INDIA
Foot and Mouth Disease Control Initiatives

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FMD Control

- *Why to Control of FMD?*
- **Major Transboundary Disease**
- Economic Consequences is the primary driver of FMD control globally
- Ranked as No.1 Priority for Control
- Benefits are immense to the developing world with large resources in Livestock sector
India: Value of Output

• Agriculture & allied Sector 2009-10
  – Rs.13,76,561 Crores = USD 286.8 Billion
  – Livestock Sector : Rs.3,40,473 Crores (USD 85 Billion)
  – Milk alone Rs.2,28,809 Crores (USD 47.7 Billion)
  – Value of output from Paddy, Wheat & Sugar Rs.2,76,299 Crores = USD 57.56 Billion
  – Livestock Sector contributes 29.7% of the total from Agriculture in India

(DADF Annual Report 2010-11)
Value of Output

• Milk Production
  – 1990-91  53.9 Million tons
  – 2006-07  100.9 Million tons
  – 2010-11  115.0 million tons

• India is the largest producer of milk in the world
AH practices and institutions

- Livestock is kept as small holdings by farmers for sustenance
- Veterinary services are primarily in the govt sector and State-funded through
- 8,732 Veterinary Hospitals/Polyclinics and 18,830 Veterinary Dispensaries/25195 others including mobile dispensaries.
- More than 45,000 veterinarians
- Dairy sector well developed through the co-operatives White revolution
Foot and Mouth Disease in India
Present Status

• **Susceptible population**

<table>
<thead>
<tr>
<th>Animal</th>
<th>Population</th>
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<tbody>
<tr>
<td>Cattle</td>
<td>199 millions</td>
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<tr>
<td>Buffaloes</td>
<td>105 millions</td>
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<tr>
<td>Sheep</td>
<td>72 millions</td>
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<tr>
<td>Goats</td>
<td>140 millions</td>
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<tr>
<td>Pigs</td>
<td>11 millions</td>
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<tr>
<td><strong>Total Domestic animals</strong></td>
<td><strong>527 millions</strong></td>
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<tr>
<td>Plus all wild ungulates</td>
<td><strong>(DADF Annual report 2010-11)</strong></td>
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</table>
Foot and Mouth Disease in India
Present Status

- *Endemic*
- **Serotypes O, A and Asia1 are prevalent**
- **Direct annual losses**
  > Rs.20,000 Crores (4.45 Billion USD)
- **Indirect losses (work capacity, growth etc.) much more**
- **Embargo on trade in animals and animal products**
FMD Control in India

• Earlier programme in 1980s in selected districts in Southern India could not be sustained

• Though vaccination was undertaken during the last nearly 25 years it was not focused till the beginning of 10\textsuperscript{th} Plan (2002-2007)

• Clear policy now to control the disease progressively by the year 2020 to attain well defined zones of \textbf{Control with Vaccination Status}
FMD Control in India-Present Status

- Two Programs presently operational in the country
  - 1. FMD CP – 100% Govt of India funded
  - 2. ASCAD Programme of GOI & State Govts Implemented in Non FMD states
    - About 80-85 million animals covered
    - Some funds from RKVY also used by states
    - Lack of uniformity in implementation and poor coverage
FMDCP – DADF, GOI

- Started in 10th Plan - Implemented in 54 Districts all Cattle & Buffaloes in the target districts - 30 Million animals plus all pigs
- Already 12 rounds of vaccination completed
- Expanded with addition of 167 districts 11th plan. Now operational in 221 Districts target population- 120.85 Million Cattle, Buffaloes & Pigs
- 38.36% of the C,B& P under the FMDCP now
- Funds till now: Rs.400 Crores (~ USD 83 Million)
- Further expansion to cover all 640 districts /316 Million animals during 12th plan.
- Vaccination schedule followed – twice a year
FMD Control Programme 10th Plan
Roadmap for FMD control in India
Expansion of the FMDCP

• The experience of the FMDCP has given valuable results so far
• Implementation as per FAO-PCP
• It is expected that the programme will be expanded further to cover the entire country during the 12th Plan
• Repeated mass vaccination of all Cattle, Buffalos & Pigs – 316 Million animals
• Establishment of one or more clearly defined Zones to attain Freedom with vaccination Status by 2020
FMD Vaccine Production

- Four large scale manufacturers
- Present capacity about 350 million trivalent doses/year
- The demand for vaccine is increasing expected to go up to about 625 million doses/year by 2015
- Regional requirement approx 800 million doses/year
- Capacity expansion in vaccine production required to meet the demand
FMD Vaccine quality Control

- About 300 Million Trivalent Doses / year
- At present done by the manufacturers as per the DCGI regulations
- National Institute of Animal Health-DADF, GOI central agency in Govt sector is mandated to undertake the testing (work initiated from this year)
- Same model as in South America - PANAFTOSA for success of the control programme
## FMDCP- SWOT Analysis

<table>
<thead>
<tr>
<th>Strength</th>
<th>Weaknesses</th>
</tr>
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<tbody>
<tr>
<td>✓ Adequate funds from GOI</td>
<td></td>
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<tr>
<td>✓ Infrastructure &amp; manpower availability</td>
<td></td>
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<tr>
<td>✓ Vaccine production facilities</td>
<td></td>
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<tr>
<td>✓ Diagnostics self sufficient</td>
<td></td>
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<tr>
<td>✓ Support to SAARC region</td>
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<tr>
<td>✓ Animal movement</td>
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<tr>
<td>✓ Disease Reporting</td>
<td></td>
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<tr>
<td>✓ Vaccination coverage</td>
<td></td>
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<tr>
<td>✓ Vaccine availability &amp; QC</td>
<td></td>
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<tr>
<td>✓ Extension activity</td>
<td></td>
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<tr>
<td>✓ Stakeholders involvement</td>
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<table>
<thead>
<tr>
<th>Opportunities</th>
<th>Threats</th>
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<tbody>
<tr>
<td>✓ Increased production</td>
<td></td>
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<tr>
<td>✓ Food security &amp; safety</td>
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<tr>
<td>✓ Market accessibility</td>
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<tr>
<td>✓ Poverty alleviation</td>
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<tr>
<td>✓ Incursions in CP areas</td>
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<tr>
<td>✓ Illegal trade</td>
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<tr>
<td>✓ Vaccine safety</td>
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</tr>
<tr>
<td>✓ Vaccination coverage</td>
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Regional Initiative

• Control of FMD is best done on a regional basis as is followed in South America

• The success in South America is inspiration for the developing countries in South Asia

• South Asia is home to large population of Cattle & Buffaloes 385 Million

• FMD control in South Asia will benefit the livestock farmers in the region as a whole
Thank you