



National prevention and control measures for avian diseases in Islamic Republic of IRAN

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**World Organisation
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susceptible populations

- *Poultry*
- *Wild birds*
- *Backyard poultry*
- *Mammals(AI)*

Risk for avian diseases introduction

- *Considering that Iran is on the flyway of migratory birds, there is a risk of disease transmission to the country like other countries.*

Disease prevention and control system(s)

- *prevention and control strategies are provided by the Iran Veterinary Organization (IVO) for avian diseases.*



- *No cases of HPAI have been observed since 2022*
- *There are national programs for prevent, control and eradicate of important avian diseases, which based on the general veterinary departments of the provinces takes measures to monitor and prevent the diseases.*
- *National programs for:*
Avian influenza, Newcastle disease, Infectious bronchitis, Mycoplasmas, ILT, MD, which is followed by IVO.



- *Prevention and control of disease is based on the implementation of strict biosecurity measures and vaccination in poultry flocks.*
- *Implementation of active surveillance is based on the program for periodic evaluation of parent , breeder and layer farms.*
- *Implementation of passive surveillance in the all poultry farms backyard poultry and wild birds based on receiving reports from veterinarian, farmers, environmentalists and other stakeholders.*
- *Immunization of backyard poultry by using of heat-resistant vaccine against ND (V4, I2).*



Wild birds

- *No cases of HPAI have been observed since 2022*

Mammals

- *No cases of avian influenza have been reported in mammals*



Response to disease incursion

Surveillance in poultry

- *Active surveillance*
- *Passive surveillance*
- *Risk-based surveillance*

Main objective of surveillance in poultry

- *Early Detection*
- *Early Warning*
- *Zoning*

Surveillance in Backyard

- *The passive surveillance system is implemented in the backyard poultry and if necessary, the active surveillance*



Surveillance in wild bird

- *A passive surveillance program is carried out by investigation of died or sick birds.*
- *The purpose of this surveillance program is to detect the highly pathogenic avian influenza virus in wild birds (migratory and resident).*
- *The sources of reporting are the trained environmentalists (staff of Department Of Environmental) based on the observation of sick or death birds, which immediately inform the nearest veterinary office.*
- *The veterinary office quickly, applies notification report, sampling, disinfection, quarantine, zoning and other necessary measures.*



Response and control

1- *Early Report*

2- *Fast detection based on national detection program*

3- *Control of the disease:*

- *Quarantine*

- *Stamping out (HPAI)*

- *Cleaning and disinfection of the infected farm*

- *Restriction related to the infected farm*

- *compensation(AI)*

4- *Closure of disease*



Vaccination

- *Vaccination along with biosecurity is one of the important measures in preventing poultry diseases in the country, which is implemented based on the strategies determined by the Iran Veterinary Organization.*
- *Some of important disease, which vaccination is carried out:
ND, IB, IBD, MD, ILT, H9*



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- *The national prevention and control program for HPAI has five parts as follows:*

First part: Epidemiosurveillance

- *In this part, epidemiosurveillance methods are implemented based on the target population, ecosystem and disease situation of HPAI.*

Second part: Control criteria

- 1. Reporting in passive surveillance or identification in active surveillance*
- 2. Stamping out*
- 3. Closure of disease*
- 4. Targeted preventive vaccination*
- 5. Correction and improvement of sanitary-quarantine structure in the farm*

The third part: The diagnosis program

- *National detection network at three levels: National, Regional and Provincial*

The fourth part: Information and training

- *Training according the national program*
- *Reporting outbreaks by WAHIS system of WOAHA*
- *Dissemination of information and reports of disease*
- *Public inform to stakeholders*
- *The Fifth part :Monitoring and evaluation*
- *Monitoring and evaluation is designed to improve the efficiency of the disease prevention and control system*



National plan for AI

National Plan for Highly Pathogenic Avian Influenza Control

HPAI CONTROL PROGRAM, 2018

Avian influenza (AI) is a highly contagious viral disease affecting several species of food producing birds (chickens, turkeys, quails, guinea fowl, etc.), as well as pet birds and wild birds. Occasionally mammals, including humans, may contract avian influenza.

