Together, beyond animal health

Poultry Diseases pressure

2023 - A growing challenge in “Indonesia”



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Ceva Animal Health Indonesia

Together, beyond animal health

Why?



CHALLENGE OF THE MODERN POULTRY INDUSTRY





Higher Farm Density Per Area

Higher Birds Density Per Flock

Multi Age Farm (Layer)

Epidemiological assessment of poultry diseases in Indonesia – 20018 to 2022

Total :

4,592 Cases found since 2018 - 2022

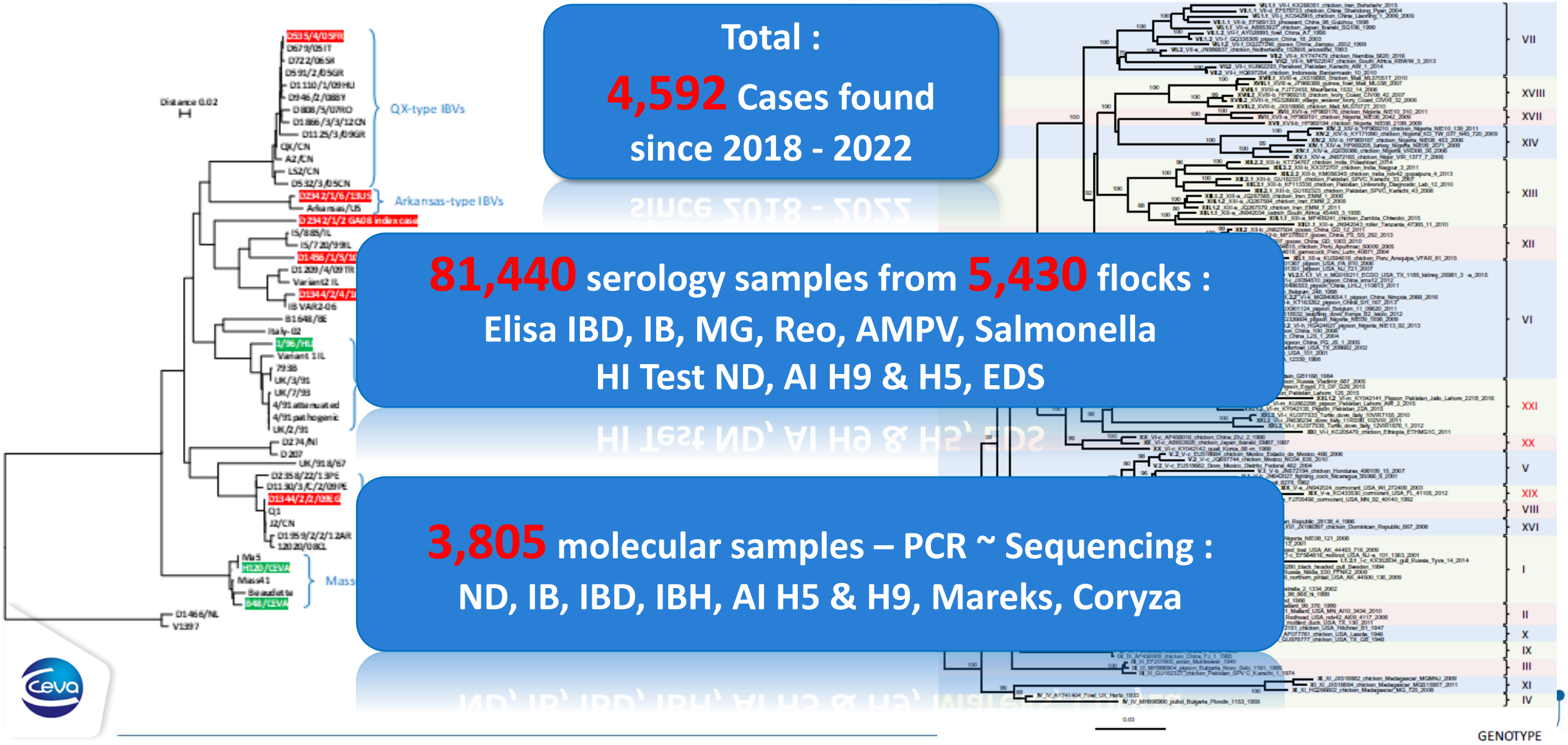
81,440 serology samples from **5,430** flocks :

Elisa IBD, IB, MG, Reo, AMPV, Salmonella

HI Test ND, AI H9 & H5, EDS

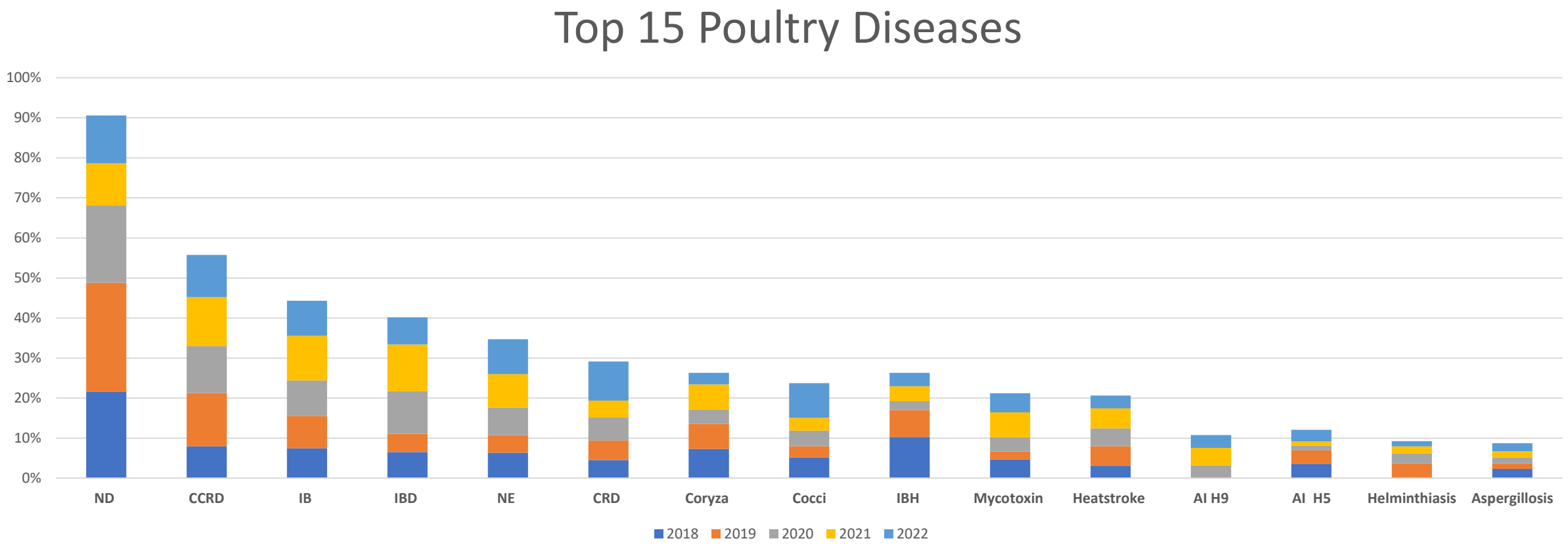
3,805 molecular samples – PCR ~ Sequencing :

