government down to the cell level.
5. Share with International Organizations and NGOs, prevention and response plan, BCC strategy and IEC materials.
6. Negotiate "800" toll free number for AI reporting with private sector companies. Police already have access to a free cell number.
7. Launch an Umuganda around the construction of bird cages (see analysis of barriers to behavior change below).

Journalists

1. Official spokespersons should be reconfirmed to eliminate recent contradictory remarks made by government officials.
2. Establish a working relationship with print and media journalists. Inform/educate journalists on steps already taken by the government to prepare for possible pandemic.
3. A draft press release should be prepared and distributed on the same day an outbreak is declared. Misinformation and rumors should also be immediately controlled through the spokesperson and immediate press releases

Health Care Providers

1. MINISANTE national community health workers manual should include AI references.
2. MINAGRI and MINISANTE training sessions on infectious diseases and infection prevention should include AI information and messages.
3. USAID-funded CAs should include AI information in all training modules and sessions.

Poultry Producers and Veterinarians

1. Engage professional and scientific stakeholders so that they can prevent, contain and respond
2. Need to be flexible and change based on evidence based information.

## APPENDIX E: AUDIENCE SEGMENTATION

Audience	Communication/Behavior Change Objective	Message	Channel	When/where/how often/cost
Illiterate populations	Create awareness, prevention control	AED material contains basic information	Radio, film, posters, village meetings, dramas	Gacaca: weekly Umuganda: monthly
General public	Create awareness, prevention control	AED material	Print media, ICT, telephone, sports ads (World Cup), training leaders/government instruction	TBD
Groups/FBOs/Community leaders	Create awareness, prevention control	AED Material and RARDA pamphlet	Dramas	FBOs meet several times a week, schools (to share info with parents and siblings)
Journalists	Never give information that doesn't come from authorities	Clear, evidence-based information	Radio, newspaper, or any mass media	Before epidemic (3 times a day)
Journalists	Keep updated. Inform and Educate	AED and RARDA information	Radio or training sessions	
Journalists	Don't scare population. Do not exaggerate	AI Country Preparedness Plan	Radio/press conference	During outbreak, once a week
Government Executives	Facilitate procedures during outbreak	Reduce red tape	Ministerial meetings	Weekly meetings
Government Executives	Obtain funds/resources		Ministerial meetings	Weekly meetings
Government Executives	Inform public of outbreak ( in the event there is H5N1 infection)	Inform status of infection, GOR plan & actions to protect animals and humans	Prepare draft press release & approve & Ministerial levels	ASAP
Government workers	Participate in mobilization	Help those responsible with mobilization	Ministerial communications to employees	Before and during outbreak
Veterinarians	Popularize best practices for prevention against outbreak	Evidence based guidelines and actions	Training, Vet associations, community meetings	Before/during epizootic, cost: meeting spaces
Poultry Industry	Inform on disease, how to behave, and means of prevention	Signs of disease, preventative measures, importance of protection	Posters, radio/tv, meetings	Before onset of disease, visit farms twice, cost: posters, radio, meeting spaces

<b>Audience</b>	<b>Communication/Behavior Change Objective</b>	<b>Message</b>	<b>Channel</b>	<b>When/where/how often/cost</b>
Poultry Industry (during outbreak)	Continuous updates on situation, how to behave, means of protection	Quarantine means adopted, protective measures	Posters, radio, tv	During outbreak, cost: posters, radio, tv
Private sector veterinarians	Inform on preventative measures and how to behave	Vaccinate if possible, how to disinfect areas, symptoms of disease, government policy on disease	Meetings, seminars/workshops, newspapers, brochures	Before onset of disease, organize seminars and workshops three times, cost: seminars and brochures
Private sector veterinarians (during outbreak)	Continuous updates on situation, what to do, means of protection	Quarantine means adopted, protective measures	Meetings, seminars, newspapers, brochures	During outbreak, cost: meetings, seminars, newspapers, brochures
International partners	Update/inform on disease, government needs, and government policy	What's planned, budget, local partners to work with	Meetings, press releases, other written documents	Before onset of disease, cost: meetings and documents
International partners (during outbreak)	Continuous updates on situation, government needs and policies	Adopted measures and needs	Meetings and written documents	During the outbreak, costs: meetings and documents
Healthcare Providers	Improve knowledge and skills to detect and treat AI infections	Evidence-based guidelines	Trainings and workshops	MINISANTE-scheduled trainings and USAID Collaborating Agencies trainings

