

# FMD DISEASE RISK ASSESSMENT AND PROGRESS ON RISK BASED CONTROL PROGRAM

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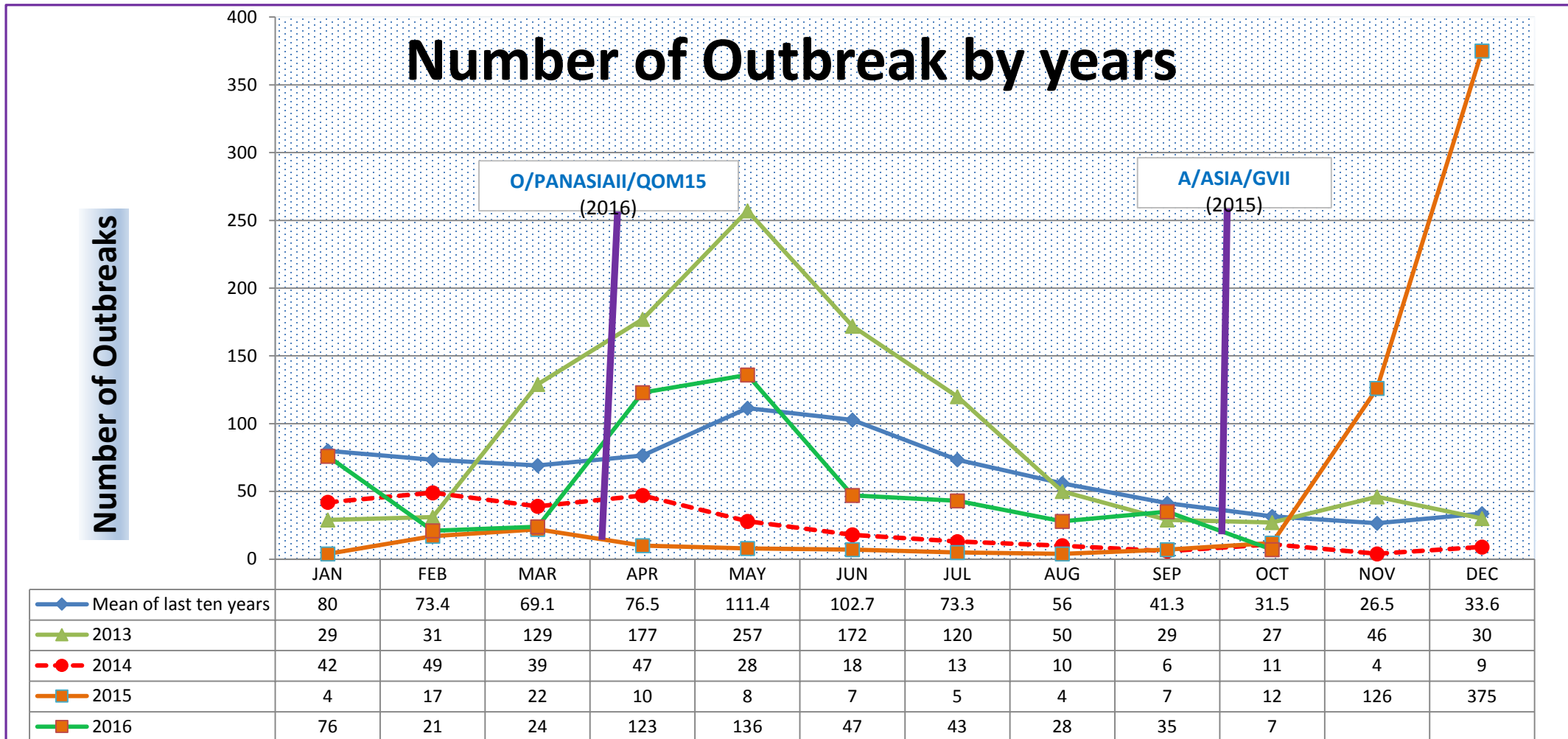
# CONCLUSION

