APR 24

GLOBAL PROTECTION SERVICE

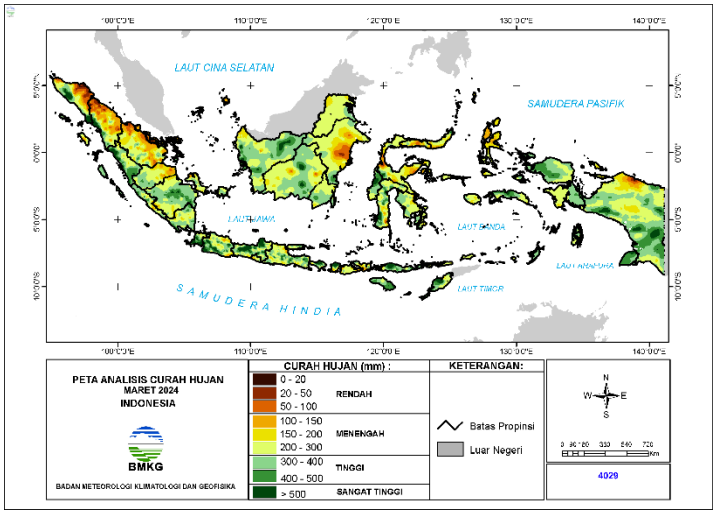
DISEASE SURVEILLANCE REPORT
Ceva Animal Health Indonesia

Four Most Reported Poultry Diseases in March 2024

by Ismail Kurnia Rambe – Veterinary Service Coordinator

Monitoring diseases program have been carried out in the centres of poultry farming areas in two major islands in Indonesia, Sumatra and Java. Data collection was carried out by a team of veterinarians from Ceva Animal Health Indonesia in their responsibility areas. The diagnose was based on clinical symptoms and post-mortem analysis of the affected flocks. Laboratory tests for confirmation were carried out whenever necessary and possible.

The BMKG data analysis for March 2024 showed, the average relative humidity (RH) in the atmosphere generally ranges between 60 - 70%. The average surface temperature range between 23 - 27°C. Rainfall analysis for the month were in vary, from low criteria (19%), medium (64%) to high (18%). 7% of Indonesia's territoriy were entered to dry season. Detail of this weather report can be access in https://www.bmkg.go.id.



Providing comfortable surroundings and fresh air exchanges inside farm houses

becoming a tough challenge for farmers during changing season. Failure of rearing management to anticipate the weather changes can cause the emergence of various diseases in poultry houses. In March 2024, there were total of 61 cases reported from 22 different diseases or condition – broilers reported 23 cases while layers reported 38 cases. Four most prominent diseases will be explained further based on the area of occurrence. From the highest, those four diseases are Chronic Respiratory Disease with 10 reports or 17% of the total reports, followed by Infectious Coryza with 9 reports (10%), Avian Influenza H9 and Newcastle Disease each with 5 reports (8%). Other diseases were Avian Influenza H5, Infectious Bronchitis, Mycotoxicosis, DOC Quality, Coccidiosis and Necrotic Enteritis each with 3 reports (5%), Feed Quality, Helminthiasis, Post Vaccinal Reaction, Heatstress and Complicated Chronic Respiratory Disease each with 2 reports (3%). And the rest of the reports are Infectious Bursal Disease, Inclusion Body Hepatitis, Dysbacteriosis, Neonatal coli, Ectoparasit, Dehydration, and Mismanagement each with 1 case (2%) consecutively.

