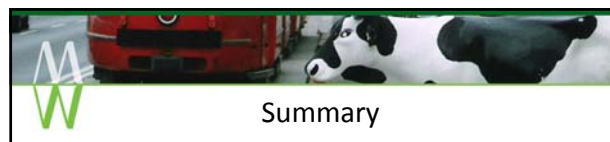


INCORPORATING DESCRIPTIVE EPIDEMIOLOGY AND MARKETING NETWORK ANALYSIS INTO THE PCP

Melissa McLaws & Nick Taylor

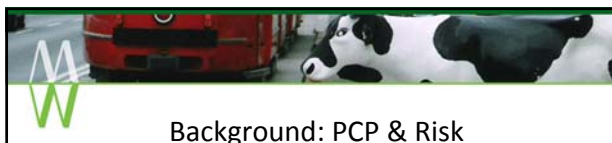
VIENNA, AUSTRIA • 27TH SEPTEMBER - 1ST OCTOBER



Summary

- Risk analysis in market networks:
 - generates list of **risk hotspots** and proposals for risk reduction measures
 - Knowledge gain through consultation and engagement of stakeholders
 - Data collection iterative and progressive
 - Part of suite of PCP Activities: complementary and synergistic


VIENNA, AUSTRIA • 27TH SEPTEMBER - 1ST OCTOBER



Background: PCP & Risk

- Progressive Control Pathway Principle:
 - Optimisation of scarce resources: Target control measures where have most impact
 - “Risk based”
- How to determine where risk is?
 - Time
 - Space
 - Production sector

VIENNA, AUSTRIA • 27TH SEPTEMBER - 1ST OCTOBER




Value Chain Analysis

- Is being combined with risk analysis concepts and applied in control of HPAI, also FMD (*work by FAO, RVC, VEERU, ILRI*)

Marketing network
+
Consideration of **why** the network is as it is:
Economics, Incentives, Governance

Value chains = contact networks
with opportunities for transmission of disease

VIENNA, AUSTRIA • 27TH SEPTEMBER - 1ST OCTOBER




PCP Stage 1:

Marketing network
Transmission opportunities
+
National Husbandry characteristics
Seasonality; Geographical distribution/movement patterns
+
Descriptive epidemiology
Susceptible populations; Circulating strains

↓

Identify “Risk Hotspots”: Points in the value chain where the **combined** effect of the **probability** and the **consequences** of FMD entry/spread are greatest.

VIENNA, AUSTRIA • 27TH SEPTEMBER - 1ST OCTOBER



PCP Stage 1:

Marketing network
Transmission opportunities

↓


Descriptive epidemiology
Susceptible populations;
Circulating strains

National Husbandry characteristics
Seasonality; Geographical
distribution/movement patterns

↓

Identify “Risk Hotspots”: Points in the value chain where the **combined** effect of the **probability** and the **consequences** of FMD entry/spread are greatest.


VIENNA, AUSTRIA • 27TH SEPTEMBER - 1ST OCTOBER



Critical Control Points

- At each risk hotspot: conduct risk assessment to identify **critical control points** (risk pathway analysis is useful)
- 3 criteria for CCP:
 - FMD poses a significant risk *and*
 - Control measures exist and their implementation is feasible *and*
 - The control measures should reduce the risk to an acceptable level.


FMD Week 2010
VIENNA, AUSTRIA • 27th SEPTEMBER - 1st OCTOBER



PVP activities are *connected* and *synergistic*


Critical control point criteria	PCP core activity
FMD poses a significant risk	<ul style="list-style-type: none"> Value chain analysis Surveillance/Monitoring
Control measures exist and their implementation is feasible	<ul style="list-style-type: none"> Value chain analysis Laboratory capacity
The control measures should ^{NT1} reduce the risk to an acceptable level.	<ul style="list-style-type: none"> Laboratory capacity Surveillance/monitoring