ND, IB, IBD, IBH, AI H5 & H9, Mareks, Coryza



Epidemiological assessment of poultry diseases in Indonesia – 20018 to 2022

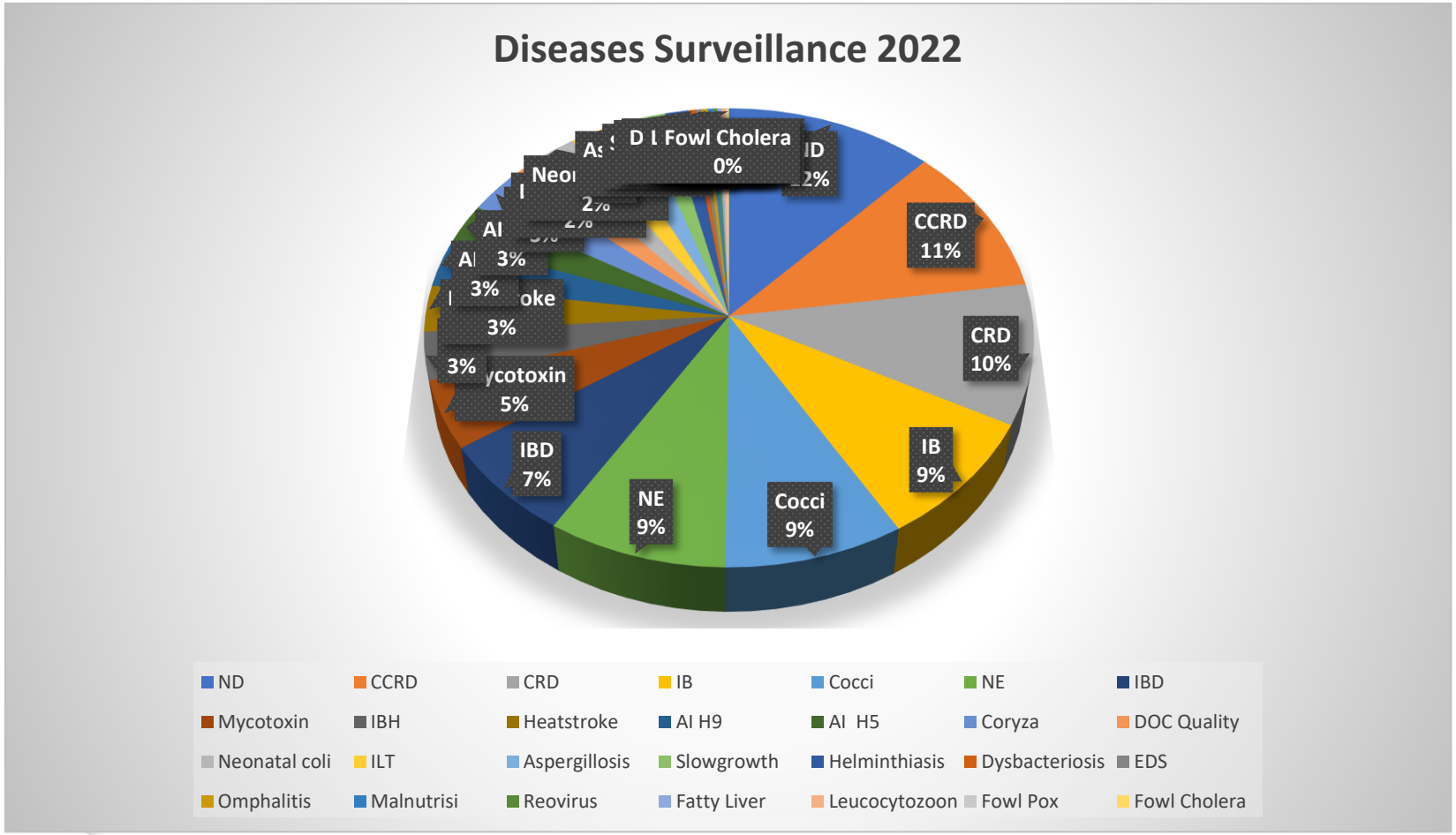
- Total of **4592** cases in 5 Years – **27** pathogens detected



Source: Indonesia Ceva Global Diseases Surveilance 2022, Rambe *et al*

Epidemiological assessment of poultry diseases in Indonesia – 2022

- Total of **900 Cases in 2022 – 27** pathogens detected

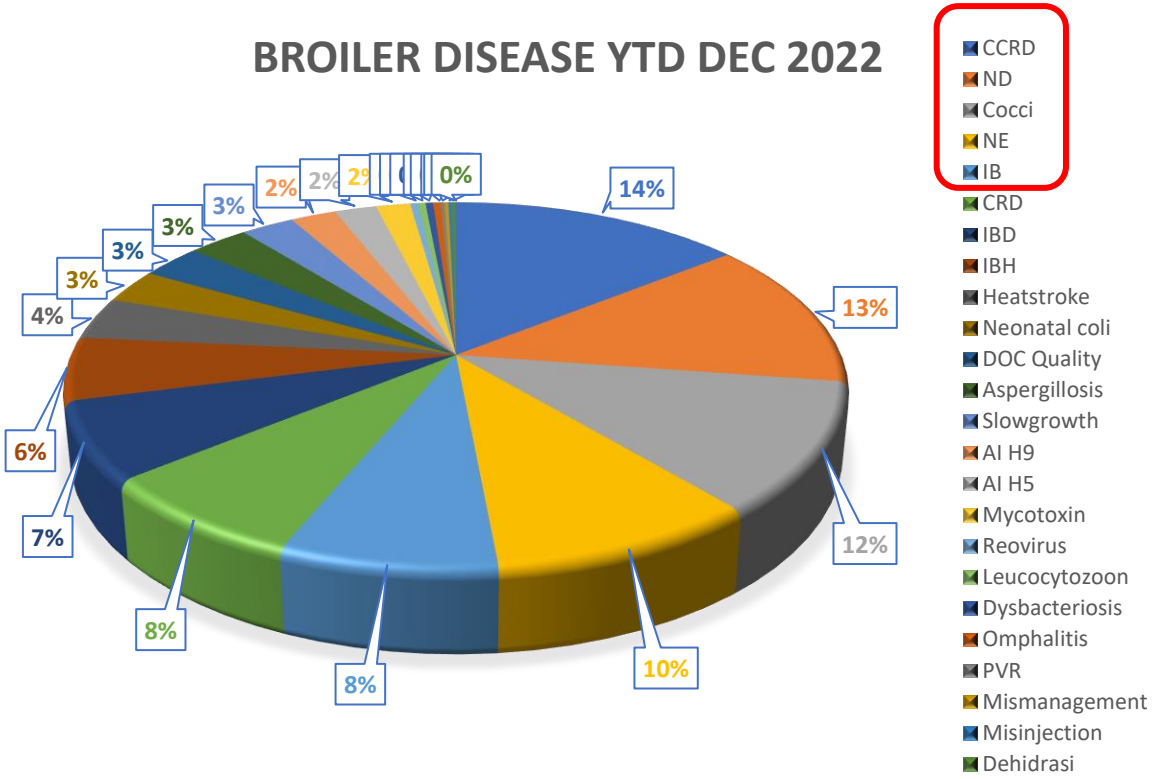


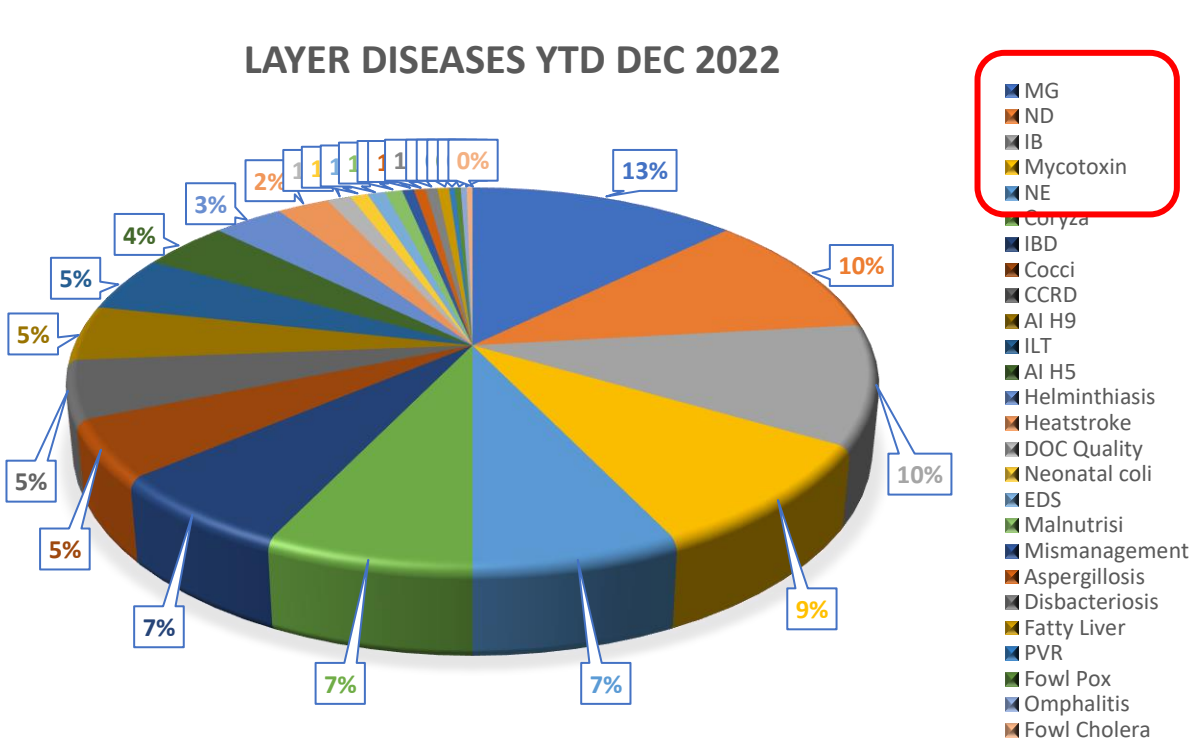
No	Disease	Precentage
1	ND	12 %
2	CCRD	11 %
3	IB	9 %
4	Coccidiosis	9 %
5	NE	9 %
6	IBD	7 %
7	Mycotoxin	5 %
8	IBH	3 %
9	Heatstroke	3 %
10	AI H5 & H9	3 %

Source: Indonesia Ceva Global Diseases Surveilance 2022, Rambe *et al*

Epidemiological assessment of poultry diseases in Indonesia 2022 (Broiler & Layer)