CRD

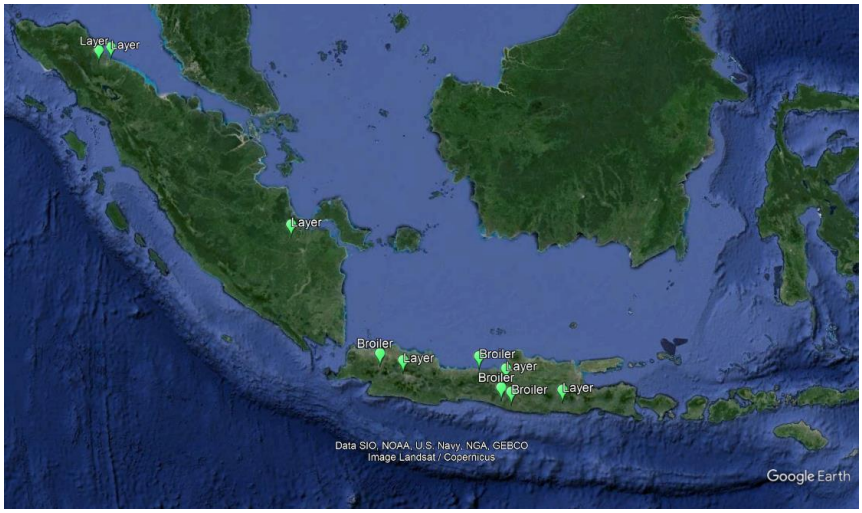
As the rainy season still dominates most of Indonesia's equatorial region, the emergence of respiratory disease also dominates disease reports in poultry. Chronic Respiratory Disease is closely related to the failure of ventilation management to prevent the negative effects of extreme weather. In March 2024 there were 10 cases or 16% of Chronic Respiratory Diseases – 4 reports from broilers and 6 reports from layers. Areas of infection can be seen in Figure and Table 1.

Areas	Species	No of Cases
Mancang, North Sumatera	Layer	1
Pantai Labu, North Sumatera	Layer	1
Banyuasin, South Sumatera	Layer	1
Padalarang, West Java	Layer	1
Bogor, West Java	Broiler	1
Salatiga, Central Java	Layer	1
Gunung Kidul, Yogyakarta	Broiler	1
Bantul, Yogyakarta	Broiler	1
Batang, Central Java	Broiler	1
Blitar, East Java	Layer	1

Many mycoplasma species can infect birds, but only Mycoplasma gallisepticum (MG), M. synoviae (MS), M. meleagridis (MM) and M. iowae (MI) are considered pathogenic in chickens and turkeys, and can cause economic losses due to stunted growth, condemnations associated with lesions, or synovitis, airsacculitis, decreased egg production, and decreased hatchability. Worldwide, the incidence of mycoplasma infection is favored by the intensification of poultry production.

Chronic Respiratory Disease (CRD) caused by Mycoplasma gallisepticum. The infection often complicated with viruses (Newcastle disease, coronavirus, metapneumovirus, etc.) or bacteria (Escherichia coli, Haemophilus spp., Pasteurella spp., Ornithobacterium rhinotracheale, other Mycoplasma sp, etc.) or with fungi (Aspergillus, etc.). Pathogenecity of the disease can be exacerbated by poor environmental conditions (high ammonia, dust, moisture, faulty ventilation, etc.), stress factors (social stress, handling, vaccination, selection, beak trimming, etc.). On farms, the most frequent mode of infection for MG or MS is the respiratory route.

Transmission occurs primarily by direct contact between sick or latent carriers and susceptible birds. Indirect transmission through human activity, wild birds or insects or lives tock equipment is also possible. In addition, MG and MS can be transmitted vertically through the egg, either by contamination of the embryo by blood route, or because of contiguity between the oviduct and the infected air sacs. The percentage of infected eggs remains limited but probably allows the spread of infection in the hatchery and then the farms. The rate of vertical transmission would be greater in the first weeks of infection.



