

## **Poultry disease aspect in Iran**

**by**

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Before the introduction and development of intensive poultry raising systems in Iran, domestic poultry in villages consisted the only poultry resource of the country and usually a few birds of native breeds were naturally reared by each farmer. In those days only 4 conditions (Fowl pox, Fowl cholera, Pullorum disease and spirochaetosis) were known as to consist poultry hazards in Iran. But since 1950 when we started importing pure foreign breeds of chicken increasingly and shifting from domestic over intensive system of poultry keeping around big twons; we have faced with many new conditions and diseases in our way to be dealt with. At the present time apart from those non specific conditions which are mostly connected with faulty management of flocks, poultry disease aspect in Iran is as follows:

### **A) Viral diseases**

#### **1) Newcastle disease**

The most widespread and important poultry hazard throughout the country since 1951.

#### **2) Fowl pox**

is more prevalent in wet climate of Caspian Sea and Persian Gulf coasts.

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### **3) Leucosis complex**

is only seen in pure foreign breeds (so far not a single case has been diagnosed in indigenous birds).

## **B) Bacterial diseases**

### **1) Pullorum disease & Fowl typhoid**

Not so common in the country. Their incidence rates in intensive poultry flocks, which are annually tested for, are negligible.

### **2 Chronic respiratory disease**

its incidence rate is increasing among intensive poultry flocks of foreign origin breeds.

### **3) Coligrauloma**

Very rare in foreign breeds.

### **4) Tuberculosis**

Very rare, only one case in turkey since 12 years.

### **5) Fowl cholera**

Beyond the rare chronic form (swelling of the comb and wattles) is not seen since 12 years.

### **6) Navel ill**

(Omphalitis of baby chicks)

Very common due to unsanitary conditions of hatcheries.

## **C) Parasitic & fungal diseases**

### **1) Coccidiosis**

Very common in most intensive poultry flocks but its incidence in those flocks which use coccidiostatic drugs (Nicarbazin, Megasul, etc) is negligible.

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## 2) Spirochaetosis

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Common in flocks with old poultry houses.

## 3) Round Worms

*Ascaridia galli* is the most widespread round worm in poultry flocks. Next to it, is *Syngamus trachea* which is common and causes mortality among chicks in Caspian Sea coasts.

## 4) Tape worms.

*Raillietina echinobotrida* is the most common one and causes some mortality among chicks.

## 5) Trichomoniasis of turkey

2 cases have been found with severe mortality in turkey poults.

## 6) Hexamitiasis of turkey

This year one case of the disease with some mortality among turkey poults has been diagnosed.

## 7) Aspergillosis (Brooder pneumonia)

Is seen quite often in intensive poultry flocks causing some losses in baby chicks.

## 8) Moniliasis

Rare cases of the disease with very low mortality rate is seen in baby chicks.

### Control measures in use

#### 1) Newcastle disease vaccination

Two types of N.D. vaccine are now produced at Razi Institute; the first one is an intramuscular type of vaccine for use in adult birds and chicks from 6 weeks old onwards. The vaccine is prepared from chick embryo culture material of N.D. Komorov modified virus vaccine (Amnio- allantoic fluids + embroy) and after being tested on susceptible

birds is delivered in 100 dose ampoules which are freeze-dried and sealed under vacuum. The vaccine is carried to the field in a thermos and locally resuspended in boiled and cooled water to be injected to susceptible birds by intramuscular route. Vaccination with this type of vaccine gives a durable immunity (usually a year) to the bird and is not followed by any severe reaction except a temporary decrease of egg production rate in laying flocks. The second N.D. vaccine is a water vaccine (buvable vaccine) for use in chicks from 1-6 weeks old. This type of N.D. vaccine is prepared since 3 years by American BI strain cultures on chick-embryo (Amnio-allantoic fluids are only used to make the vaccine). This vaccine after being titrated and tested on chicks is delivered in 200 dose ampoules under liquid state preserved in glycerin phosphate buffered. For use it is diluted in drinking water plus 10% skimmed milk to have a final concentration of virus equal to  $10^6$  M.L. embryo doses per cc. This vaccine gives 2-4 months immunity according to the age of chicks and is quite effective in controlling N.D. in the early stage of chicks' life.

The quantity of N.D. vaccine delivered in the year 1959 is as follows:

Intramuscular type 1.187.35/ doses  
doses

Water vaccine 764.350

## II) Fowl Pox vaccination

Fowl pox vaccine is prepared from a chick embryo adapted indigenous Fowl pox virus. The vaccine is used for adult birds and chicks from 6 weeks old onwards. It is delivered in 100 dose ampoules which are lyophilised and sealed under vacuum. Apart from this vaccine, a pigeon pox virus vaccine is under experiment to produce a safer prophylactic for baby chicks.

## III) Fowl spirochaetosis vaccination

This vaccine which is a formalised chick embryo culture of the disease agent (*B. anserinum*) is used in flocks where tick infestation (*Argas persicus*) is a problem.

## IV) Pullorum rapid stained antigen

This antigen is prepared from a standard strain of *Sal. pullorum* and is used for rapid plate test mostly in intensive poultry flocks to detect and eliminate pullorum reactors.

List of avian diseases diagnosed in poultry section of Razi Institute during the year 1958

No	Diseases	No of cases diagnosed
1	Coccidiosis	50
2	Newcastle disease	11
3	Fowl pox	1
4	Visceral lymphomatosis	16
5	Osteopetrotic leucosis	2
6	Haemangioma	7
7	Fowl typhoid	2
8	Chronic respiratory disease	30
9	Fowl spirochaetosis	13
10	Aspergillosis	7
11	Coligranuloma	1
12	Egg peritonitis	28
13	Omphalitis	55 (baby chicks)
14	Round worms	5
15	Tape worms	4
16	Visceral gout	69
17	Cannibalism	6
18	Chilling,	16 (baby chicks)
19	Fatty degeneration of liver	5
20	Impaction of alimentary tracts	17
21	Pendulous crop	1
22	A Avitaminosis	15
23	B2 Avitaminosis	3
24	Rickets	15
25	Encephalomalacia	1
26	Injury	7
27	Asphyxia	2
28	Sulfa-poisoning	31
29	Blue comb	2
30	Ascites (Salt poisoning)	4 (baby chicks)