

FMD DISEASE RISK ASSESMENT AND PROGRESS ON RISK BASED CONTROL PROGRAM

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Open Session of the EuFMD - Cascais –Portugal 26-28 October 2016



CONCLUSION

- Main risk identified in Turkey is virus incursion, once it happens
 - Allow virus circulation in naive population and evolution of novel strains, due to some risk and gaps identified in Turkey. It is resulted maintenance of endemic setting.
- To response the situation, it has been developed a «Risk Based Control Program»
- By regional progressive disease control approach, control measures have been implemented
- Main goal of the program is to achieve OIE status of FMD free with vaccination by 2025
 - Based on risk assessment and socio-economical evaluation, and CBA eradication program has been initiated through West to East Anatolia by three regional level; West, Central and East/SE Anatolia
 - As a first step, Risk based Control program has been updated for West Anatolia and initiated control
 measures including stamping out and activities in order to eliminate/reduce identified risk and gaps
 - Progress of the program will be strictly monitored by specified monitoring system using all available indicators
 - The program has some challenges including regional implication. Turkey can capable to overcome using its own sources and effort, such as vaccine production with enough capacity/potency and capacity on developed diagnosis and molecular epidemiological tools ect.
 - However, to overcome challenges by regional interaction, it needs
 - Functional early detection system in the region
 - Implementing effective all-duty regional control program
 - Overall needs a strong political commitment on regional disease eradication



CIRCULATING STRAINS

- FMD is endemic in Anatolia region in Turkey
- Current Circulating virus strains:
 - Serotype O (O PanAsiall/Qom),
 - <u>A (Asia/GVII)*</u> and
 - (Asia1 has been not recorded since July 2015)
 - Latest sirculated one was Asia-1(Asia1/SINDH08)
- Thrace region has been free of FMD with vaccination since May 2010.



Number of FMD outbreaks occurred by years (2016 -till 8thOct)





Map Distribution of FMD Outbreaks Occurred in 2016 (till October)









_ Map Distribution for Outbreaks in between January-October2015





Early Response to new A outbreak wave: Vaccination vs no of Outbreak





Filogenetic Analysis2016 : O serotype



European Commission for the Control of Foot-and.Mouth Disease

A/Samsun/1100/2016.577 A/Corum/1137/2016.615 27 A/Amasva/307/2015.923 A/Kirikkale/336/2015.923 A/Kars/455/2016.327 A/Ardaban/1055/2016 538 A/Mus/1008/2016.500 A/Malatya/347/2016.288 A/Gaziantep/480/2016.327 A/Kavseri/239/2016.192 A/Isparta/246/2016.212 A/Eskisehir/333/2015.923 A/Ardahan/312/2016.269 A/Ankara/306/2016.269 A/Kutahya/317/2016.269 A/Manisa/912/2016.462 A/Kocaeli/234/2016.192 A/Van/198/2015.808 A/Ardahan/123/2016.058 L A/Van/203/2015.827 A/Kayseri/274/2015.923 A/Duzce/219/2015.865 A/Kutahya/331/2015.923 A/Kirsehir/279/2015.904 A/Bursa/271/2015.923 A/Yozgat/304/2015.923 A/Van/175/2015.712 A/Isparta/65/2016.038 A/Agri/679/2015.981 A/Ankara/300/2015.923 A/Corum/292/2015.923 A/Corum/243/2015.904 A/Eskisehir/276/2015.923 A/Kars/267/2015.904 A/Mus/719/2015.981 A/Ardahan/565/2015.962 A/Ardahan/43/2016.019 A/Ardahan/569/2015.962 A/Nigde/245/2015.904 A/Kars/229/2015.885 A/Nigde/231/2015.904 A/Kars/226/2015.885 A/Yalova/217/2015.865 A/Usak/327/2015.923 A/Izmir/365/2016.288 A/Agri/252/2015.904 A/Amasya/209/2015.865 A/Elazig/248/2015.904 A/Karabuk/323/2015.923 A/Igdir/48/2016.019 A/Izmir/214/2016.173 A/Cankiri/312/2015.923 A/Yozgat/305/2015.923 A/Kirsehir/310/2015.923 A/Cankiri/277/2015.923 A/Bursa/214/2015.865 A/Bitlis/205/2015.827 A/Balikesir/335/2015.923 A/Mus/657/2015.981 A/Afvon/699/2015.981 A/Erzurum/820/2016.423 A/Antalya/242/2016.212 A/Konya/294/2015.923 A/Sivas/381/2016.308 A/Agri/704/2015.981 A/SAU/1/2015.692 A/BAN GA Sa197 2013/2014.000 A/ALB/1/1996 A/IND/40/2000.000 A/NEP/21/84 A22/Mahmatli/1964.981 A/Nevsehir/402/2006.173 - A/IRN/1/2005.269 66_ A/Kocaeli/180/2015.788 99 A/Sivas/208/2015.546 A/Nigde/200/2015.827 43 A/Ankara/195/2015.827 A/Karabuk/223/2015.885 A/Malatya/242/2015.904