## APPENDIX F: PRIORITY ACTIONS AND NEXT STEPS

Action	Lead Organization	Supporting Partners	When	Priority	Comments
<b>Leadership, Advocacy, and Coordination</b>					
1. Create RARDA Subcommittee on Communication	RARDA	Ministries' communications staff	June 1st	1	Non-additive costs
2. Initiate weekly updates to Cabinet by MINAGRI Minister	RARDA Chair		Immediately	1	Non-additive costs
3. Develop and communicate compensation arrangement	RARDA		Mid-June	1	
4. Create Hotline	RARDA	Private sector	Immediately	1	Police have free line
5. Draft press release announcing outbreak	RARDA	Ministries' communications staff	Immediately	1	
6. Ask government workers to volunteer time in case of an outbreak	RARDA chair requests from Minister	MINAGRI and MINISANTE Ministers	Immediately	1	
7. Communicate preparedness plan to NGOs and IOs	RARDA Chair	Cabinet level	As soon as complete and approved	1	
<b>Community Level Materials and Actions</b>					
8. Create awareness materials for illiterate populations	AI Task Force Subcommittee	MINISANTE	Week of June 1st	1	Translate AED materials and reproduce
9. Disseminate materials to community, FBOs, Gacaca, Umugudu	Delegate responsibility to MINAGRI at district level	MINAGRI & MINISANTE in Kigali	By mid-June	1	
10. Train community leaders on core messages and actions	MINAGRI ICT Unit/Chair of RARDA	Communications subcommittee	By mid-June	1	

Action	Lead Organization	Supporting Partners	When	Priority	Comments
<b>Mass Media</b>					
11. Reconfirm press spokesperson	RARDA	Cabinet level		1	
12. Train/educate journalists for accurate info	RARDA Chair	Communications subcommittee		1	
13. Create messages for TV	RARDA Epidemiological and Diagnostic Unit			2	
14. Develop mobile TV production	MINAGRI/RARDA			2	Borrow mobile unit from PSI?

## APPENDIX G: FOCUS GROUPS AND INTERVIEWS

Focus groups or interviews were held with:

- Young men (20-25) at Rwandan border with Uganda
- Group of 5 men and women at Rwandan border with Uganda
- Group of 5-6 women at Kigali food market
- Car drive in Kigali
- Hotel staff at Intercontinental Hotel

Observations:

1. Most had heard about AI from the government radio station. A few from newspaper
2. Many had either misinformation or incomplete information on the disease e.g. thought chicken would have blue eyes if ill, did not understand why they should not live with chickens in household
3. Women in the rural areas were not aware of AI; women in the market in Kigali seemed to have more information.
4. Those that knew about AI considered it serious and potentially harmful to humans
5. Most had not received recent information about the status of AI
6. Many had chickens in their backyard
7. Some were eating chickens
8. Most said they would call the local administrator (in rural areas) or the Ministry of Agriculture or RARDA, if in Kigali, in the event they saw sick or dead animals.
9. Most wanted additional information on how to protect themselves
10. When probed about how they would prefer to receive information and what they would like to know, many wanted to see what an AI infected chicken would look like, they wanted one-on-one information at the community level, and would welcome additional information via the government radio. A couple requested the information be provided via TV.

All groups and individuals were provided with basic infection prevention messages and instructions on good hygiene.