- Total of **900** cases – **27** pathogens detected

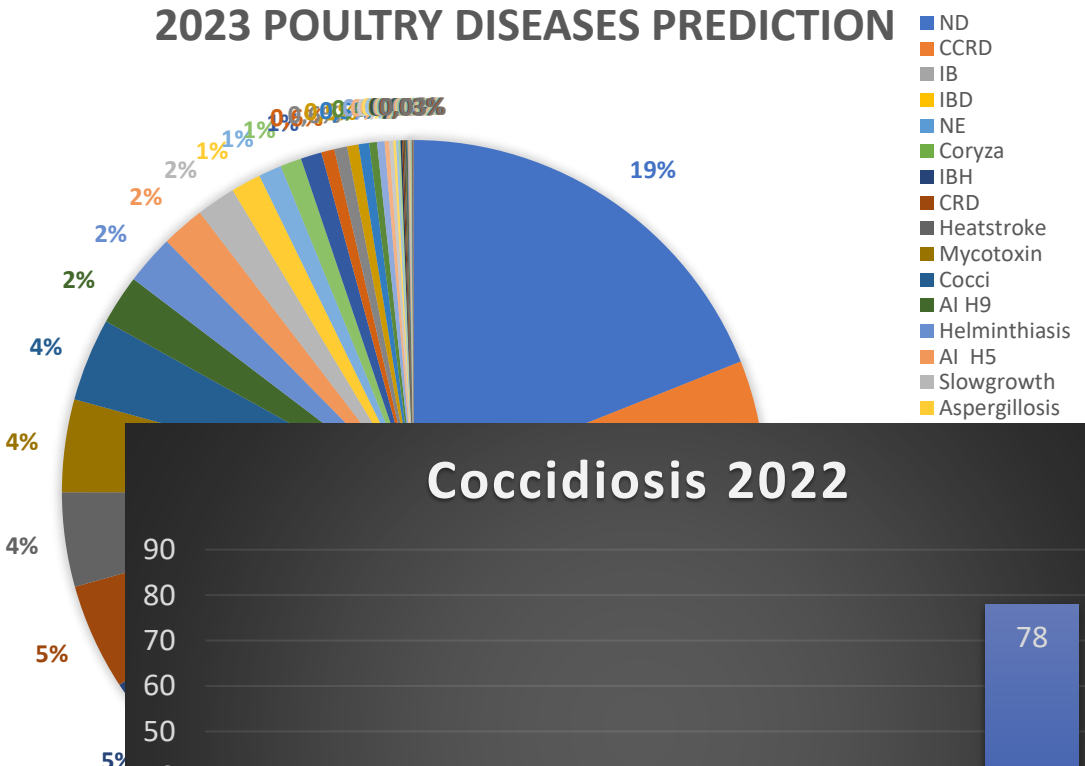




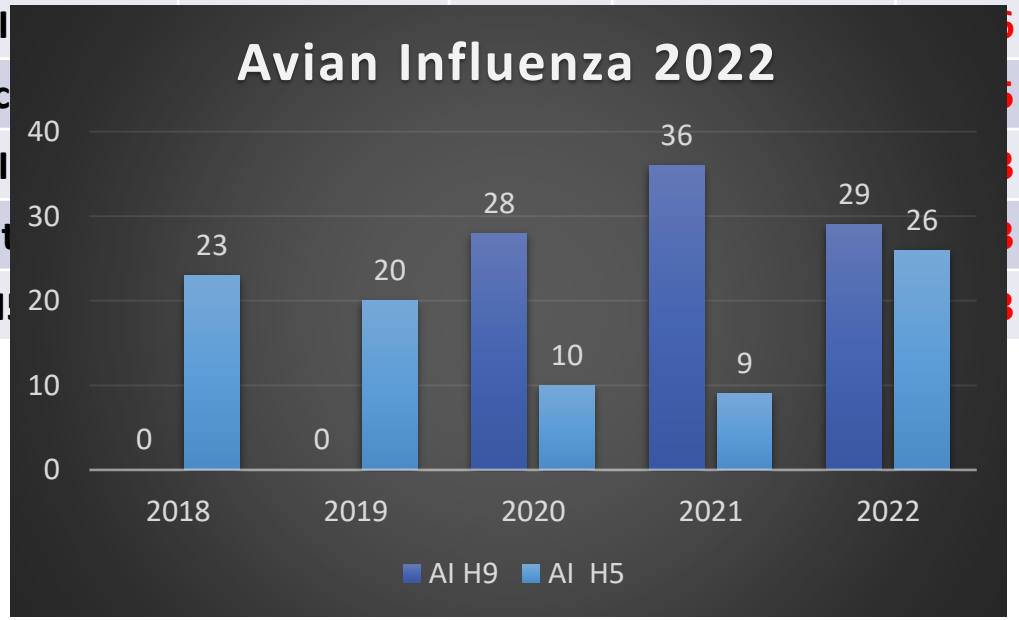
Source: Indonesia Ceva Global Diseases Surveilance 2022, Rambe *et al*

Epidemiological assessment of poultry diseases in Indonesia

2023 Poultry Diseases Prediction



2018-2022			2023		
No	Disease	Precentage	No	Disease	Precentage
1	ND	12 %	1	ND	19 %
2	CCRD	11 %	2	CCRD	11 %
3	IB	9 %	3	IB	9 %
4	Coccidiosis	9 %	4	IBD	9 %
5	NE	9 %	5	NE	7 %
6	I				5 %
7	Myc				5 %
8	I				3 %
9	Heat				3 %
10	AI H5				3 %

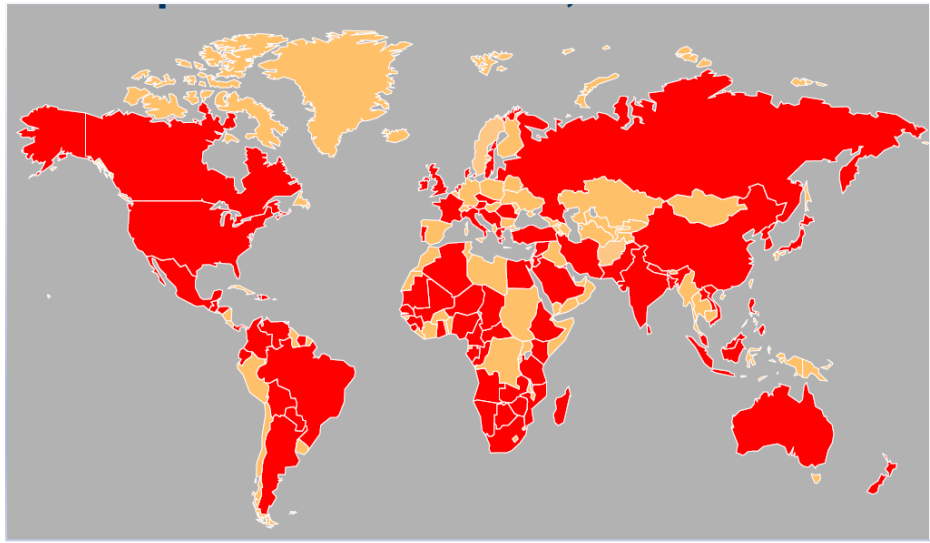


...pe et al

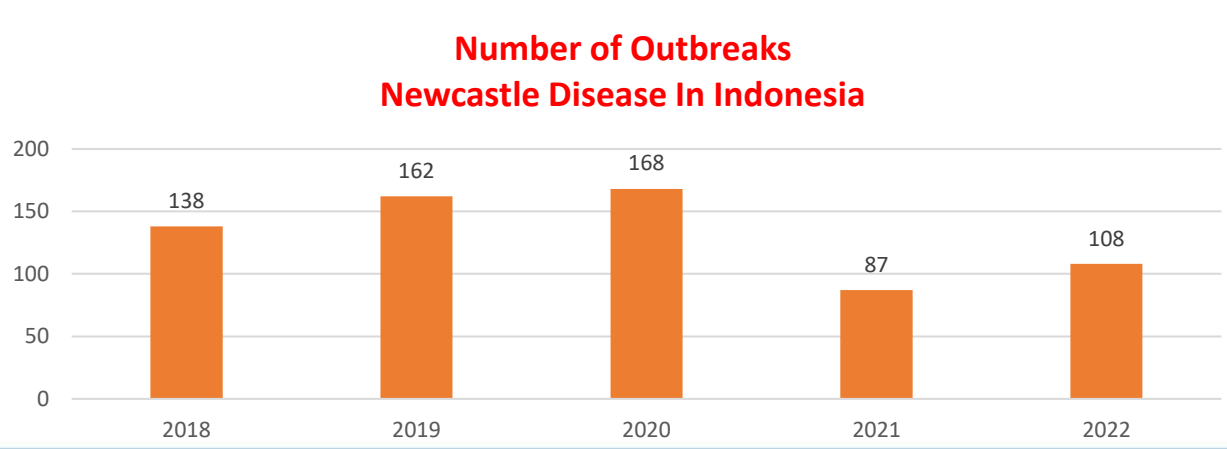
NEWCASTLE DISEASE EPIDEMIOLOGY

Vectormune® ND

- Newcastle Disease is caused by an avian paramyxovirus type 1;
- Newcastle Disease (ND) has a worldwide distribution and it is enzootic in several countries;



- Only a few countries in the world have never reported any ND outbreak;
- This virus is able to kill birds, inducing enormous economical losses for the poultry industry;