CORYZA

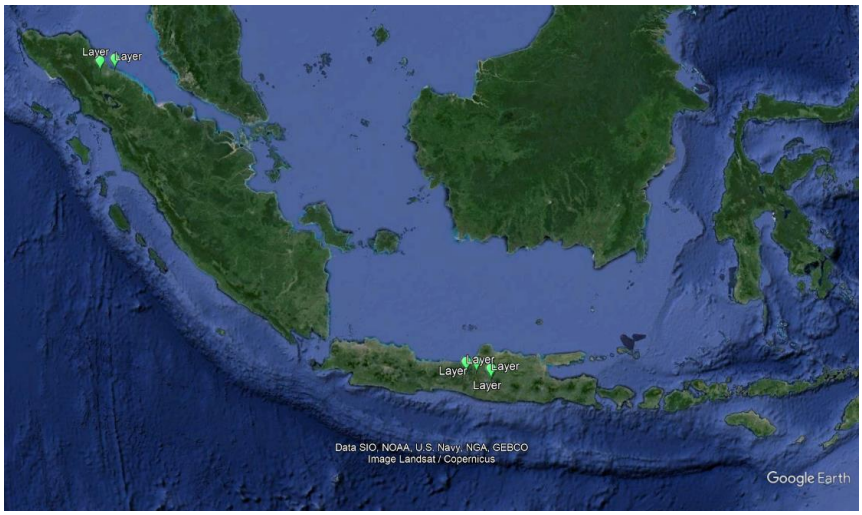
Infectious coryza is an acute respiratory disease of chickens caused by the bacterium *Avibacterium paragallinarum* (once known as *Haemophilus paragallinarum*), it is a Gram-negative, pleomorphic, nonmotile, catalase-negative, microaerophilic rod that requires nicotinamide adenine dinucleotide (V-factor) for in vitro growth. Once a flock has been infected, it is a constant threat to any nearby uninfected flocks. Transmission is typically by direct contact, airborne droplets and contamination of drinking water. "All-in/all-out" production can be a very effective management tool. Commercial farms that have multiple-age flocks tend to perpetuate the disease. Egg transmission does not occur.

Areas	Species	No of Cases
Mancang, North Sumatera	Layer	1
Pantai Cermin, North Sumatera	Layer	1
Karanganyar, Central Java	Layer	2
Salatiga, Central Java	Layer	1
Temanggung, Central Java	Layer	1

Infectious coryza is characterized by nasal discharge, sneezing, and swelling of the face under the eyes. In the developed countries such as Australia and the USA, infectious coryza occurs primarily in pullets and layers and only occasionally in broilers. In the developed poultry industries, the impact of the disease is primarily due to a drop in egg production – 10 to 40%. In other countries, infectious coryza often occurs in very young chicks, even as young as three weeks of age. Poor biosecurity, poor environment and the stress of other diseases are probably the main reasons why infectious coryza is more of a problem in such countries. The disease is often associated with significant mortalities under these conditions. Infectious coryza vaccines are widely available. As Page serovars A, B and C are not cross-protective, it is essential that vaccines contain the serovars present in the target population. The immunization should be completed three to four weeks before infectious coryza usually breaks out on the individual farm.

Early treatment of infectious coryza is important. Water medication is recommended immediately until medicated feed is available. Antibiotics should only be used with due care and attention to the local

regulatory environment. In more severe outbreaks, although treatment may result in improvement, the disease may recur when medication is discontinued. Preventive medication may be combined with a vaccination program in which started pullets are to be reared or housed on infected premises.



In March 2024, Infectious Coryza came out with 6 cases or 10% of all reports. All cases from layers. Details of infected area can be found in Figure and Table 2.

AI H9

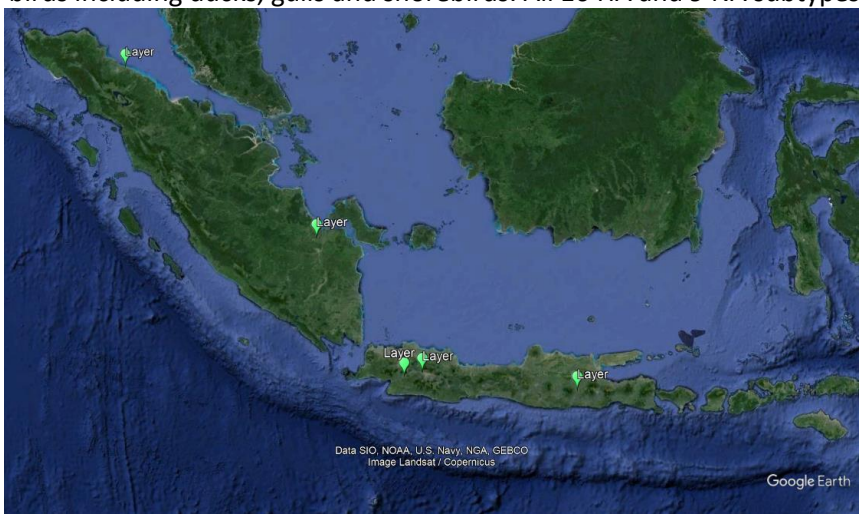
The next place for the most reported disease in March 2024 was held by Avian Influenza subtype H9 infection. AI H9 was reported 5 times, all reports were from layers, this number equal to 8% of the total reports. The area affected by AI H9 is shown in Figure and Table 3.