There are many AI virus strains, which are usually classified into two categories according to the severity of the disease in poultry:

- I. Low pathogenic (LPAI) strains, which typically cause few or no clinical signs in poultry,
- II. Highly pathogenic (HPAI) strains, which can cause severe clinical signs and potentially high mortality rates among poultry.

Avian Influenza has captured the attention of the international community over the years, with outbreaks in poultry having serious.

In addition, although most avian influenza viruses do not infect humans, some, such as avian influenza H5N1 and H7N9, are well known to the public because of their implication in serious and sometimes fatal infections in people.

H5N1, for example, a highly pathogenic AI virus, was initially diagnosed in humans in Hong Kong in 1997. The virus then re-emerged in 2003 and 2004, and spread from Asia to Europe and protect public g several hundred human cases and deaths, as well as destruction of hundreds of millions of poultry.

This Asiatic form of H5N1 triggered concern from scientists and authorities and remains under close surveillance due to its feared pandemic potential if a mutation allows it to be transmitted from human to human. Nowadays, due to ongoing circulation of various strains (H5N1, H5N2, H5N8, H7N8, etc), outbreaks of avian influenza continue to be a global public health concern. The OIE's objectives of promoting transparency and understanding of the global animal disease situation continue as a priority of our organization in the face of this situation, in order to protect public health, and to ensure the safety of world trade in animals and animal products.

The science-based standards, guidelines and recommendations issued by the OIE are designated as the international reference in dealing with avian influenza. Its world network of Reference Laboratories and Collaborating Centres provides policy advice, strategy design and technical assistance for the control and eradication of these viruses.

In addition, the OIE has strengthened international coordination and cooperation in the control of avian influenza through joint collaboration with the World Health Organization (WHO) and the Food and Agriculture Organization of the United Nations (FAO): the three bodies regularly exchange follow-up information on the global zoonotic influenza situation, as one of their 3 Priority Topics.

Iran highly pathogenic avian influenza (HPAI) control program is updated based on the science-based standards, guidelines and guidelines and recommendations issued by the OIE and EU council directives in 2018.

2018



Training





Biosecurity

- *Biosecurity in poultry farms and related industries is one of the main priorities of IVO, and poultry farms are visited at the time of issuing and renewing the license, to confirm that in terms of hygiene structure.*
- *Biosecurity measures is monitoring during the breeding by farm veterinarian.*



Vaccination

- *The vaccination program is implemented in a targeted-base along with other components of the national program.*

Updates on Vaccines research

- *Islamic Republic of Iran is one of the producers of avian influenza vaccine based on the virus isolated in the country.*



Post-vaccination monitoring

- *The method of monitoring the flocks after vaccination is according:*
- *Reduction in water consumption*
- *Reduction in feed consumption*
- *Reduction in egg production*
- *Observation of dead and sick birds*
- *Active surveillance based on national plan , periodically*
- *Oropharyngeal and cloacal swabs are used for the detection of avian Influenza.*



Zoning

- *Zoning according to the regulations of the World organization for Animal Health (WOAH)*
- *Quarantine measures will be taken within a radius of 3 and 10 kilometers based on the infected farm.*
- *Provincial restrictions are also applied.*

Movement control

- *According to the quarantine system, all transportation of poultry is carried out by obtaining transport health permits by IVO.*

live bird market

- *The market of live birds is monitoring periodically based on national plan.*



National detection network at three levels:

- *National (the Central and Reference Laboratory and Applied Studies)*
- *regional*
- *provincial*
- *The veterinary organization has an up-to-date laboratory network with a national reference laboratory, 5 regional laboratories and 32 provincial laboratories of the Veterinary General Directorates, which operate under the supervision of the Central and Reference Laboratory and Applied Studies (CVL).*
- *All samples of HPAI are tested in governmental laboratories.*



In order to prevent HPAI, there is a continuously cooperation between the IVO and stakeholders in the poultry industry based on national action plan, including:

- *Ministry of Health and Medical Education*
- *Department Of Environment*
- *Farmers and poultry associations*

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- *Export restrictions imposed by some countries*

Action

- *Coordination with other countries and providing a complete report and clarification on the disease situation in the country.*

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- *Development of training programs*
 - *Improving the sanitary structure of farms*
 - *Cooperation with other countries in the region to prevent of diseases*

Thank you!



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