



Project: Technical assistance to improve implementation of food safety standards and disease crisis preparedness

Panel: Poultry disease emergencies, risks and prevention (2)

Lecturer: Mustafa Tufan

Date: 25 April 2023

Place: Nicosia, Cyprus

*Project funded by the European Union within the scope of the Aid Programme for the Turkish Cypriot community,
implemented by the NSF Euro Consultants Consortium*



Disclaimer: This presentation has been produced with the financial support of the European Union. Its contents are the sole responsibility of NSF Euro Consultants Consortium – Contractor, and do not necessarily reflect the views of the European Union.

➤ Newcastle disease



Diseases of **POULTRY**



Poultry diseases-ND



Newcastle disease

NEWCASTLE DISEASE (Yalancı Tavuk Vebası)
NEDİR, NASIL KORUNULUR?

1. Release of TAAs and danger signals required for APC activation and antigen presentation

<http://www.kayserihaber.com>

Newcastle Disease is a severe viral disease of poultry that can affect humans.

Photo from USDA OnLine Photography Center.

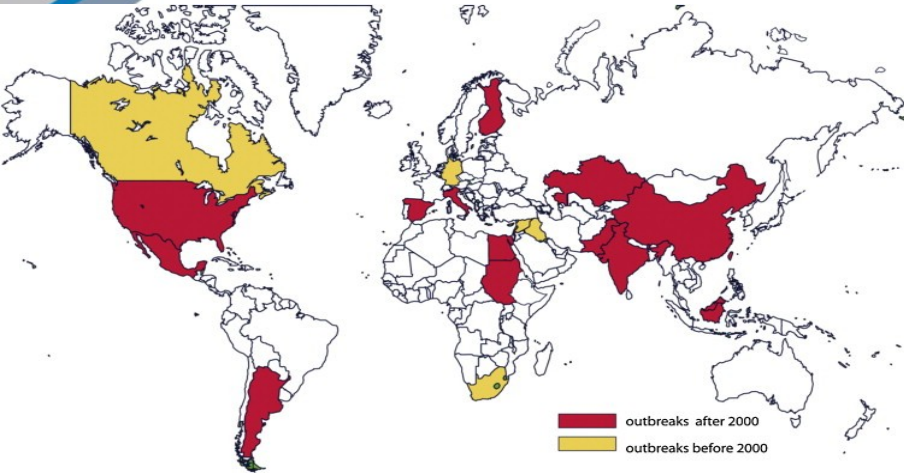
New Castle Disease



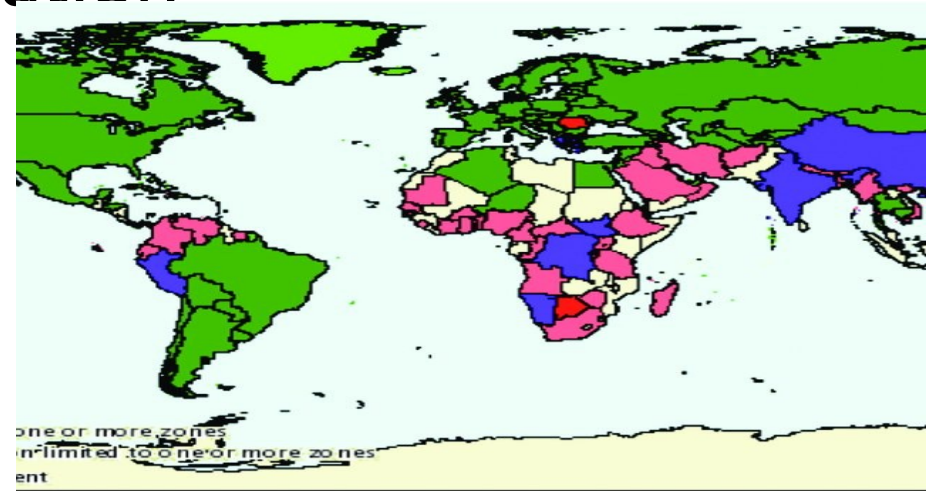
Poultry diseases-ND



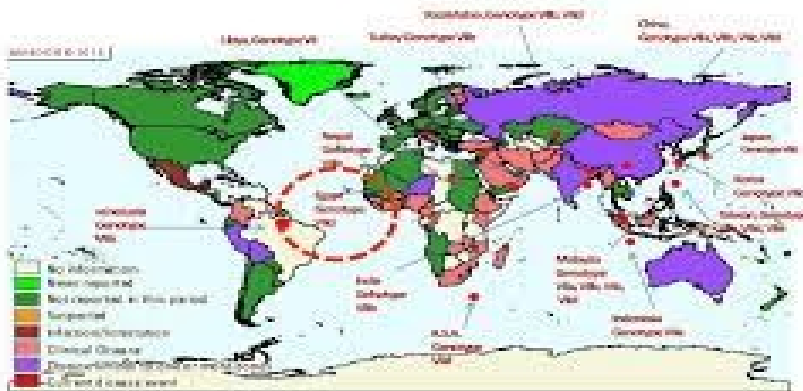
Geographic distribution



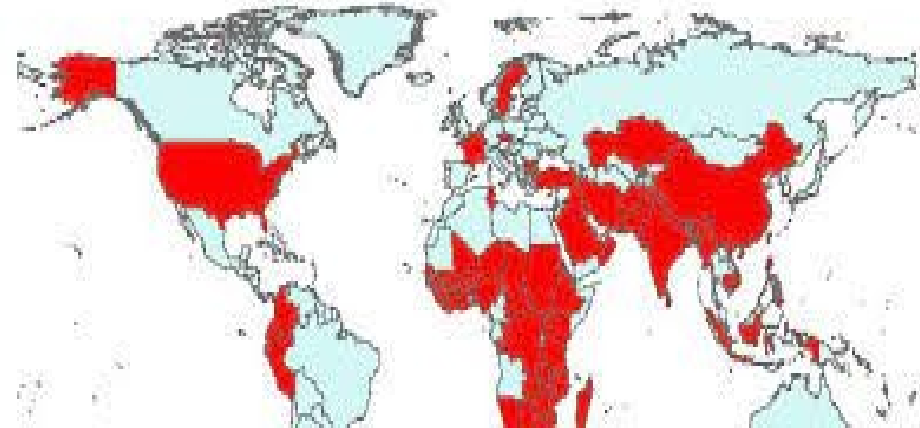
The global scenario of Newcastle disease virus outbreaks in different parts of the world.



Prevalence of Newcastle disease in 2015 World Animal Health Information Database (WAHID Interface)



Distribution of NDV Genotype VII



Poultry diseases-ND



Morbidity/Mortality

- Morbidity: up to 100%
- Mortality: 90%
- Varies greatly depending on
 - Virulence and strain
 - Avian species and susceptibility of host
 - Environmental conditions
 - Vaccination history
- Some species show few or no signs
 - Carrier state may exist



Poultry diseases-HPAI



Which animals get Newcastle disease?

- Both domestic and wild birds
- Chickens are very susceptible to the disease.
- Ducks, turkey, geese, as well as parrots, pigeons and wild cormorants can also get END.



Clinical Signs

- Drop in egg production
- Numerous deaths within 24 to 48 hours
