

Participatory Epidemiology Methods for Foot and Mouth Disease Surveillance

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Outline

- Introduction to PE
- Applications to FMD
 - Participatory disease surveillance
 - Improving program efficacy
 - Participatory impact assessment
- Conclusion



Participatory Epidemiology

The use of participatory rural appraisal techniques to collect epidemiological knowledge and intelligence



Participation

- The empowerment of people to find solutions to their own development challenges
- Both an attitude and philosophy
 - Learning
 - Discovery
 - Flexibility
- Ownership



Participatory Rural Appraisal (PRA)

- Qualitative intelligence gathering process
- Key informants
- Problem solving
 - Multiple methods
 - Multiple perspectives
 - Triangulation
- Best-bet scenarios



Existing Veterinary Knowledge

- Traditional terms and case definitions
- Clinical presentation
- Pathology
- Vectors
- Reservoirs
- Epidemiologic features



Photo: T. Leyland

Applications

- Basic Research
 - Chronic Effects of FMD
- Active Surveillance
 - Participatory Disease Surveillance (PDS)
- Holistic Needs Assessment
 - Stakeholders, livelihoods and risk
- Impact Assessment
 - Participatory Impact Assessment (PIA)
 - Qualitative and Quantitative
- Institutional change

PENAPH

Participatory Epidemiology Network for Animal and Public Health

- Seven Core Partners
- Building Surveillance Capacity
- Good Practice Guidelines
- Certification of Training
- Research, Policy and Advocacy
- Pro-Poor and One Health Focus
- Knowledge Exchange



Surveillance

- Information for action
- Decision support
- Suite of complimentary activities that act as checks and balances



Participatory Disease Surveillance PDS

- Active surveillance done by professionals
- Risk-targeted
- High detection rate
 - Information networks
 - Extended time frame
- Sensitive and Specific
 - Validation processes
 - Laboratory support
- Timely



Designing PDS for FMD in the Context of Progressive Control

- Clinical case definition
- Differential Dx
- Epidemiological status
- Level of confirmation
- Action plan
 - Response to increased disease detection levels



