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HPAI outbreak responses: An integrated One Health approach **Lebanon**

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17-19 December 2024

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**Regional Coordination meeting on HPAI situation in the Middle East and action plans
guided by Global HPAI Strategy , 17-19, December 2024 (Amman, Jordan)**



Co-funded by
the European Union



- **A brief about Poultry industry in the country:**
 - Poultry Industry
 - Susceptible population: The poultry Population in Lebanon as per the statistics of 2024/Pre-war are as follows

October 2024	
Parent Stock Layers	55000
Parent Stock Broilers	1000000
Layers	3000000
Broilers	120000000
Duck	20000
Quail	30000
Turkey	10000



- **Preparedness Plan for Early Detection and Prevention of Notifiable Avian Influenza in Lebanon – 2009**
- **Manual Guide for AI**
- **LARI**
- **The risk of HPAI introduction is during the immigration season (Spring and fall) /wild birds/////Smuggling poultry**

Challenges for HPAI is Early Detection and Rapid Response since Lebanon is a small country with no boundaries and the virus would spread rapidly all over



Avian disease situations

Poultry diseases

Avian Influenza

Newcastle Disease

Infectious Bursal Disease

Infectious Bronchitis Virus

Mycoplasma gallisepticum

Mycoplasma Synoviae

Adenovirus

laryngotracheitis

REO virus

Avian encephalomyelitis virus

Currently and since the
only case in 2016, we had
no case of HPAI in the
country



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H5N1 case in Nabicheit and Saraaen/2016

- Active Surveillance
- Host species: **Broilers and layers**
- Type of samples: **swabs and dead poultry**
- Subtype: **An A/chicken/Lebanon/157/2016(H5N1) virus was isolated**
- Sequence information: **HPAI H5N1 Clade 2.3.2.1c Virus in Lebanon, 2016**
- Complete Genome Sequence of the First H5N1 Avian Influenza Virus Isolated from Chickens in Lebanon in 2016:



An A/chicken/Lebanon/157/2016(H5N1) virus was isolated from infected chickens. The emergence of this H5N1 clade in the Middle East is of both veterinary and human public health concern and requires surveillance at the human-animal interface

- Avian influenza surveillance at the human–animal interface in Lebanon, 2017:

In chickens, 0.6% were positive for AIV H9N2. None for H5N1. All human samples tested negative.



Nabicheit /Saraaen 2016

- Urgent Meetings
- (Central emergency unit -Regional emergency unit)