- 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

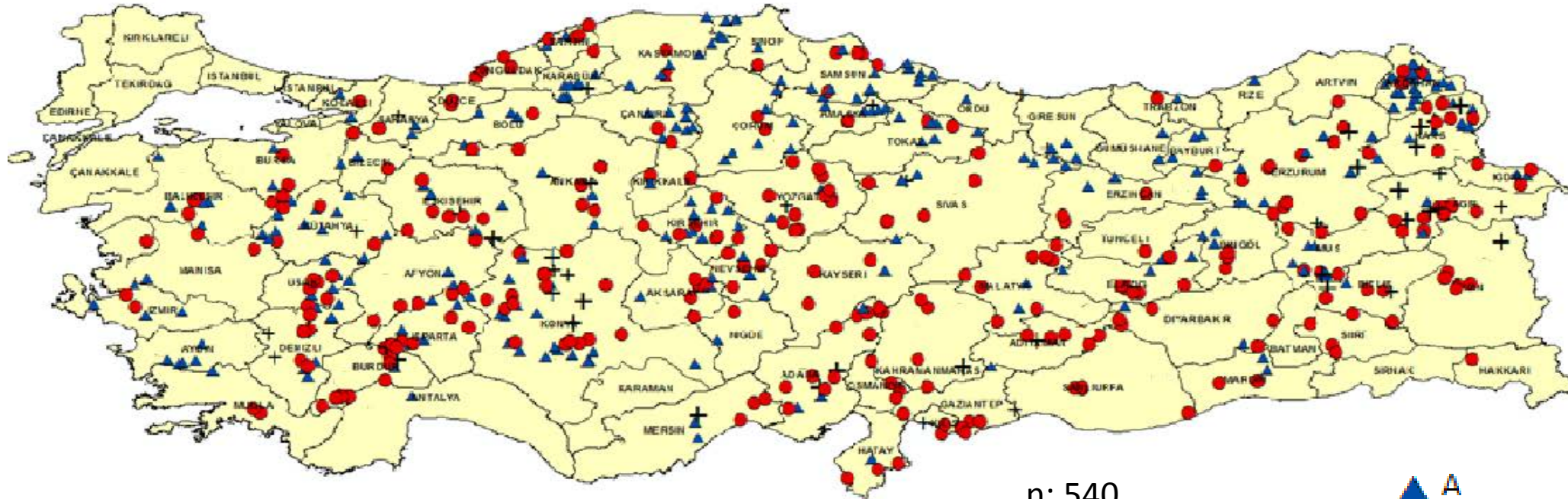
## CIRCULATING STRAINS

- FMD is endemic in Anatolia region in Turkey
- Current Circulating virus strains:
  - Serotype O (O PanAsiaII/Qom),
  - A (Asia/GVII)\* and
  - (Asia1 has been not recorded since July 2015)
    - Latest circulated 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 8th Oct)