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Challenges for Disease Control

REGIONAL

- Virus Incursion into the country
 - profitable animal price amounts of causes illegal movements across the borders
 - Insufficient early detection of upcoming strains
 - Lack of all-duty regional control program

NATIONAL

- Booster vaccination of young animals in Central and East Anatolia
 - Single vaccination of calves having maternally-derived antibodies might be unfavorable for herd immunity.
- Dense cattle population providing raw material (>1 year) for fattening farms in the other region: causes irregular animal movement
- High elevation, hard and long winter conditions in East Anatolia
- Common grazing and highland (yayla) for summer grazing
- Farmer awareness; Biosecurity, outbreak management



CONTROL PROGRAM

• A *Risk Based Control Program* has been developed and applied since 2014

GOAL OF THE STRATEGY

- To contribute to the development of the livestock sector by achieving OIE status of FMD free with vaccination by 2025
 - By regional progressive disease control approach, the strategy is consist of 30 component objectives

ACTIVITIES AND TACTICS

- To reduce/eliminate risk and gaps for each identified risk and gaps:
 - Initiated implementing of control activities



MAP FOR REGIONAL PROGRESSIVE CONTROL PROGRAM





RISK BASED CONTROL PROGRAM FOR WEST ANATOLIA

GOAL: Reach PCP Stage4 in 2019; and OIE FMD Free Status with vaccination in 2021

MAIN COMPONENTS OF CONTROL PROGRAM:

- Continuing risk based vaccination
 - Including booster vaccination for primo vaccinators
- Risk based surveillance program
- Monitoring movement: Check point
- Regulation of animal movement form the other regions compliance with OIE Terrestrial Code: Quar./NSP testing ect.
- □ Effective outbreak management/Biosecurity

□ Stamping out for DC

- Enhance awareness for stakeholders
- □ Increasing technical capacity
- □ Effective monitoring and improvement of infrastructure





CURRENT FMD CONTROL POLICY CONDUCTED IN TURKEY

• Vaccination

Vaccination implemented based on risk analysis:

- <u>Preventive campaign vaccination :</u>In Anatolia; twice a year for LR;_In Thrace: : Twice a year for LR/once for SR
 - Early Spring: population assured immun before releasing grazing time
 - Late Summer: population assured immun before Kurban festival
- <u>Ring Vaccination to response outbreak</u> in Surveillance zone of outbreak
- Targeting vaccination for identified "Hotspot»
- Small ruminant veccination where risk identified
- Booster vaccination in West of country

Şap Institute produces FMD vaccine sufficient capacity covered national population **with >6PD50 potency** vaccine used

- Diagnosis and Genetic and Antigenic Characterization of Isolates
- Epidemiological investigation
 - Active and passive surveillance
 - Outbreak investigation and case study
 - Sero-surveillance; NSP Prevalence estimation in Anatolia/Risk based surveillance Program for early detection in Thrace
- Routine control measures in case of disease outbreak (biosecurity, restriction, quarantine, sampling)
- Control of animal movements and markets
- Training field vets and awareness activities for stakeholders
- [°]Stamping out in West of Anatolia



MONITORING CONTROL PROGRAM_INDICATORS

- Reconstructed TURVET (Registration and Information System) with more functional and features :
 - Animal Registration System
 - LR/SR registered into the system with ear-tag; initiated replacement of electronic ear-tag
 - Animal movement managed and monitored by the system
 - Regular movement report by province
 - Veterinary Information System (VIS)
 - Outbreak Management
 - Entering outbreak data all notifiable disease
 - Vaccination data
 - Sample Management System
- Establishment Epidemiology and Monitoring Unit
 - Central level at GDFC; at 9 Regional Vet Institute including Şap Institute and Provincial level
- Regular Diagnosis Activities
 - Clinical diagnosis (Incidence, attack and mortality rate) data; VIS
 - Serotyping data: Şap Institute and VIS at GDFC
 - Genotyping data: Şap Institute
 - Antigenic Characterization (r Value) data: Şap Institute
 - Clinical surveillance
- Sero-surveillance Activities
 - NSP Suro-surveillance: Assessment disease dynamics and identifying risk factors
 - Post vaccination sero-surveillance: Vaccination performance and antibody level



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Thank you very much for your attention!

Acknowledges

- Fuat Ozyörük; Unal Parlak
- The Şap Institute
- General Directorate for Food and Control (GDFC)