➡ Implementation of NPP

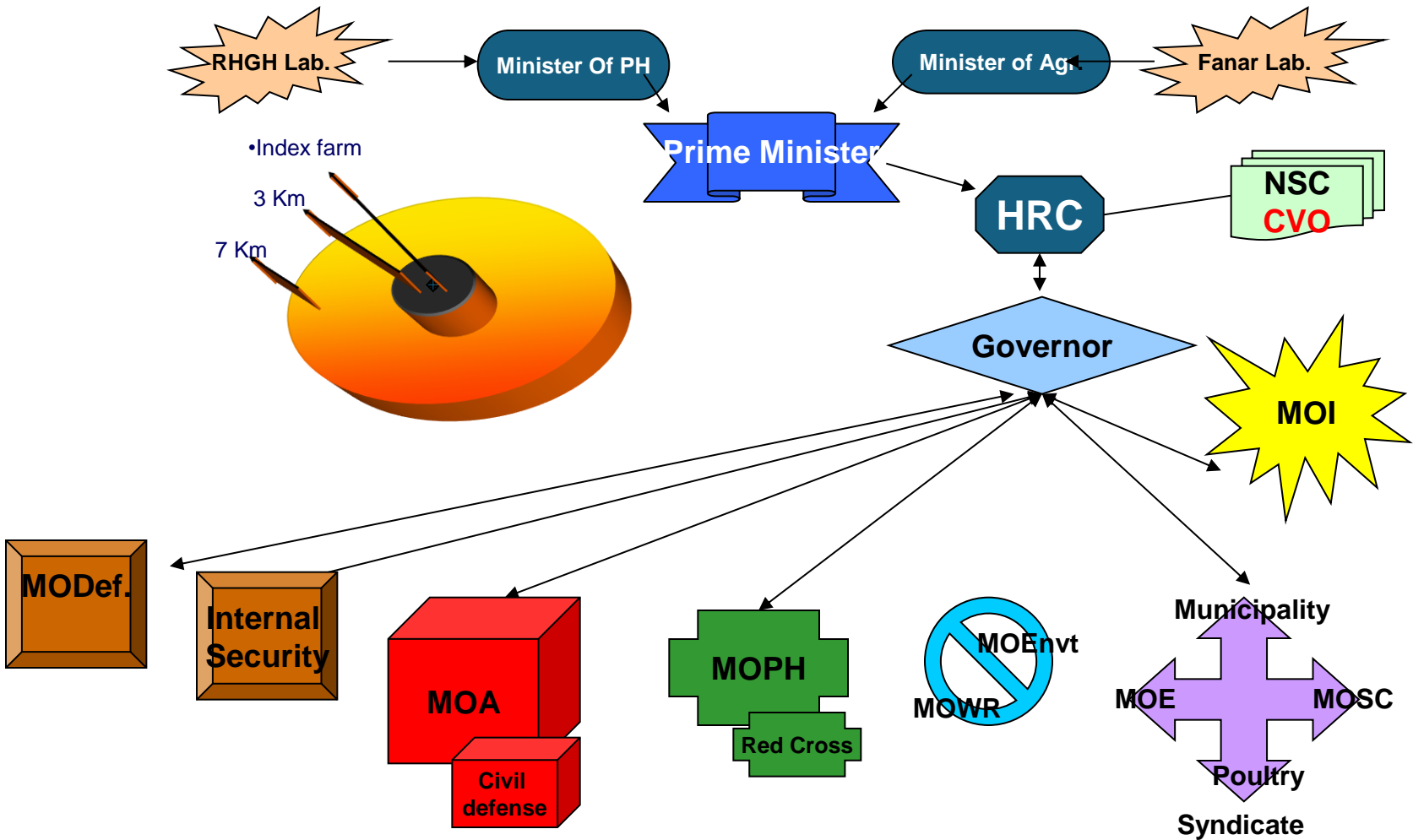


Notification
to
OIE/WOAH





Emergency plan – Chain of orders





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Nabicheit /Saraaen 2016/ Measures Taken

- Team Preparation in the animal department in Baalbeck (MOA)
- Quarantine / escort (MOD-MOI)
- Farmers Awareness & soothing (MOA-MOPH)
- People check ups (MOPH)
- Collecting extra samples (MOA)
- Stamping out (MOA-Workers)/ commercial-backyard
- Burying dead & stamped out poultry (MOEnvt-Workers)
- Fumigation of pens(Formaldehyde)
- Litter (Fumigation-Disinfection/Fermentation(OIE)
- Awareness & soothing visits (Eng. Abeer Sirawan - Head of Poultry Husbandry Department-Dr. Bassel Bazzal –Head of Animal Health Service)





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Nabicheit /Saraain 2016

Measures Taken in parallel

- Several Disinfections to reduce contamination
- 21 days samples **NEGATIVE SAMPLES**
 AREA



FREE

- Declared resolved (1/6/2016)/OIE-WOAH
- 3 months  Repopulate/ ARD



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Nabicheit /Saraain 2016

- Samples sent to Reference Laboratory (Padova-Italy) for confirmation
- Samples taken intensively within 10 Km radius
- Samples taken randomly from all the Lebanese governorates
- Epidemiological Inquiry
- Compensation (Assessment made by the ARD MOA /Council of Ministers - High Relief Committee)
- Awareness Program for commercial poultry farmers /Backyard poultry farmers
- Analysis & Evaluation (MOA-MOPH)



Response measures to avian disease outbreak

- Tracing in-contact animals
- Eliminating of source of pathogenic agent Stamping out of infected/suspected cases
- Prevention of spread of disease by:
 - Movement restrictions
 - Biosecurity
 - Communication and public awareness

*Costs of response measures
were covered by the
HRC/MOA/MOPH-Council of
Ministers*

FAO-WHO-WOAH



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Response measures to avian influenza - surveillance

- Passive and Active Surveillance;
- Moreover all imported one day old chicks are being tested upon arrival

**Negative results for HPAI
since 2016**



Measures of prevention practiced in the country against HPAI


Measures	Y/N	Description
1. Program to control or eradicate disease	Y	HPAI National Preparedness Plan
2. Veterinary legislation	Y	Legislation of poultry farms and import control (pre-import license)
3. Emergency preparedness and response plans	Y	HPAI National Preparedness Plan
4. Disease surveillance	Y	Passive and active
5. Disease reporting	Y	Official and private vets and farmers
6. Detection and management of cases	Y	MOA ARD teams
7. Measures to prevent introduction or spread of disease	Y	Biosafety measures implementation
8. Vaccination	N	-
9. Measures to protect public health	Y	Awareness through lectures and brochure distribution
10. Communication and collaboration among all competent authorities	Y	MOPH mainly and all concerned authorities as MOEnv, MOIn,.....
11. Awareness program for relevant stakeholders	Y	Awareness campaign in collaboration with MOPH, FAO, WHO



Laboratory capacity

- Disease covered/Type of diagnostic test
- Capacity: HPAI per day 50 samples
- Airport samples daily

LEBANESE REPUBLIC
Ministry of Agriculture
Lebanese Agriculture Research Institute

 **FANAR LABORATORY**
FANAR- Jdeidet El Metn

ANIMAL HEALTH LABORATORY

December 9, 2024

POULTRY DISEASE TEST LIST

Disease	Diagnostic Techniques			
	Antibodies Detection (ELISA)	Antigen Detection (PCR)	Kit available	Genotyping
Avian Influenza	x			
Newcastle Disease	yes	yes	3	H5 and H7
Infectious Bursal Disease	yes	yes	2	x
Infectious Bronchitis Virus	yes	yes	1	x
Mycoplasma gallisepticum	yes	x	1	Genotype 1, Variant 1
Mycoplasma Synoviae	yes	yes	1	x
Adenovirus	yes	x	1	x
Infectious laryngotracheitis	yes	yes	1	x
REO virus	yes	x	1	x
Avian encephalomyelitis virus	yes	x	1	x
		x	1	x



Challenges and solutions in implementing national plan

Challenges	Solutions
Current situation	???
Lack of suitable funds for the updating of the NPP/Sops/sustainable capacity building/Awareness programs	Funding
Lab: Kits availability from the suppliers/import point of view (dangerous goods)	Stocking



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Recommendation





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Thank you

Lebanon

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