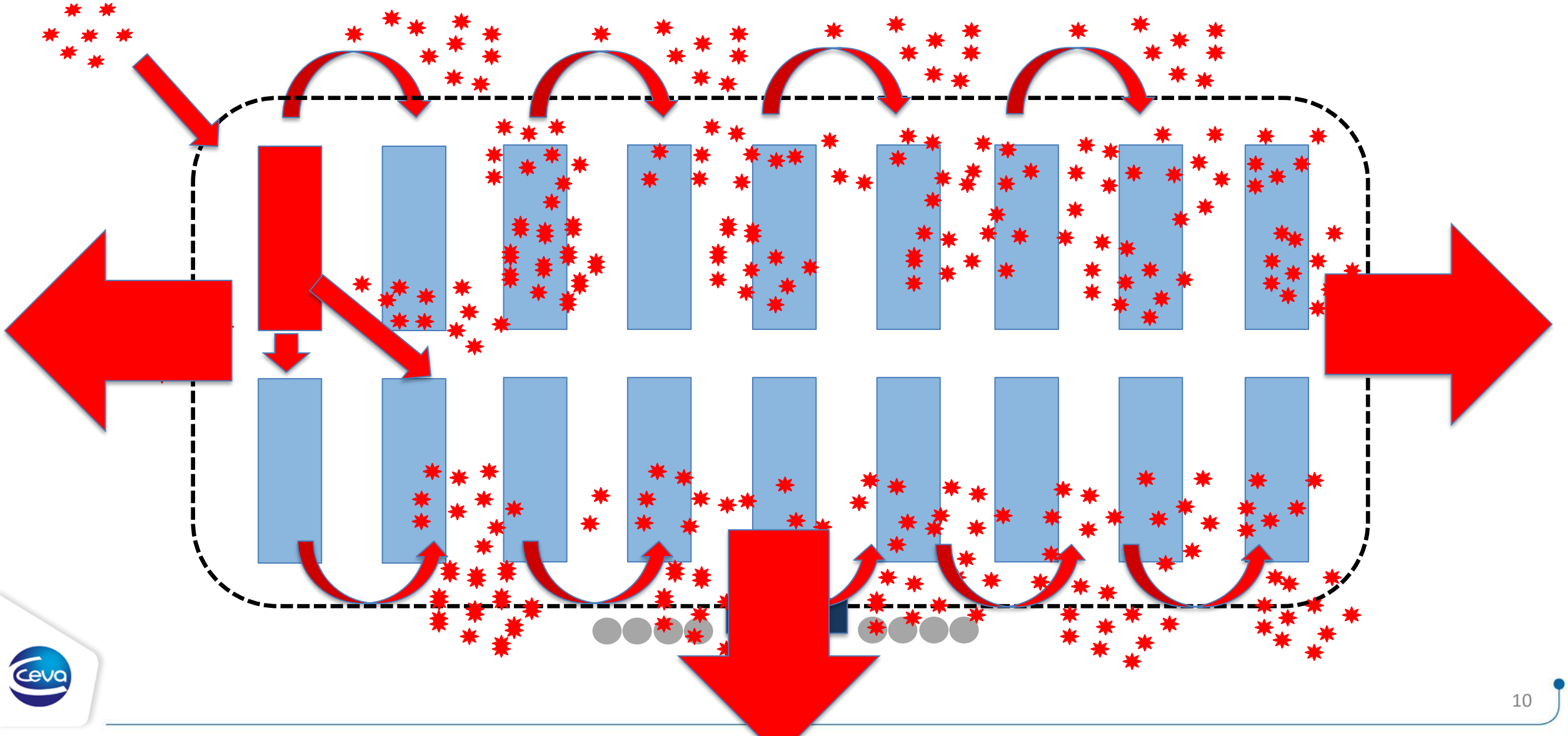
BEFORE



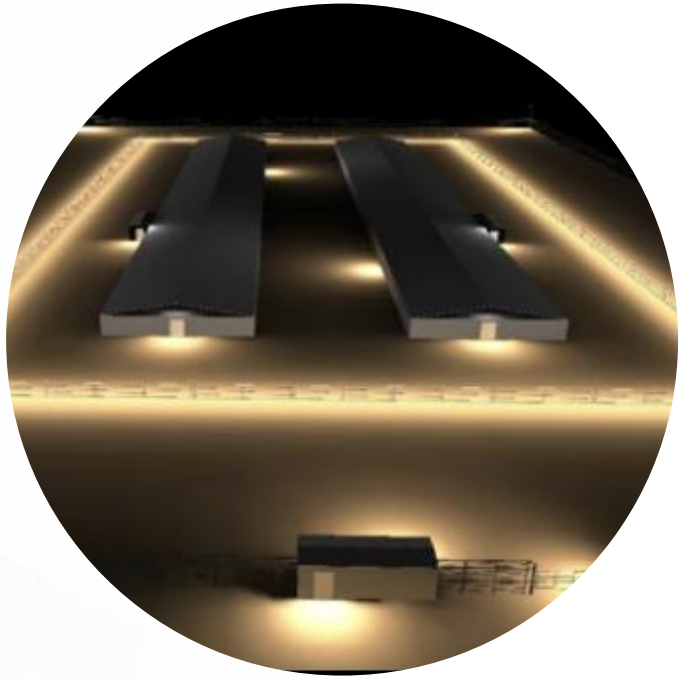
AFTER

Reports of ND Ceva Indonesia GPS DS 2018-2022

Industri poultry modern & Newcastle Disease



TO PREVENT DISSEASE PERSISTENT CHALLENGE





→ **Biosecurity**

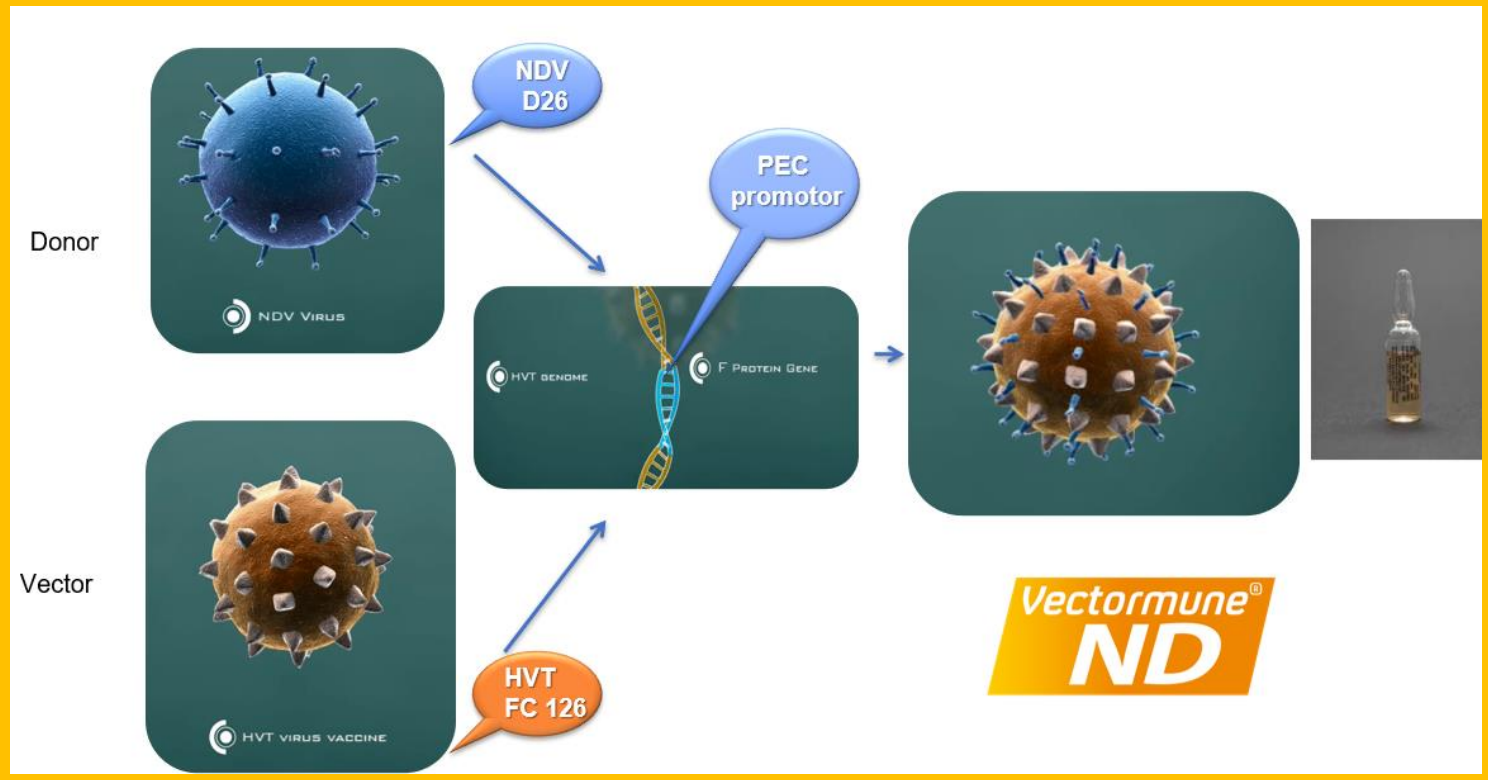
→ **Vaccination**

Newcastle Diseases Pressure Solution

Vectormune® ND

INSTALL THE ULTIMATE ANTIVIRUS



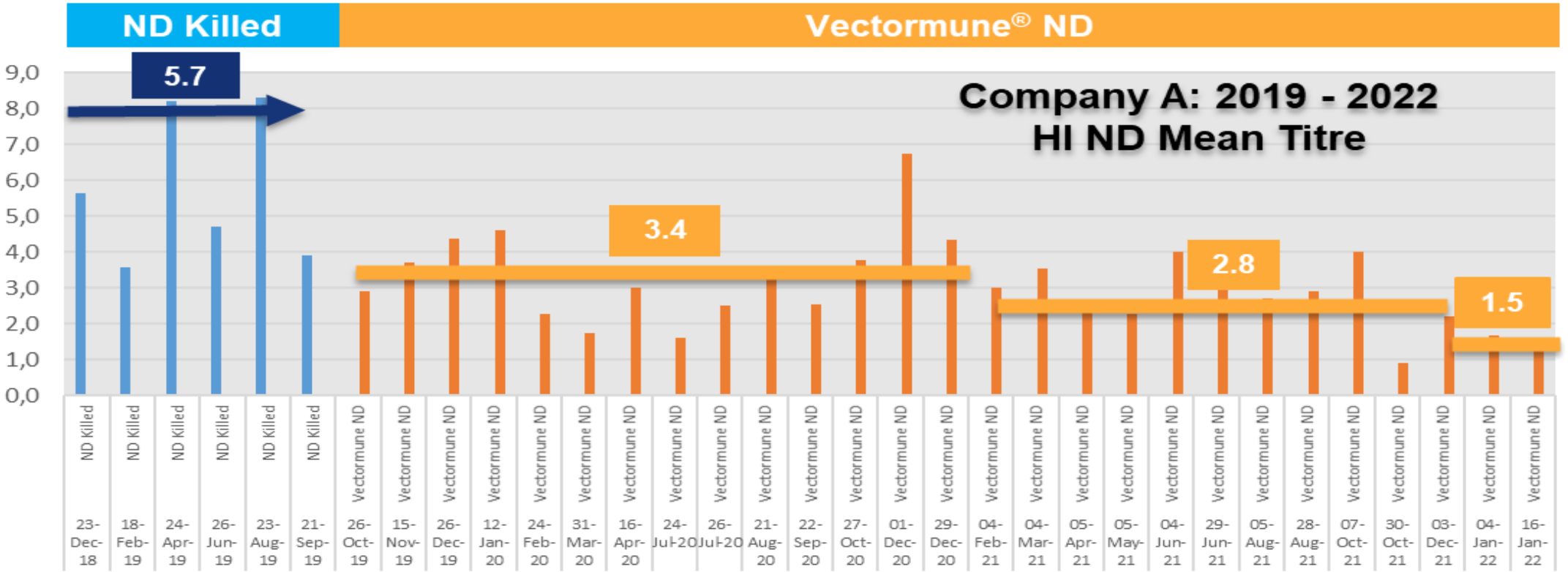


Respon Kekebalan

	Vaksin live (konvensional)	Vaksin inaktif (konvensional)	r-HVT Vectormune ND
Tanggap kebal	Cel-mediated, local, humoral	Humoral	Cell-mediated, local, humoral
Pengaruh kekebalan Induk	Ada	Ada	Tidak
Respon kekebalan	Cepat tapi Jangka Pendek	Lambat dan Jangka Panjang	Sedang dan Jangka Sangat panjang

Vectormune® ND + 2 live ND VS ND Killed + Live ND

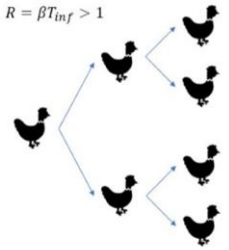
Vectormune® ND vs ND killed vaccine



Vectormune® ND controls field virus circulation better than ND Killed vaccine

P value of ND titer < 0.05 : the difference between ND killed and Vectormune ND groups is statistically significant.