Diagnosis

Clinical Case Definition

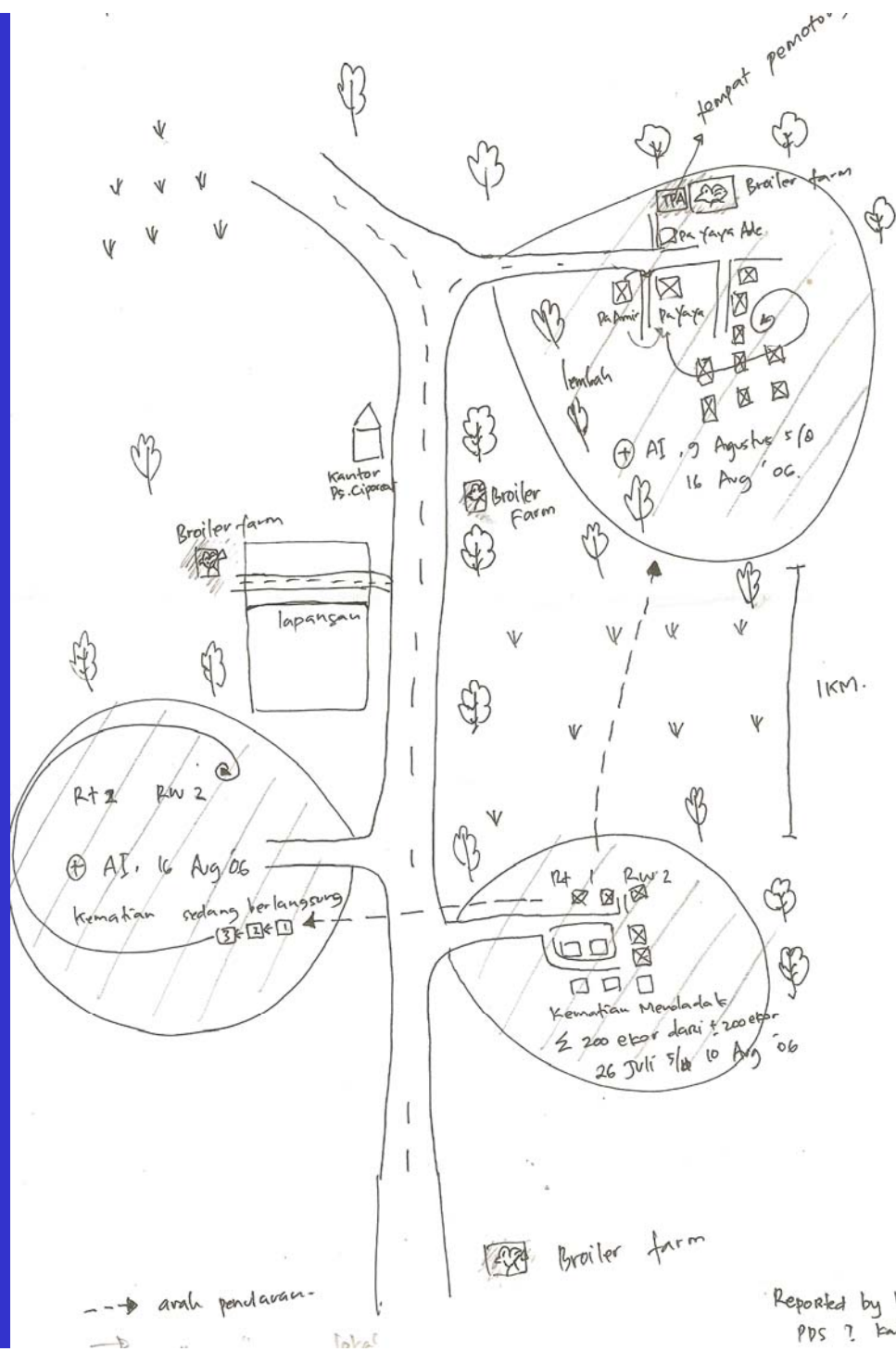


Flock of Bangkok fighting chickens, presentation consistent with clinical case definition, Lampung Province September 2006.

Anigen Test



Positive Anigen test, same flock.



Reported by Winiu
 PDS ? Kab 50g

Improving FMD Control Efficacy

- Are you making progress?
- Identify drivers at the community level
 - Entry points - needs
 - Constraints - blocks
 - Incentives
- Critical control points in the context of social and economic realities
- Ownership