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



n: 540

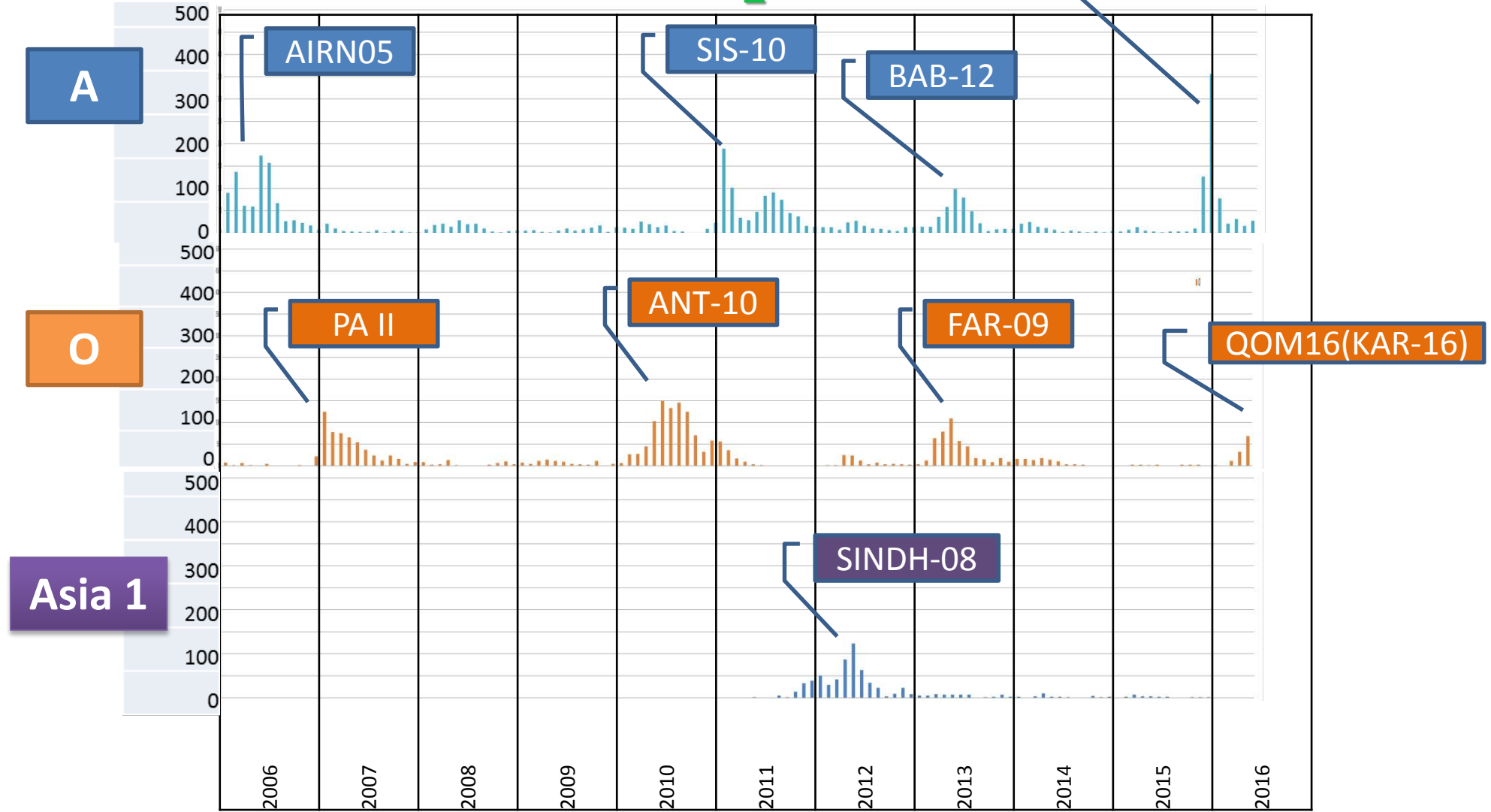
Serotype O: 261

Serotype A: 270

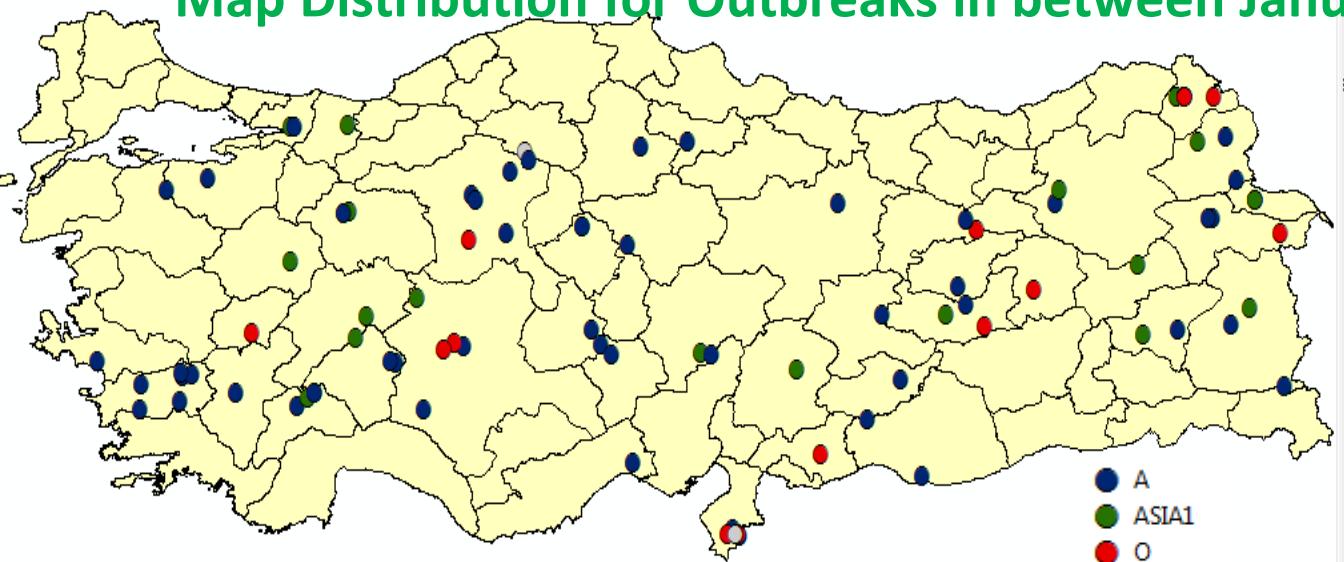
PCR(+): 9

▲ A  
● O  
+ POZİTİF

## TREND DISEASE -EPIDEMIC CURVES\_LAST DECADES



## Map Distribution for Outbreaks in