Controlling ND Sheeding Pattern



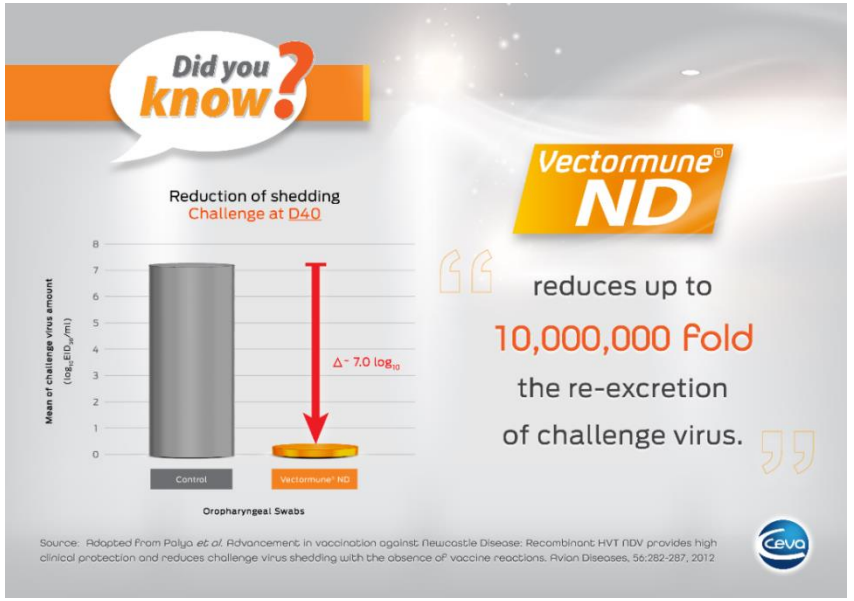
vaccines

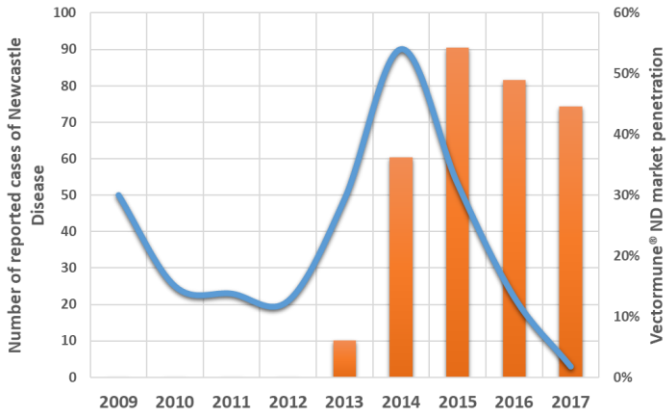
MDPI

Article

Efficacy of a Turkey Herpesvirus Vectored Newcastle Disease Vaccine against Genotype VII.1.1 Virus: Challenge Route Affects Shedding Pattern

Vilmos Palya [1,*], Tímea Tatár-Kis [1], Abdel Satar A. Arafa [2], Balázs Felföldi [1], Tamás Mató [1] and Ahmed Setta [3]





ND outbreaks & Vectormune® ND in South Africa

"Vectormune® ND together with improved biosecurity played a significant role in controlling ND in South Africa"

reported by poultry vets belonging to the South African Poultry Association

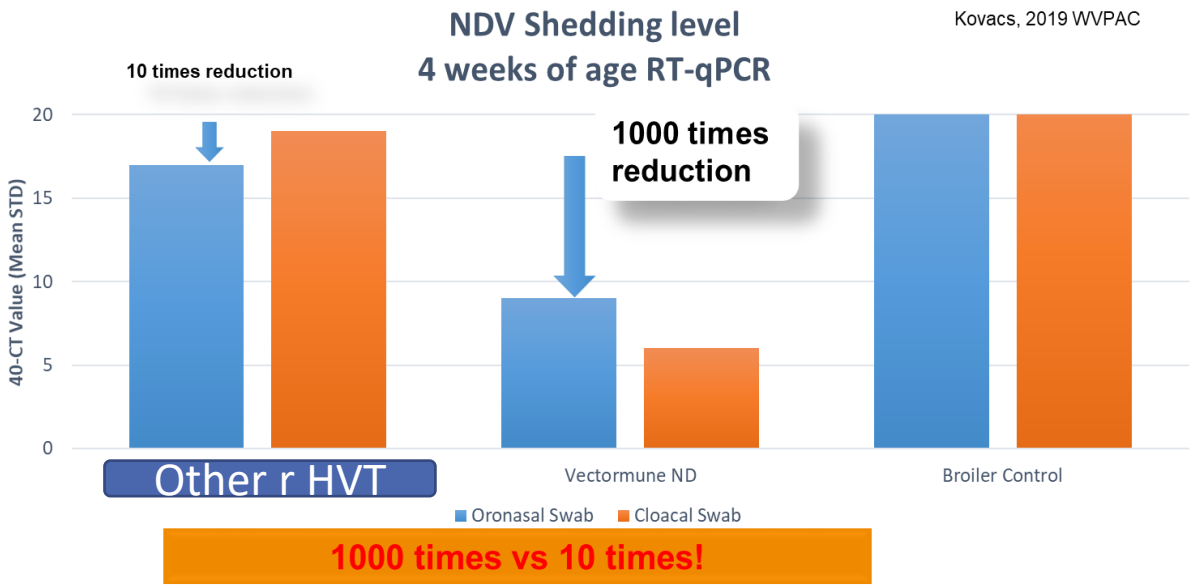
November 2017

Number of reported cases of Newcastle Disease in South Africa 2009-2017

Vectormune® ND market penetration in South Africa 2013-2017

http://www.daff.gov.za/daffweb3/Branches/Agricultural-Production-Health-Food-Safety/Animal-Health/Epidemiology/disease-reporting/Disease-Reporting-Summaries