## APPENDIX H: COMMUNICATIONS WORKSHOP AND TABLETOP SIMULATION PARTICIPANTS

Name	Agency	Position	e-mail
Dr.Tarsis Kagwisagye	FAO	Consultant	<a href="mailto:kagwisagye2001@yahoo.com">kagwisagye2001@yahoo.com</a>
Twizeyimaiya Jmu	Minagri/RARDA	Vet Tech	<a href="mailto:twizeyijmu@yahoo.fr">twizeyijmu@yahoo.fr</a>
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Dr. KARASIRA Anicet	Minagri/RARDA	Veterinary Inspector	<a href="mailto:karasiraanicet@yahoo.fr">karasiraanicet@yahoo.fr</a>
Dr. Thomas BAZARUSANGA	Minagri/RARDA	Vet.	<a href="mailto:tomabazar@yahoo.fr">tomabazar@yahoo.fr</a>
Tony MUBAKIKWA	ORTPN	Head Vet.	<a href="mailto:saveagorilla@rwandatoursim.com">saveagorilla@rwandatoursim.com</a>
Emmanuel RUGIRA	TRAC	BCC	<a href="mailto:rugem2@yahoo.fr">rugem2@yahoo.fr</a>
NKUNDAMWESIGWA Richard Clive	National Reference Lab	Technologist	<a href="mailto:nmrclive@yahoo.com">nmrclive@yahoo.com</a>
UWIMANA Jean Marie Vianney	National Reference Lab	Technologist	<a href="mailto:uwimanajeanmarie@yahoo.fr">uwimanajeanmarie@yahoo.fr</a>
Nzairé Philip	Rwanda Bureau of Standards	Head of Quality Assurance Department	<a href="mailto:nzbph@yahoo.com">nzbph@yahoo.com</a>
Dr. Sylvain MBARUBUKEYE	FAO	Consultant	<a href="mailto:sylmbaru@yahoo.fr">sylmbaru@yahoo.fr</a>



**APPENDIX I: RARDA-PRODUCED PAMPHLET AND TRANSLATION  
(POSTER CONTAINS THE SAME TEXT)**

## IBICURANE BY'IBIGURUKA

- Kubuza abana kwegera inkoko, inyoni, ndetse n'amagi.
- Kaza neza inkweto, inyambaro n'imipira y'amagare igihe cyose tuvuye aho bororera cyangwa bacururiza inkoko, ariko cyane cyane mbere yo kwinjira mu nzu.
- Umuntu wese wumvise arwaye kandi afite aho yahuriye n'inkoko zirwaye cyangwa zapfuye, agomba kwihutira kujya ku ivuriro rimwegereye.

### ESE BYABA BIBUJIJWE KURYA INYAMA Z'INKOKO N'AMAGI?

**Oya, ibibujijwe ni ukurya inkoko zirwaye cyangwa se zipfushije, inyama z'inkoko n'amagi bidahiye neza.**



*Icyo tugomba kumenya*

### KUBERA IKI TUGOMBA GUKUMIRA ICYO CYOREZO?



- Ibicurane by'ibiguruka ni indwara ikaze cyane ku buryo iyo ifashe abantu ibica.
- Kugeza magingo aya, iyo ndwara imaze guhitana abantu benshi, harimo abana n'abasore bari basanganywe ubuzima bwiza.
- Iyo cyorezo rero tugomba kugifatira ingamba zikomeye kugirango kitoreka imbaga.

