



OS18

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european commission for the
control of foot-and-mouth disease



Exploring private and public sector rights and responsibilities in prevention and control of FMD:

the case of right to access vaccines by
livestock keepers

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Outline

- Externalities
- Endemic vs exotic settings
- Rationale for government interventions
- Rationale for private sector
- Barriers to access FMD vaccines
- Continuous dialogue
- Concluding remarks



Externalities

- A consequence of a commercial activity which affects other parties without this being reflected in market prices
- Contagious infectious diseases are examples of negative externalities
- At larger scales and for severe examples (e.g. national level) market cannot address them → market failure (net social welfare loss)
- Coordination is often required by a centralised institute (e.g. government, association, tribe, etc.)



Endemic vs exotic settings

Endemic

- Frequent outbreaks
- Farm-level loss widespread (often imposed externality)
- Wider domestic economic impact (supply/demand, price)
- No trade implications
- Impact on animal welfare

Exotic

- Outbreaks are rare
- Often limited to one or more geographical regions but large consequential losses
- Wider economic impacts
- Trade ban
- Impact on animal welfare



Free market economy

An economy where the government imposes few or no restrictions and regulations on buyers and sellers

- Western democracies, governments that are elected by citizens pass regulations.
- In autocratic governments, often non-elected governments impose major market decisions.



Tackling externalities

- Pigouvian tax (Pigou, 1932)
 - Tax to the agent causing
 - Tax equal to the difference of the private and social costs
 - Does not induce better biosecurity but lowers density
 - Can be very costly in terms of loss output
- Coasean negotiation (Coase, 1960)
 - Externality arises from interaction of two or more agents
 - The proximity of herds causes the externality
 - In absence of transaction costs, a unique efficient solution can be achieved by negotiation
 - Less applicable when many agents are involved



Role of gov. (intervention rationale)

- Protect human health against zoonotic diseases
- Protect and promote animal health & welfare; e.g.:
 - contingency planning, risk based strategic plans, risk based surveillance and control, emergency preparedness, etc.
- Protect the interests of producers, the wider economy, environment and society
- Comply with international trade rules and agreements: e.g. WTO, OIE, EU, etc.



Rights: regulatory instruments

Sermons, carrots & sticks

- **Sermons:** voluntary advice on biosecurity little compulsion or liability defined
- **Carrots:** range of incentives to maintain biosecurity, disease status, rapid reporting and implementing control measures
- **Sticks:** Fines, sanctions, obligations
- Also: private-public partnerships, insurance, cost and responsibility sharing.



Motives of private sector

- Improve technical efficiency
- Improve economic efficiency (avoiding losses)
- Accessing better markets & prices
- Gain reputation and social status
- Satisfy other goals and motives



Private sector's issues

- Require resources to invest in biosecurity measures
- Poor health management by neighbours reduces the effectiveness of biosecurity by any farmer
- If the private returns to investment in biosecurity are smaller than social return, farmers invest less than social optimum and the disease is not controlled
- Require underpinning policies & partnership with the public sector



Barriers of access to FMD vaccine

Assuming an endemic setting and a lower degree of free market economy:

- FMD as a notifiable disease is considered as a global public good
 - The badge of honour
 - Financing vet services
 - Diagnosis problem (early vaccines)
 - Licensing & marketing
 - Lack of capacity for policy reforms to encourage market based solutions



Continuous dialogue/training

- Efficacy & relevance of serotypes & strains
- Impacts on differentiation
- Risk of outbreaks because of misuse
- Financing mechanisms
- Vaccine as one of the critical control policy tools
- Coordination at national and regional levels
- Eradication programme



Once vaccines accessible

- Expected up-take/demand (behaviour; risk profile)
- Price, extra costs and practicalities
- Impact at sector and national levels
- Gainers (and losers)
- Animal welfare
- Household's economy
- Household's food-security



Concluding remarks

- Best solution is reducing the externality at the lowest social cost
- Marginal cost of investing in biosecurity measures must be lower than marginal benefit
- Taxing producers are costly; subsidising biosecurity (vaccines?) combined with stronger control of the concentration points and borders is more effective



Concluding remarks

- Access to vaccine does not guarantee full control or eradication but
- In endemic settings protects individual farmers from private losses as a result of externalities imposed by neighbouring farms
- Particularly in endemic settings and less free market economies, effective public-private partnerships is desperately needed
- This will hopefully satisfy the right to access effective vaccines by private sector



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Thank you!

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