Kovacs, 2019 WVPAC



Ceva Layer Offer-Innovative Vaccines

LESS IS MORE

THE LARGEST DISEASES COVERAGE WITH INNOVATIVE VACCINES FROM THE HATCHERY

"Less is More"

UP TO **50%** LESS VACCINE APLICATION WITH BETTER SAFETY AND EFFIACY

NOVAMUNE · Vectormune ND · Cevac IBird · Cevac MD Rispens · IMMUcox 5

Immunize your chicks from the hatchery and reduce field booster application for Marek's, IBD, ND, IB and Coccidiosis *

* According to market specificity you can use as well Ceva AI or ILT vaccines solutions at the hatchery.

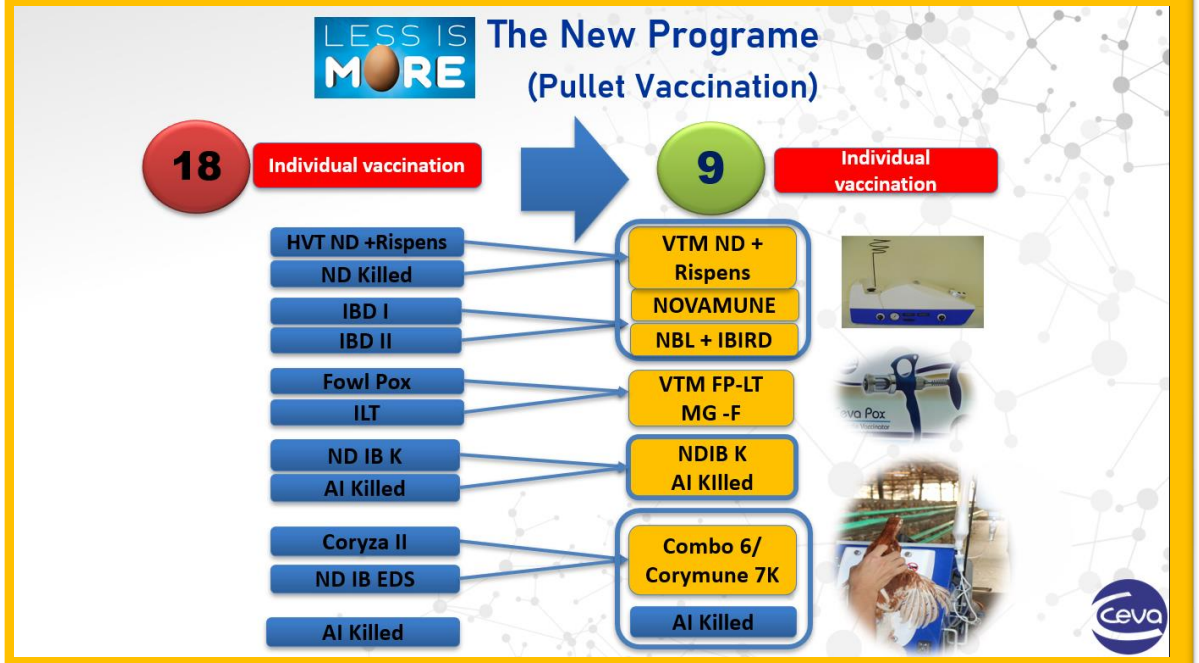
Vectormune FP LT · Vectormune FP ILT + AE · Vectormune FP MG AE · Vectormune FP MG

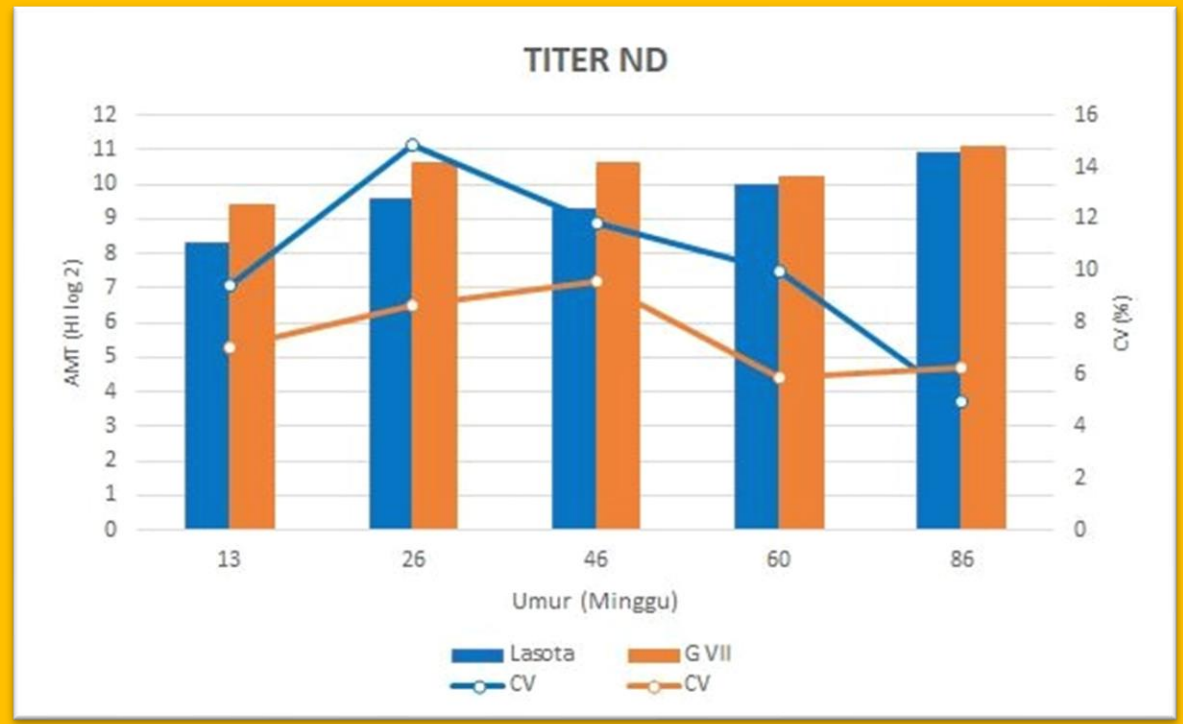
Perfect balance between safety and efficacy in a single injection, Allows you to use other vector HVT vaccines at the hatchery

Cevac CORYMUNE 4 K · Cevac CORYMUNE 7 K · Cevac MEGAMUNE K

Broad protection in a single injection, reduce catching stress and handling of birds.