FMD Week 2010
VIENNA, AUSTRIA • 27th SEPTEMBER - 1st OCTOBER

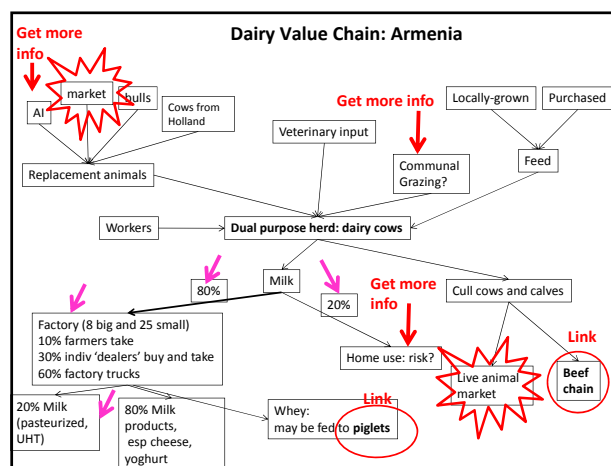



PCP in practice: Armenia

- 1.5 day workshop, July 2010
- Stakeholders from cattle, small ruminants, swine sectors
- Market network analysis, seasonal calendars, mapping...



FMD Week 2010
VIENNA, AUSTRIA • 27th SEPTEMBER - 1st OCTOBER

Outcome: List 8 candidate risk hotspots:

- Mixing at seasonal pastures and subsequent return to villages
- Pigs consuming contaminated feed
- Free-ranging domestic swine can contact other susceptible species and FMDV-contaminated products, and return to village....


Useful discussion tool; Not an end point:

- Highlight interconnectedness of stakeholders
- Identify knowledge gaps
- Start to consider feasibility of alternate control measures

Next steps:

- Data gaps
- Risk analysis at each hotspot to focus/elaborate

FMD Week 2010
VIENNA, AUSTRIA • 27th SEPTEMBER - 1st OCTOBER



Conclusions

- PCP activities :
 - Risk analysis in market chains generates list of risk hotspots and proposals for risk reduction strategy
 - Parts of a whole: Mutually informative, Synergistic
- Non-prescriptive approach:
 - Knowledge gain through consultation and engagement of stakeholders
- Data collection iterative and progressive
 - Highlights areas where we don't know things, data are needed most; cost effective data collection


FMD Week 2010
VIENNA, AUSTRIA • 27th SEPTEMBER - 1st OCTOBER



Acknowledgements


- RVC: Jonathan Rushton
- FAO: Nicoline DeHaan, Julio Pinto, Anni McLeod

FMD Week 2010
VIENNA, AUSTRIA • 27th SEPTEMBER - 1st OCTOBER

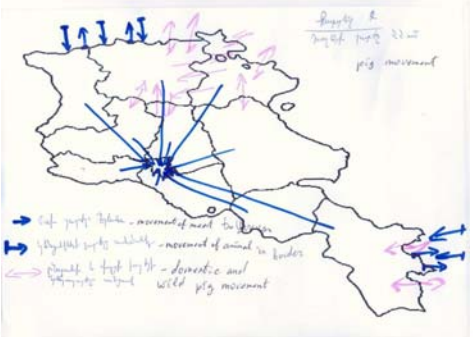


Thank you for your attention

FMD Week 2010
VIENNA, AUSTRIA • 27th SEPTEMBER - 1st OCTOBER




Mapping:



Handwritten notes on the map:
 - Blue arrows: Safe piglets to farms - movement of meat to slaughterhouses
 - Pink arrows: Illegal piglets to markets - movement of animal to borders
 - Purple arrows: Piglets to high birth - domestic and wild pig movement

FMD Week 2010
VIENNA, AUSTRIA • 27th SEPTEMBER - 1st OCTOBER



PCP Stage 1:

- descriptive epidemiology and market network analysis
- monitoring, information systems
- enhance laboratory capacity,

↓

FMD control strategy based on risk
(developed in stage 1... implemented in stage 2)

FMD Week 2010
VIENNA, AUSTRIA • 27th SEPTEMBER - 1st OCTOBER



What did we learn in Armenia?

- Engagement participation
- Illustration of complexity...chains, different stakeholders
- Iterative...need national commitment
- Highlights areas where we don't know things (pigs)
- List of risk hotspots/tables/next steps

FMD Week 2010
VIENNA, AUSTRIA • 27th SEPTEMBER - 1st OCTOBER