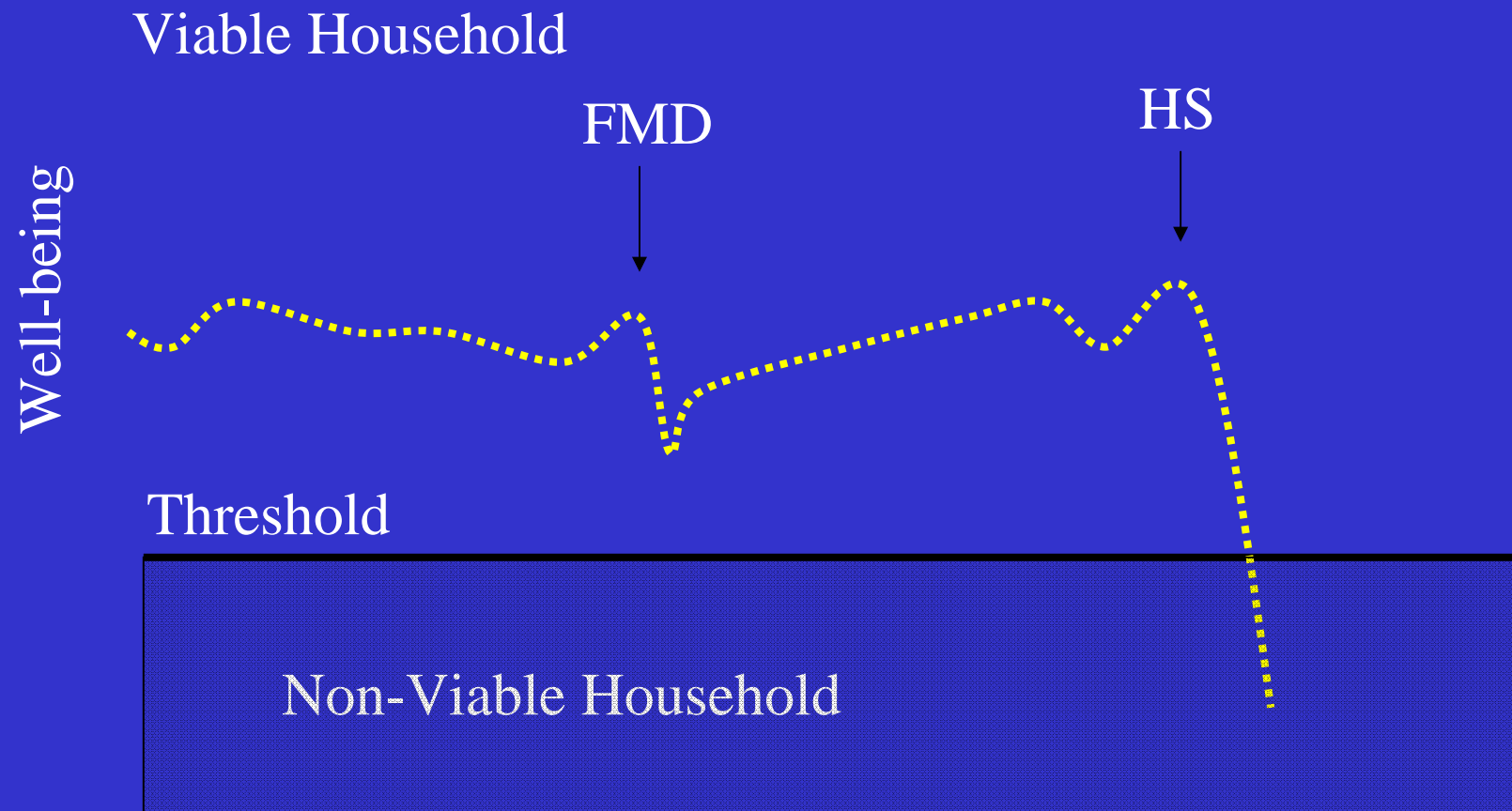


Participatory Impact Assessment

- Assessing livelihoods impact
 - More than just cost benefit
 - Livelihoods, risk and vulnerability
- Assessing epidemiologic impact
 - Combining PE and quantitative epidemiology
 - Random samples and longitudinal designs
 - Changes in indicators of incidence

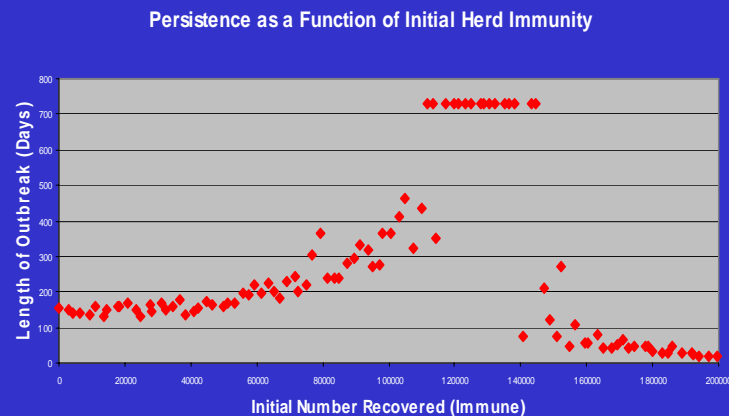


Hemorrhagic Septicaemia (HS) vs. FMD and Household Viability



Appropriate Combinations of Complimentary Techniques

- Participatory epidemiology
- Quantitative epidemiology
- Laboratory diagnostics



Summary

- More accurate epidemiological targeting
- Better understanding of social context
- Consensus on epidemiological and institutional challenges
- Closer partnership between veterinary services and livestock owners
- More dynamic institutions
- Shared ownership