Ceva OFFER Innovative Vaccine

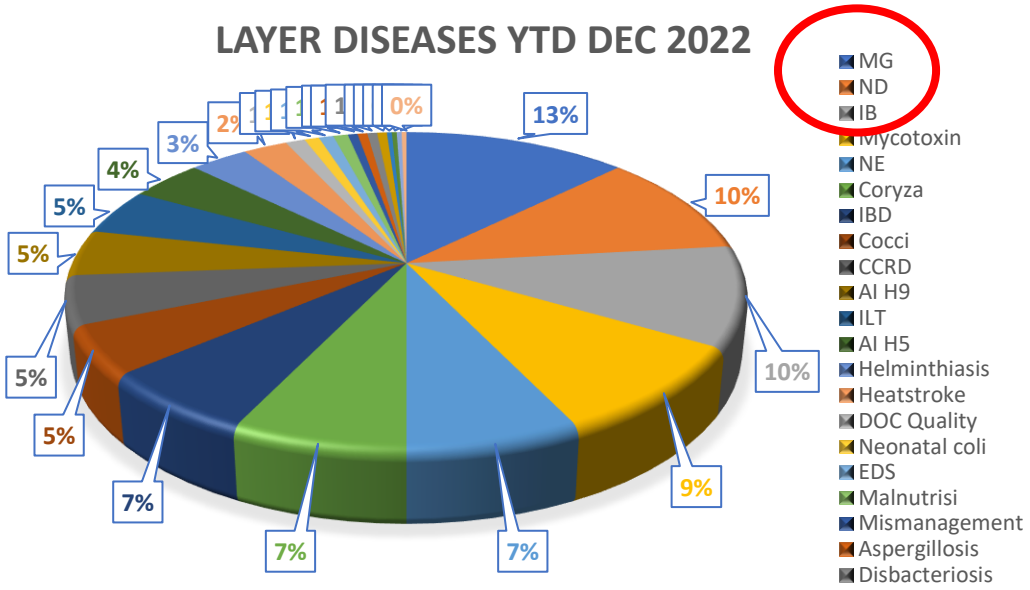




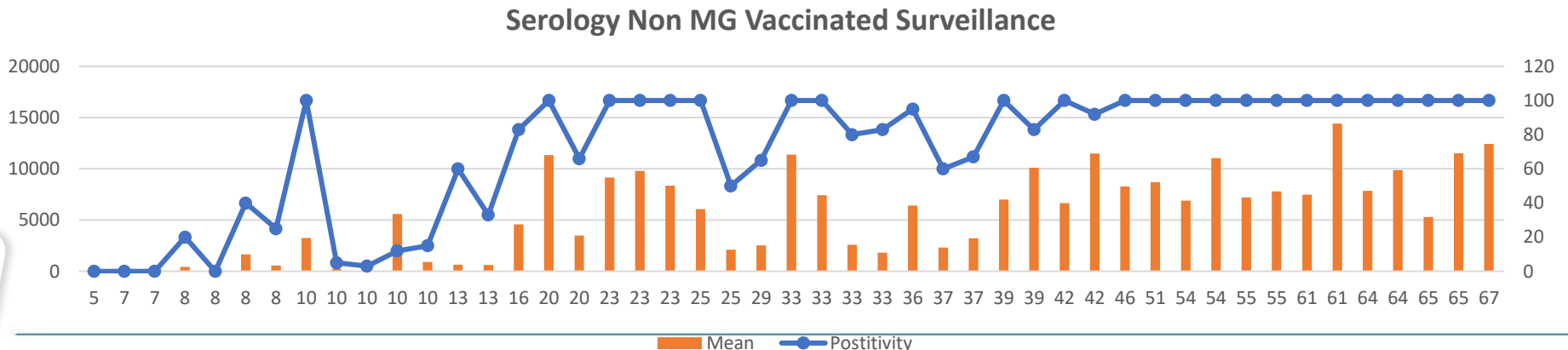
% Protection

→ C
& c
wee

Mycoplasma gallisepticum Epidemiology



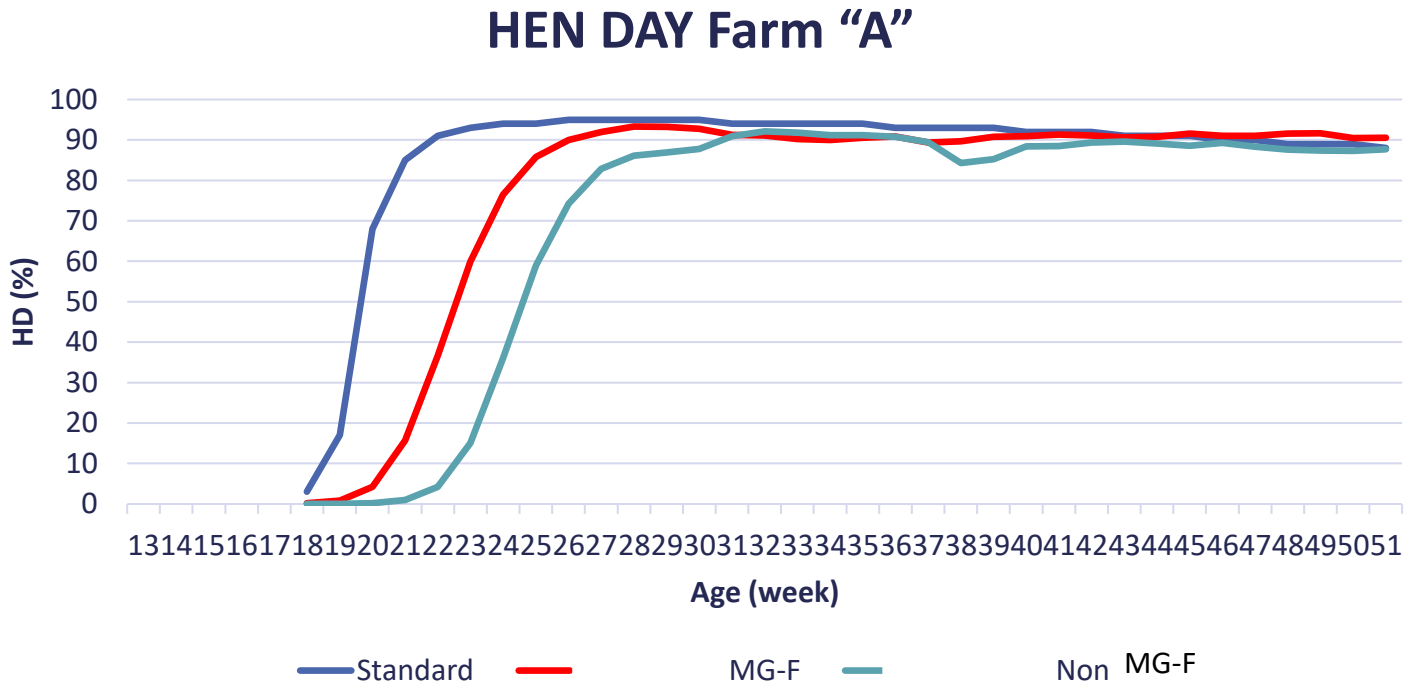
- ✓ *Organisme yang sangat kecil*
  - ✓ *Large Virus* : *100 nm*
  - ✓ ***Mycoplasma*** : ***150 – 250 nm***
  - ✓ *E. Coli* : *2 µm*
- ✓ *Organisme yang tidak berdinding sel*
  - ✓ *Pleomorphism : Round, Pear-shaped, filamentous*
  - ✓ *Antibiotic resistance & not effective*
- ✓ *Organism yang berkolonisasi di permukaan mukosa*
  - ✓ *Respiratory & Urogenital tract*



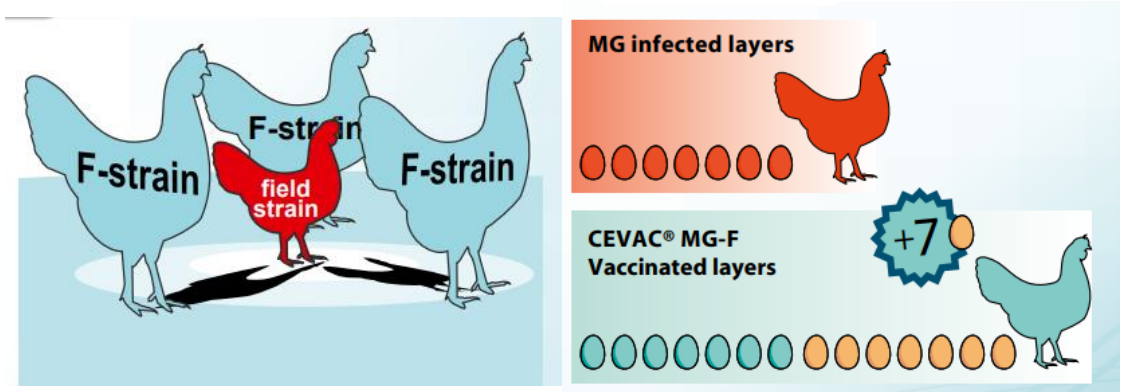


Vaccination with Cevac MG F

- **Keep it out**
  - Surveillance
  - Quarantine and Slaughter
- **Live with it**
  - Medication
  - Live Vaccines



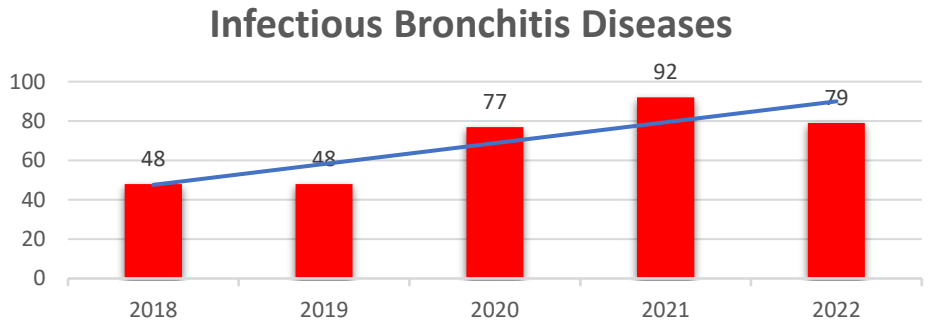
Reduce 720 Kg antibiotic

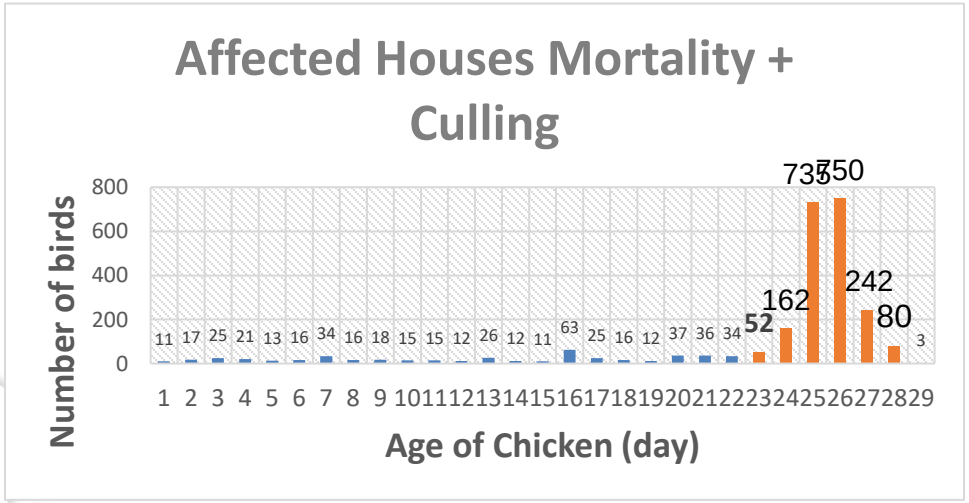


Infectious Bronchitis

"IB MOST OF THE TIME IS NOT DETECTED BY THE FARMER"