Areas	Species	No of Cases
Pantai Cermin, North Sumatera	Layer	1
Banyuasin, South Sumatera	Layer	1
Sukabumi, West Java	Layer	1
Padalarang, West Java	Layer	1
Kediri, East Java	Layer	1

Avian Influenza infection in poultry, primarily chickens, can cause clinical disease or losses in production for the affected flocks. The virus can be generally divided into viruses that cause a localized infection, often primarily restricted to the respiratory or enteric tract, and viruses that cause systemic infections. The viruses that cause localized infections are usually referred to as low pathogenic avian influenza (LPAI) viruses, and typically these viruses do not cause high mortality in affected flocks.

In general for LPAI viruses the disease symptoms are restricted to the respiratory and enteric tract and can include lesions in the sinuses, trachea, bronchi, lungs, airsacs, and intestines. Lesions can include mucopurulent or caseous inflammation, thickening of airsacs, edema of the serosa and other localized lesions. Evidence of enteritis may also be seen with some strains of virus. Internal lesions are rare but can include peritonitis, pancreatitis, lesions in the reproductive tract, and in the kidney. Decreases in egg production without other clinical signs are common in layers or breeders in production.

The influenza reservoir, is in wild birds including ducks, gulls and shorebirds. All 16 HA and 9 NA subtypes of viral genes are found in wild birds, with certain types of ducks, like pintails and mallards, having the highest prevalence of infection.



The LPAI viruses can be of many different hemagglutinin and neuraminidase subtypes. H9 is a LPAI virus. It is only a rare occurrence that these low pathogenic viruses mutate into the highly pathogenic forms of the virus.

ND

The Newcastle Disease always made into consideration since the beginning of the year - ranked fourth in March 2024. Altough the number of reports of ND continues to decrease every month, ND is still a very dangerous disease for poultry. ND wave that have been struck in South East Asia since 2010 continues to threat with 5 reports or equal to 8% of total reports, 3 reports from broilers and 2 from layers. Most of reported cases of ND were came from farms that using conventional ND vaccination. Areas with ND reports can be seen in Table and Figure 4.

Areas	Species	No of Cases
Banyuasin, South Sumatera	Layer	1
Pandeglang, Banten	Broiler	1
Padalarang, West Java	Layer	1
Bantul, Yogyakarta	Broiler	2

Ever since its first report in 1926, Newcastle Disease continuously threatening poultry, from backyard chicken to industrial poultry business. The high number of case reports every month shows that conventional ND prevention programs which based on a combination of live and killed ND vaccination have its limitations in protecting chickens from the ferocity of ND infections. The major problems in ND conventional prevention programs are the interference of MAB ND to the efficacy of ND vaccination, quality of on farm vaccination, and the prolonged postvaccinal reaction. The solution to stop ND infections in broilers, layers and breeders is to use the Vectormune ND vaccine which has been proven to provide maximum protection, reduce virus shedding and has no side effects.