Hari ibindi ufuzwa kumenya baza :

**RANDA** Tél: 55106073

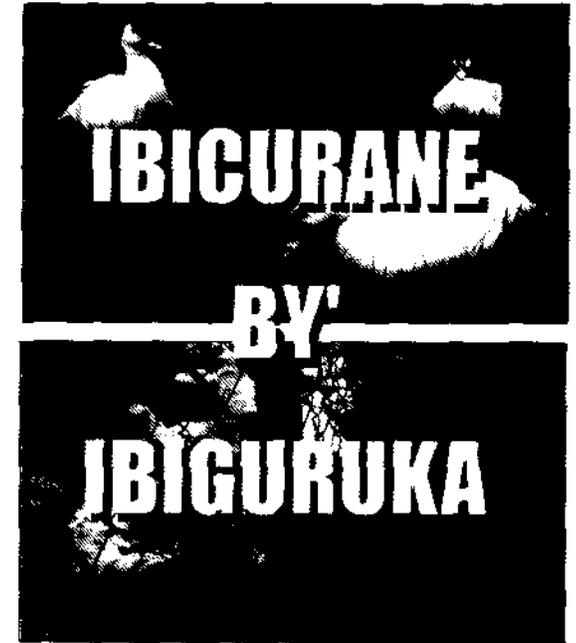
Mob: 08475493, 08559639

## IBICURANE BY'IBIGURUKA

Repubulika y'u Rwanda



Ministeri y'Ubuhinzi n'Ubworozi/  
Ministeri y'Ubuzima



*Icyo tugomba kumenya*

**Tugendeye kuri ayo mabwiriza, ibicurane by'ibiguruka twabikumira ntibigere iwacu.**

## IBICURANE BY'IBIGURUKA

*icyo twagombaga kumenyera*

## IBICURANE BY'IBIGURUKA

### IBICURANE BY'IBIGURUKA NI IKI?

- Ibicurane by'ibiguruka ni indwara iterwa na virusi (akanyabuzima gato cyane kataboneshwa ijisho kandi kanduza), ikaba ikunze gufata inyoni ariko rimwe na rimwe ikaba yakwanduza n'ingurube.
- Ubwandu bw'iyi virusi burihuta cyane ku buryo inyoni yanduye (inkoko, igishuhe, n'izindi nyoni) ipfa mu kanya gato.
- Iyo virusi kandi ishobora kwanduzira n'abantu.

### IKIBAZO CY'ICYO CYOREZO UBU GITEYE GITE ?

Ibicurane by'ibiguruka byakunze kugaragara muri Amerika, Aziya n'Uburayi ndetse no mu gihugu cy'Afurika y'Epfo. Ku mugabane w'Afurika, ubu tuyisanga mu Misiri, Nijeriya, Nijeri, Kameruni na Burukina Faso. Bityo, ibihugu byose by'Afurika birugarijwe n'u Rwanda rurimo.

### INYONI ZAFASHWE ZIGARAGAZA IBIHE BIMENYETSO?

- Gucika intege no guhumeka nabi
- Kunanirwa kurya, kubyimba umutwe, amaso, isunzu n'ibirokoroko
- Gukorora, kwitsamura no guhitwa cyane

- Ibirokoroko n'isunzu biba ubururu
- Gupfa cyane ari nyinshi kandi mu gihe gito.

### UMUNTU YANDURA ATE IYO VIRUSI? AGIRA IBIHE BIMENYETSO ?

- Umuntu yandura iyo yakozze ku biguruka byanduye (inkoko, ibishuhe, imbata n'ibindi).
- Iyo yakozze ahantu handujwe n'inyoni zirwaye (nk'iyi zahataye amatotero cyangwa amarira).
- Ibimenyetso by'ibicurane bisanzwe, umuriro mwinshi, guhumeka nabi no kubabara mu maso no mu ngingo zose.

### TWAKORA IKI KUGIRANGO TURINDE IBIGURUKA KWANDURA IYO NDWARA MU GIHE CY'ICYOREZO?



- Kurinda inkoko n'imbata ntizihure n'izindi nyoni zo mu gasozi

- Gukora isuku mu biraro by'inkoko n'imbata
- Kudakora inyoni zigaragaza ibimenyetso by'indwara cyangwa zapfuye
- Kubahiriza amabwiriza atangwa mu gihe cy'indwara z'ibyorezo
- Kumenyeshya ubuyobozi bukwegereye niba hari ibimenyetso by'iyi ndwara wabonye
- Kutajugunya inyoni zapfuye mu mugezi cyangwa mu binamba.