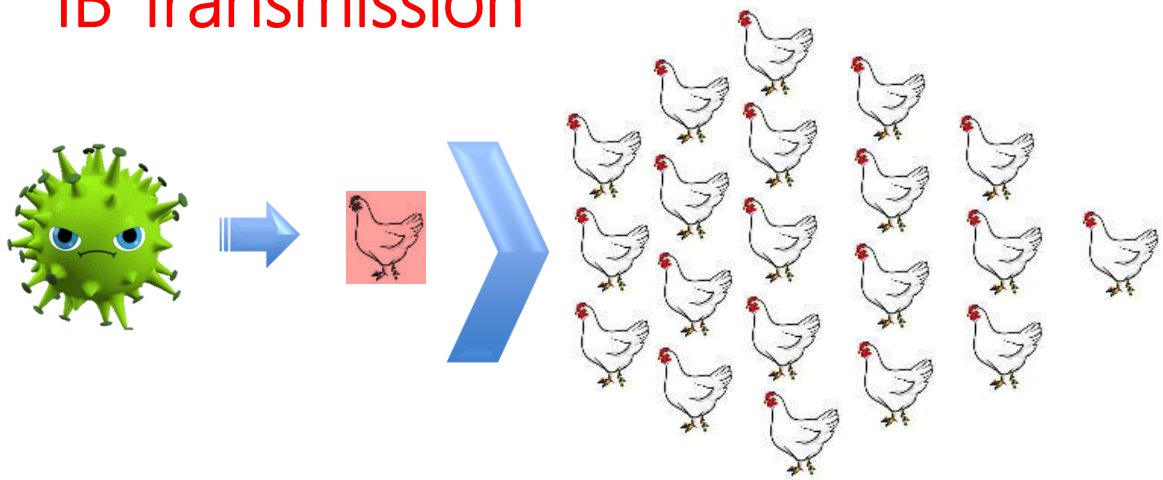
MARK JACKWOOD, 6TH BSF MAR 2017





IB Transmission

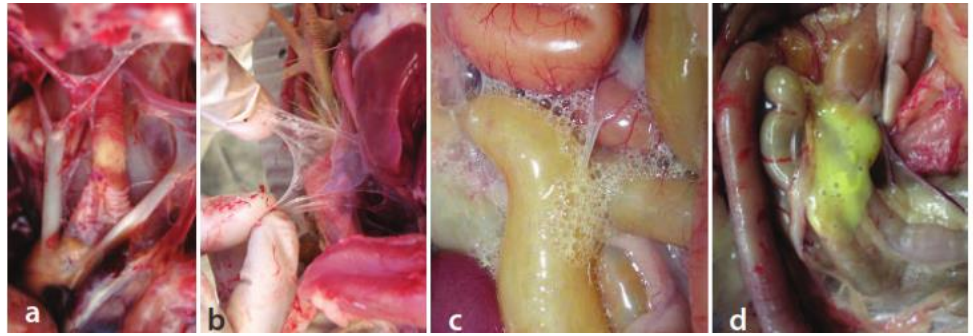
R_0 M41: 20



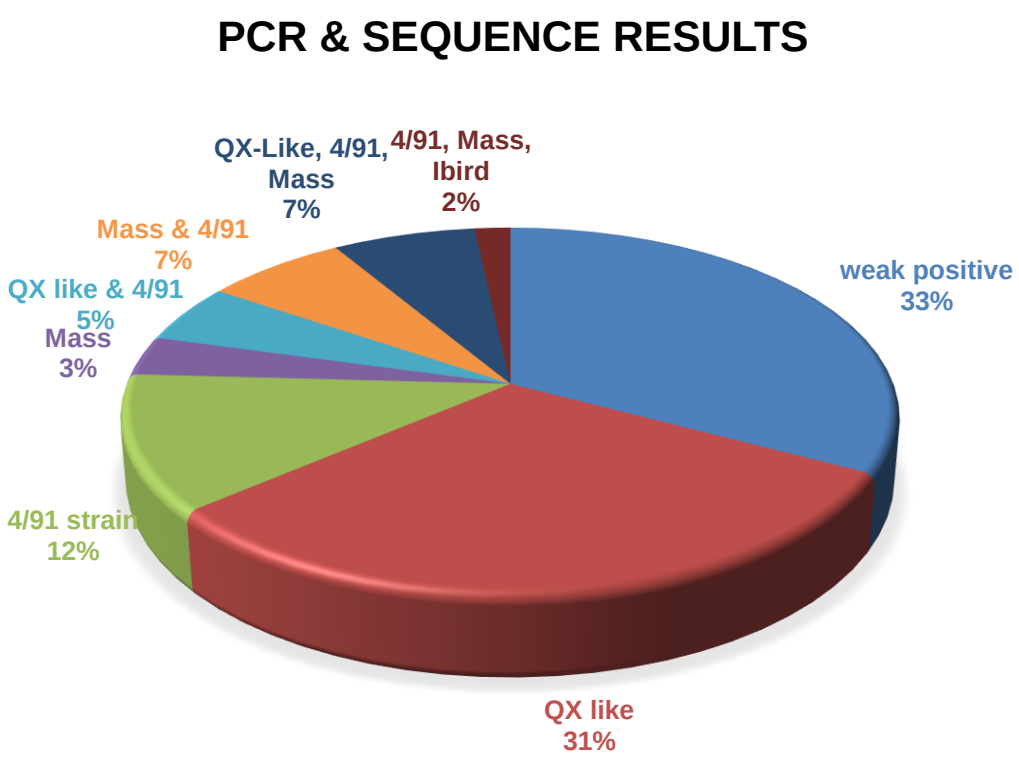
1 chicken can infect up to 20 chicken

No persitency from farm to flock but high level of contamination & spreading capacity

Source: De Wit et al, 1998, Avian Pathology, 27, 464-471



PCR & SEQUENCE RESULTS (Indonesia)



Sumatera : 10 % of total sample
West Java : 43 % of total sample
Central Java : 33 % of total sample
East Java : 14 % of total sample

- Total of 58 flocks were collected (2020 – 2021) from broiler commercials
- **Diagnostic test were conducted at SSIU Phylaxia Hongaria**
- **31 % sample from Indonesia detected IB QX like variant challenge**
- **QX-like**, **TW-I like** and **Malaysian** IB variant strains represent **over 90%** of all IBV molecular detections in Asia in the past 10 years (Ceva Asia)

Effect of IB infections on Layers at different ages

IB Infection

1-10 Ages of Age

- Pinguin like
- Cystic oviduct
- False layer syndrome





IB Infection

Rearing Periode

IB cause only respiratory signs



IB Infection

Laying Periode

- Production problem
- Respiratory signs





Proposed program in layers

Could be of interest in multiage farms
Every 6/10 weeks

Cevac IBird® + cevac MASS L

Cevac IBird® + cevac MASS L

W14 : killed IB

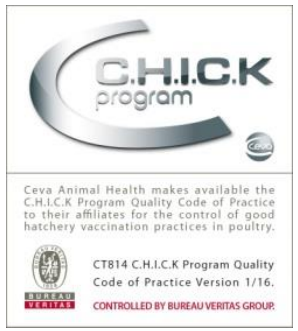
Cevac IBird®

At least 2 weeks

At least 4 weeks











Key Messages

1. Top 5 2023 poultry diseases prediction based on 5 years Ceva Indonesia Diseases Surveilance

   - Newcastle Disease
   - Infectious Bronchitis
   - Infectious Bursal Diseases
   - Inclusion Body Hepatitis
   - Avian Influenza

2. Vectormune ND + Rispens
   - Earlier & Strong immune respons
   - Maximum protection
   - Reduction of ND virus shedding
   - Long lasting protection

3. Infectious bronchitis
   - Economic losses (Lower BW, higher mortality, higher FCR, ABO treatment
   - Mass + Ibird give broad protection with better performance
   - Early protection “False Layer Syndrome”

4. Mycoplasma gallisepticum
   - Top 1 diseases surveillance in 2022
   - Respiratory problem
   - Drop egg production
   - Vaccination reduce ABO treatment

Thank you for your attention





Ceva Animal Health Indonesia