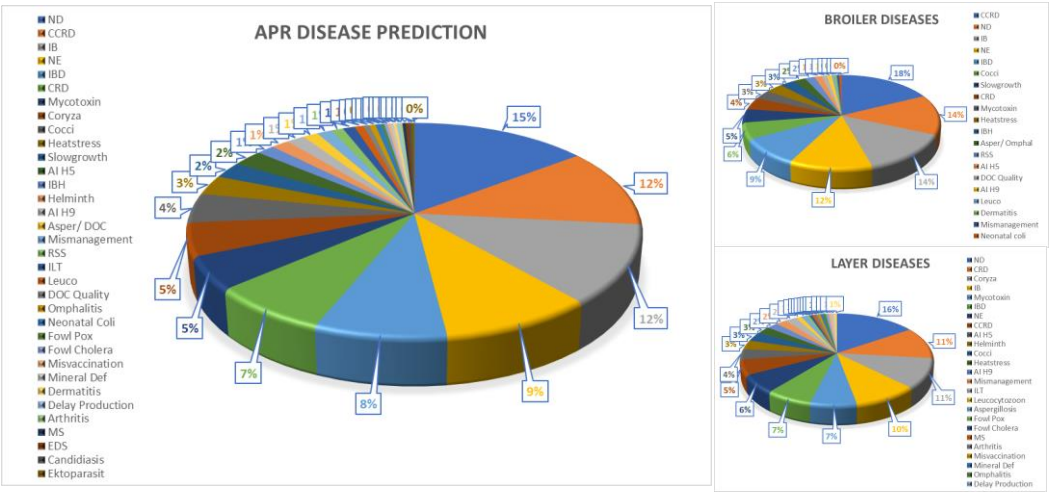
From 2018 to 2020, Ceva Disease Surveillance Database always showed that ND is the number one enemy of the Indonesian poultry business. However, the situation changed after Vectormune ND was introduced in Indonesian market. In year 2021, the Database has shown a 52% decrease in ND reports compared to the year 2020. The reason behind this improvement is that farms that previously infected by ND have agreed to use Vectormune ND as their basic vaccination programme. These farms were fully protected by Vectormune ND and eventually stopped reporting repeated ND cases. Vectormune ND was able to prevent ND virus shedding from one period to the next, which ultimately succeeded in increasing protection against field ND virus challenges.

Newcastle Disease still a deadly and rapidly transmitted infection affect both meat and laying type chicken, causing enormous economical losses either due to high mortality that can reach 100% in young birds or losses of production performance like dropped egg production, poor FCR and bodyweight, until poor carcass quality. The solution to stop ND infections in broilers, layers and breeders is to use the Vectormune ND vaccine. The best ND protection started from the hatchery.



APR 24 PREDICTION

Based on surveillance data for 6 consecutive years, we are able to predict the dominant disease occurring in a certain month. For the prediction of disease incidence in the next April 2024, the percentage of disease occurring in the same month during the previous 6 years is as follows.



The Indonesian poultry business will still facing multiple threats in April 2024. Especially when the extreme weather continuous. The three diseases with the highest probability are: ND 15%, CCRD 12%, and IB 12% opportunity. The three highest predicted diseases in broilers are : CCRD 18%, ND 14%, and IB 14% opportunity. While layers prediction are ND 17%, IBD 10% and Coryza 11% probability. This prediction is intended to help the poultry community improve its prevention program, not as a guarantee of accuracy.

CONCLUSION

In March 2024, the GPS Diseases Surveillance program have been reporting 61 cases from 22 different diseases or condition – broilers reported 23 cases while layes reported 38 cases. From the highest, four most prominent diseases are Chronic Respiratory Disease with 10 reports or 17% of the total reports, followed by Infectious Coryza with 9 reports (10%), Avian Influenza H9 and Newcastle Disease each with 5 reports (8%). Other diseases were Avian Influenza H5, Infectious Bronchitis, Mycotoxicosis, DOC Quality, Coccidiosis and Necrotic Enteritis each with 3 reports (5%), Feed Quality, Helminthiasis, Post Vaccinal Reaction, Heatstress and Complicated Chronic Respiratory Disease each with 2 reports (3%). And the rest of the reports are Infectious Bursal Disease, Inclusion Body Hepatitis, Dysbacteriosis, Neonatal coli, Ectoparasit, Dehydration, and Mismanagement each with 1 case (2%) consecutively. For more detail information of this report please contact Ceva Animal Health Representative in your area to help and provide solution to your poultry problems.