between January-October 2015

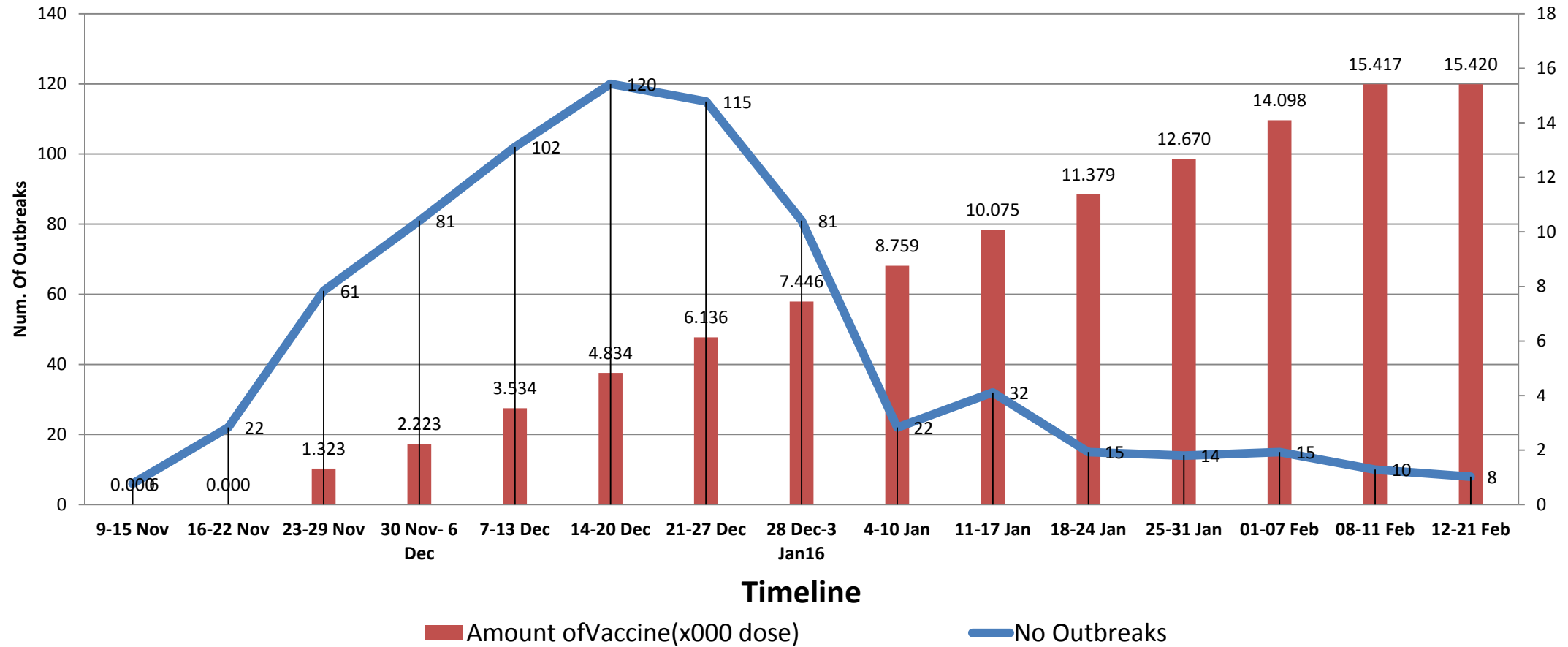


## Map Distribution for Outbreaks due to A/ AsiaGVII

Nov ● / Dec ● 2015

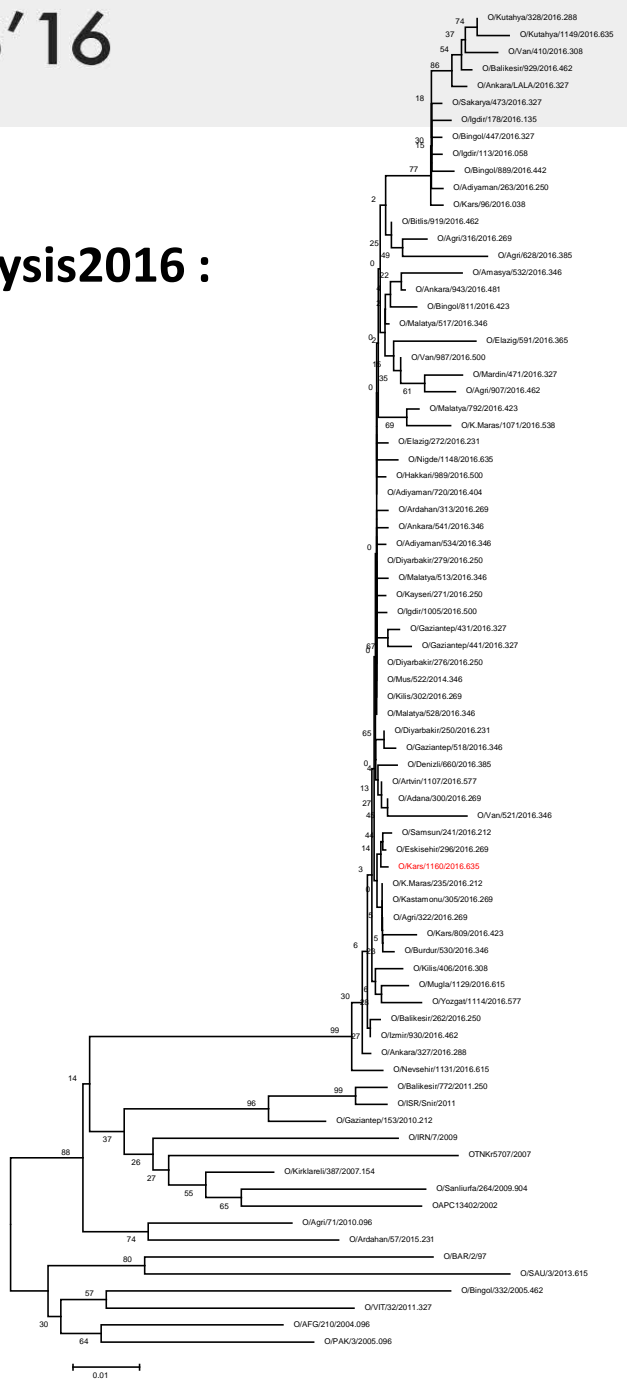


# Early Response to new A outbreak wave: Vaccination vs no of Outbreak

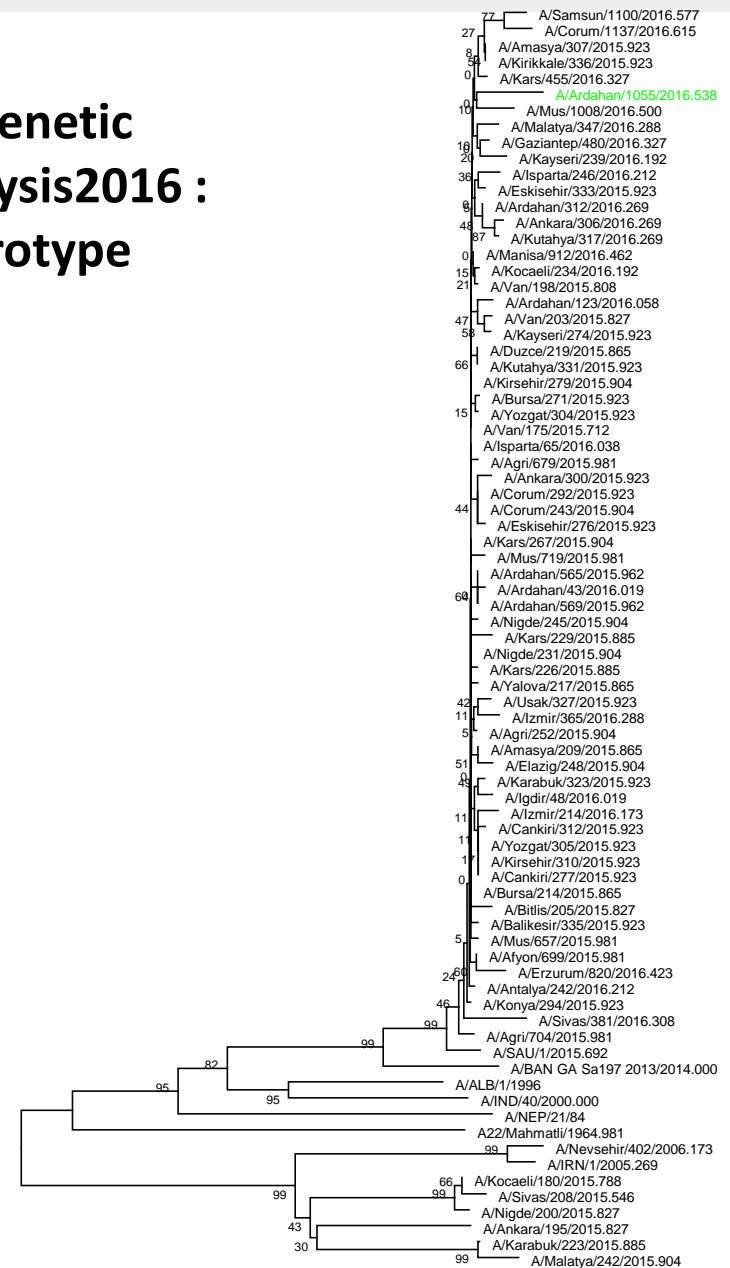