### TWAKWIFATA DUTE MU GIHE CY'ICYOREZO?



- Gukaraba intoki mbere na nyuma yo gutegura ibyo kurya, dukoresheje amazi n'isabune.
- Kudakora ku nyoni.
- Kubuza ibiguruka kwinjira mu nzu.

**Tugendeye kuri ayo mabwiriza, ibicurane by'ibiguruka twabikumira ntibigere iwacu.**

# **BIRD FLU**

**REPUBLIC OF RWANDA**



**MINISTRY OF AGRICULTURE  
AND ANIMAL RESOURCES/**

**MINISTRY OF HEALTH**

# **BIRD FLU**

*FACTS WE SHOULD KNOW*

If we follow these instructions, we can stop bird flu from spreading to our home country.

## **BIRD FLU**

### **WHAT IS BIRD FLU?**

- Avian influenza or bird flu is a disease caused by a virus (infectious micro-organism which is not visible to the naked eyes) that usually infects birds but which can sometimes infect pigs.
- The infection of that virus spreads very rapidly to such an extent that an infected bird (domesticated chickens, ducks and other birds) dies in the shortest period of time.
- Avian influenza virus may also cross the species barrier to infect humans.

### **HOW SERIOUS IS THE CURRENT PANDEMIC RISK?**

Bird flu has been firmly entrenched in large parts of America, Asia, Europe and even in South Africa. In Africa, the virus is currently reported in Egypt, Nigeria, Niger, Cameroon and Burkina Faso. Therefore, all African countries including Rwanda are in danger of the looming bird flu infection.

### **WHAT ARE THE SYMPTOMS OF INFECTED BIRDS?**

- Weakness and respiratory distress.
- Lack of appetite, swollen head, eyes, crest and wattles.
- Cough, sneeze and acute diarrhoea.

If we follow these instructions, we can stop bird flu from spreading to our home country.

- Turning blue of wattles and crests.
- High rates of death in birds in the shortest period of time.

**HOW DO HUMANS GET INFECTED WITH THE VIRUS?  
WHAT ARE THE SYMPTOMS OF THE VIRUS IN HUMANS?**

- Cases of avian influenza infection in humans result from contact with infected birds (domesticated chickens, ducks, turkeys and others).
- They also result from contact with surfaces contaminated with infected birds (faeces or eye secretions from infected birds).
- Ordinary flu: high temperature, respiratory distress, eye pains and joint pains.

**WHAT SHOULD WE DO TO PREVENT BIRDS FROM GETTING INFECTED  
IN CASE OF BIRD FLU PANDEMIC?**

- To stop birds and ducks from having contact with wild birds.

If we follow these instructions, we can stop bird flu from spreading to our home country.

## **BIRD FLU**

- Keeping hen and duck houses clean.
- Avoiding direct or close contact with dead birds or those showing symptoms of infection.
- Following instructions given in times of pandemics.
- Informing the nearest authorities if you have detected symptoms of the virus.
- Not throwing dead birds into rivers or stagnant pools.

## **WHAT SHOULD WE DO IN CASE OF BIRD FLU PANDEMIC?**

- Washing our hands using soap and clean water before and after food preparation.
- Avoiding direct or close contact with birds.
- Stopping birds from entering our house.

If we follow these instructions, we can stop bird flu from spreading to our home country.

## **BIRD FLU**

- Stopping children from having contact with poultry, birds and even eggs.
- Thoroughly washing shoes, clothes and bicycle tyres whenever we have been in poultry or a bird market especially before entering our house.
- Anybody feeling ill and who may have had contact with dead or infected poultry should consult the nearest health centre or hospital.

### **IS IT FORBIDDEN TO EAT CHICKEN AND EGGS?**

No. What is forbidden is to eat infected chickens or dead ones showing no symptoms of disease, half-cooked chicken and eggs.