- Deaths continue for 7 to 10 days
- Surviving birds may have neurological or reproductive damage



Clinical Signs

- Edema of head, especially around eyes
- Greenish, dark watery diarrhea
- Respiratory and neurological signs
- Signs vary with species and virulence



Poultry diseases-ND



How does Newcastle disease affect my animal?

- Newcastle disease in birds can vary from no signs of illness to sudden death.
- Affected birds may have coughing, sneezing, nasal discharge, depression, and diarrhea.
- Chicken flocks may have a sudden decrease in egg production or produce thin shelled eggs.



Laboratory Diagnosis

- Virus isolation
- RT-PCR
- Serology
 - No strain information
 - Cannot differentiate infected from vaccinated animals
 - May be used post-vaccination to confirm immune response



Poultry diseases-ND



Video/ More information

TR: <https://www.dailymotion.com/video/x6ga6sh>

https://www.youtube.com/watch?v=GUuiGHuiPUo&ab_channel=AIMAgriculture

https://www.youtube.com/watch?v=EFE7q-cASpA&ab_channel=FieldVet

https://www.youtube.com/watch?v=91o-eDt_dys&ab_channel=FieldVet

https://www.youtube.com/watch?v=W2mQ0SGbL1g&ab_channel=AIMAgriculture

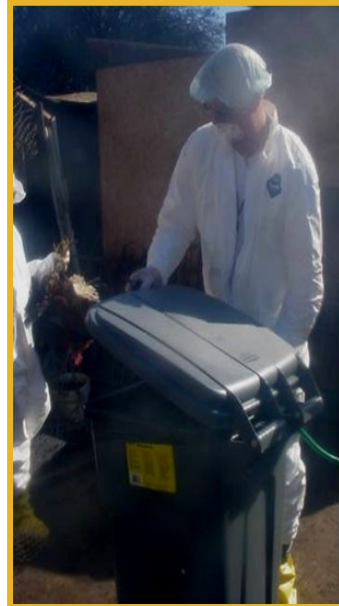


Poultry diseases-ND



Control and Eradication

- Disinfection of premises
- Delay re-introduction of new birds for 30 days
- Limit human traffic



Vaccination

- Vaccination routine
- Reduces clinical signs
- Does not prevent virus replication or shedding
- Not an alternative to good management, biosecurity, or good hygiene



Poultry diseases-ND



How can I protect myself from Newcastle disease?

- Wear protective clothing such as gloves, and safety glasses when working with birds or poultry.
- Wash your hands after contact with birds or poultry.
- Avoid touching your eyes until your hands have been washed.
- People working with the virus in laboratories or on vaccination crews should take extra precautions.





Project e-mail: foodsafetyprojectTCc@gmail.com

THANK YOU FOR YOUR ATTENTION



*Project funded by the European Union within the scope of the Aid Programme for the Turkish Cypriot community,
implemented by the NSF Euro Consultants Consortium*