## Filogenetic Analysis2016 : O serotype



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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

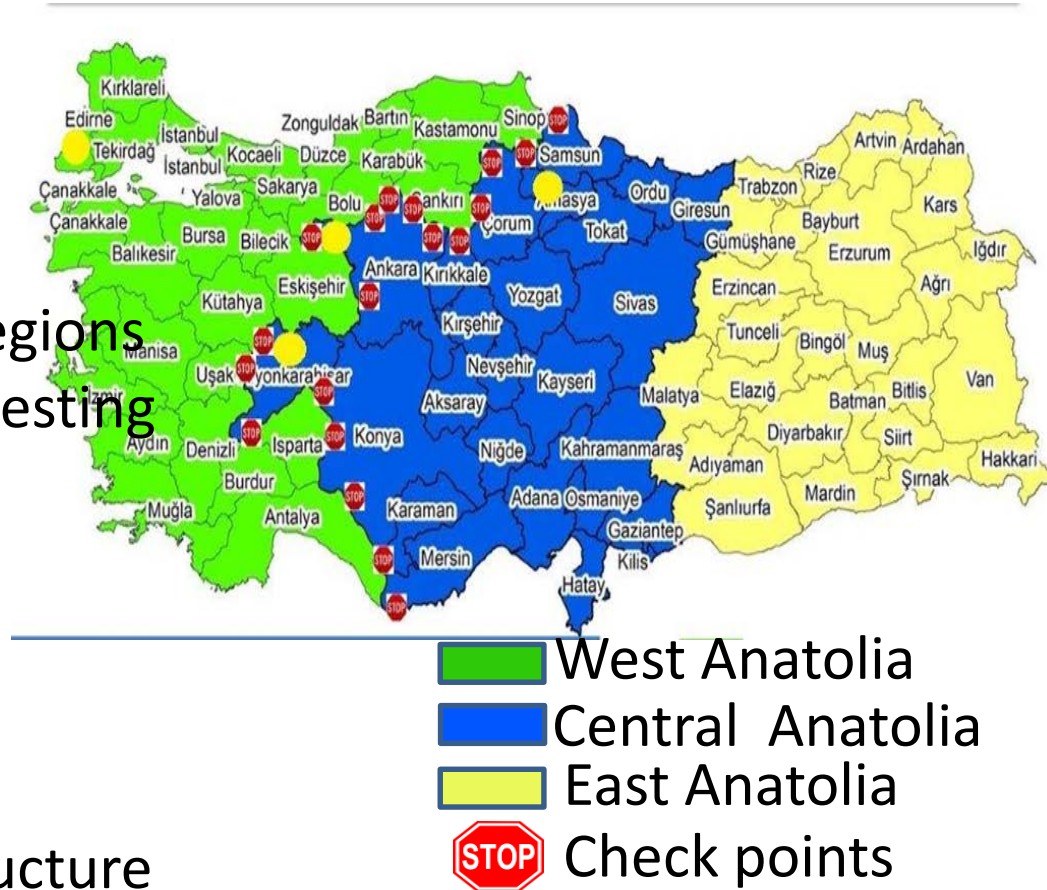


# RISK BASED CONTROL PROGRAM FOR WEST ANATOLIA

❑ **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 from 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:

- Preventive campaign vaccination :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
- Ring Vaccination to response outbreak 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

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