If we follow these instructions, we can stop bird flu from spreading to our home country.

## **WHY SHOULD WE PREVENT THIS PANDEMIC?**

- Bird flu is a very serious disease to such an extent that infected people die.
- The disease has so far exacted a heavy toll of death especially among previously healthy children, young men and women.
- We should therefore take strong action to stop this pandemic from decimating our population.

For more information, contact:

**RARDA Tel: 55106073**

**Mob: 08475493, 08559639**

If we follow these instructions, we can stop bird flu from spreading to our home country.



## APPENDIX J: AED MATERIALS

# WHAT WE CAN DO TO PROTECT OUR FLOCKS FROM BIRD FLU



1.

Do not allow domestic birds to have any contact with wild birds.

2.

Keep any new birds separate from the rest of the flock for at least two weeks.

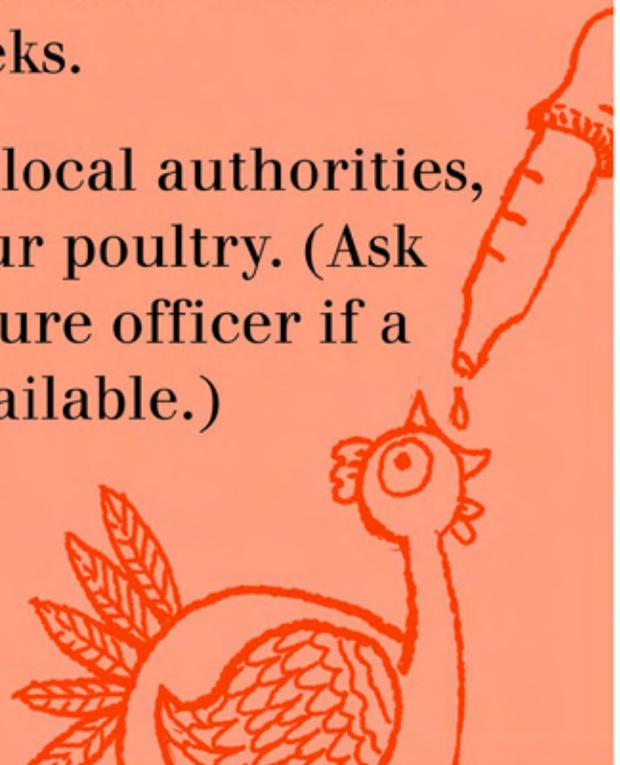
3.

If advised by local authorities, vaccinate your poultry. (Ask your agriculture officer if a vaccine is available.)



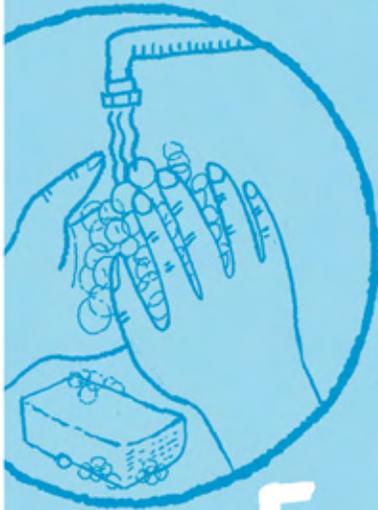
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To find out more about the AED Avian Influenza Initiative, visit [www.aed.org/avianflu](http://www.aed.org/avianflu).



# WHAT WE CAN DO TO PROTECT OURSELVES FROM BIRD FLU

1. Do not touch a sick or dead bird.
2. Announce sick or dead poultry to the nearby agriculture officer or animal health worker.



3. Always wash hands vigorously by rubbing with soap and water after coming in contact with birds or places birds have been.
4. Avoid markets where poultry is sold if you hear of an outbreak of bird flu nearby.

5. Cook chicken meat and eggs thoroughly.

6. Avoid all surfaces that may have been contaminated until they have been cleaned and disinfected.



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