



# **Country Report on FMD State of Kuwait**

**FMD PCP – Regional Map  
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# Epidemiological Situation of FMD in the State of Kuwait

## الوضع الوبائي لمرض الحمى القلاعية في دولة الكويت

Foot and Mouth Disease is an endemic disease in Kuwait. Asia, Africa, the Middle East and GCC countries, and some countries in South America are still being considered as endemic for FMD.

الحمى القلاعية مرض متوطن بالكويت وأسيا وأفريقيا والشرق الأوسط ودول مجلس التعاون الخليجي وبعض دول أمريكا الجنوبية

## Occurrence of FMD 2010 to 2012:

- Clinical cases of FMD were detected in cattle by passive clinical surveillance program.
- Rapid response to contain the outbreak in a herd with all possible control measures were adopted during the outbreaks.
- **2010**, no clinical outbreaks
- **2011**, 3 outbreaks
- **In 2012**, 2 outbreaks and representative clinical samples had been submitted in the national veterinary laboratory, Kuwait and OIE reference laboratory, Pirbright, UK.

## Diagnosis:

- . Clinical specimens of tongue epithelium and blood samples were submitted in the national veterinary laboratory.
- . Diagnostic tests namely antibody detection ELISA and competitive ELISA(c ELISA) were used in Kuwait to diagnose the clinical FMD cases.
- . Serotype “O” has been identified and genetic analysis and vaccine matching was done in the OIE reference laboratory, Pirbright, UK.

## FMD serotypes and its last occurrence:

Serotypes **O** (2012),

**A** (2009),

**Asia 1** (1981),

**SAT 1** (1970)

**SAT2** (2000).

Serotype ‘**O**’ its topo type **ME-SA** with its lineage of Pan Asia 2 ANT 10 has been identified.

For **Serotype ‘A’** its topo type **ASIA** with lineage Iran 05 BAR -8 has been identified in **2009**.

## Vaccine strains: العترات المستخدمة في التحصين

- Currently used FMD vaccine (**AFTOVAXPUR**) contains six strains namely **O1 Manisa, O 3039, A Iran -05, A Saudi 95, Asia 1 and SAT 2.**
- The vaccine is being used in Kuwait is giving adequate protection for the currently circulating FMD virus strains in Kuwait as well as in the GCC countries.
- **Vaccine matching** was done in the OIE reference laboratory, Pirbright, UK for field isolate in 2011 (sero type O, ME SA, lineage Pan Asia 2 ANT 10), the vaccine strain O 3039 is being used in Kuwait gives adequate protection as it is closely related to the field isolate.



## . **Control measures during outbreaks:** إجراءات السيطرة على الوباء عند حدوثه

Early detection of clinically suspicious cases and adoption of immediate control measures namely isolation of affected animals in a herd, collection of clinical specimens, treatment, movement restrictions of animals, personals, and vehicles and emergency vaccine for healthy animals, disposal of carcass and disinfection procedures.

## . **Routine preventive vaccine:** التطعيم الوقائي

Preventive vaccination for cattle at three times in year at every 4 months interval;

## . **Surveillance activities:** وسائل التقصي والتتبع للمرض

Implementing control measures according to the FMD-PCP (OIE/FAO)

## . **Import regulations:** ضوابط الإستيراد

Importation of live ruminants in accordance with the OIE Terrestrial Code, risk analysis is being conducted for the presence of serotypes of the exporting country and protection conferred by vaccine used in Kuwait.

Importation of live ruminants will not be permitted from the countries where FMD new serotype as well as its topo type and lineage.

## . **Veterinary regulations:** الإجراءات البيطرية

FMD is notifiable disease in Kuwait in accordance with the law No 10 of 1964.

Preventive vaccination and emergency vaccination during clinical cases outbreaks are being adopted as one of the control measures in Kuwait.

التحصين الوقائي والطارئ عند حدوث الوباء من وسائل السيطرة على المرض بالكويت

In Kuwait, dairy cattle for breeding imported from FMD free countries were vaccinated in the quarantine station.

تحصن الأبقار الحلاب في المحاجر ضد مرض الحمى القلاعية بعد إستيرادها من دول خالية من المرض في الكويت

Sheep and goats are being imported from horn of the African countries, Australia, the Middle East and GCC countries.

تستورد الأغنام والماعز من القرن الأفريقي وأستراليا والشرق الأوسط ومجلس التعاون



**PCP**

**Progressive Control Program**

# Stage 1.

Comprehensive plan to gain  
insights to epidemiology & Socio  
economic impact of FMD

# Outcome 1:

All husbandry systems, the livestock marketing network and associated socio economics drivers are well described for FMD susceptible species

## Outcome 2:

The distribution of FMD in the country is well described and understood and a working hypothesis of how FMD circulate has been developed

## **Outcome 3 :**

**Socio economic impact of FMD  
on different stakeholders have  
been estimated**

## **Out come 4:**

**The most common circulating strains of FMDV have been identified**



## Out come 5:

There has been progress towards developing an enabling environment for control activities ( continues in all 3 PCP stages).

# Outcome 6:

The country demonstrate  
transparency and commitment to  
participating in regional FMD  
control

## **Outcome 7:**

**Important risk hot spots for FMD  
transmission are identified**

## **Outcome 8:**

**A strategic FMD control plan that has aim of reducing the impact of FMD in at least one zone or husbandry sector is developed:  
(This outcome is critical, successful completion of stage 1)**

# Stage 2

**Risk based FMD control strategy to decrease the impact of FMD at least one livestock sector or zone.**

**Outcome 1:** Ongoing monitoring of circulating strains and FMD risk in different husbandry systems

**Outcome 2:** risk based control measures are implemented for the sector(s) or zone(s) targeted based on the FMD strategic control plan in stage 1

**Outcome 3:** It is clearly established that the impact of FMD is being reduced by the control measures, at least some livestock sectors/zone

**Outcome 4:** There is further development of an enabling environment for control measures: This outcome continues in all PCP stages.

**Outcome 5:** A revised, more aggressive control strategy that has the aim of eliminating FMD from at least a zone of the country has been developed

## Stage 3

**Able to provide evidence that the control measures are effectively & progressively reducing the FMD incidence. At end, FMD virus circulation is eliminated in at least 1 zone**

**Outcome 1:** Ongoing monitoring of circulating strains and risk in different husbandry systems. Continue the work as mentioned in stage 2 outcome 1.

**Out come 2:** FMD control plan developed at the end of PCP stage 2 is implemented, resulting in rapid detection of, and response to, all FMD outbreaks in at least in 1 zone:



**Out come 3:** incidence of clinical FMD progressively eliminated from domestic animals, at least one zone:

NSP and clinical surveillance indicates FMD is decreased for at least 3 years. Active and passive surveillance to produce the evidence that FMD incidence is decreased for at least 3 years

**Outcome 4:** There is further development of an enabling environment for control measures: continued as mentioned in the Stage 2, outcome 4.

**Outcome 5:** Body of evidence that FMD is not circulating endemically in domestic animals (in country or zone)

**Surveillance and Control  
Measures will be  
Implemented in Kuwait to  
Comply FMD - PCP**

- Incidence of FMD cases by serological survey for NSP in the different region and different husbandry production type, and clinical surveillance
- Economic losses due to FMD for stakeholders rearing cattle, sheep and goats
- Identifying circulating FMD strains, in the different geographical areas and husbandry type at regular interval. Characterization, identify source of infection and transmission from different husbandry system or different regions within the country.
- For FMD surveillance establishing specific unit with roles and responsibilities of the specific unit in the Vet Authority, legislation for future control program and Centralized computer information system to collect and store field data for analysis and for decision making
- A strategic plan for reducing impact of FMD, FMD incidence decrease in a certain area or sector over 3 years

- Enhancing bio security, vaccination coverage, movements control and improve awareness & knowledge about FMD.
- NSP sero survey, clinical surveillance provide sufficient evidence that FMD circulation is no longer in domestic animals. Outbreaks may still occur as sporadic, most likely source was a cross border incursion or contact with infected wildlife

Thank you

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