

# DISCONTTOOLS

## sheep and goat pox

# Members of the capripoxvirus group

- Dr. Eeva Tuppurainen, Head of Capripoxvirus Reference Laboratory, Institute of Animal Health Pirbright, United Kingdom, Capripoxvirus diagnostics
- Prof Koos Coetzer, Head of Department of Veterinary Tropical Diseases, University of Pretoria, South Africa, world renowned expert of tropical veterinary diseases, president of AITVM (epidemiology and pathology of LSD)
- Dr. David Wallace, Onderstepoort Veterinary Institute (ARC-OVI), South Africa (molecular characteristics and recombinant vaccine development of LSD)
- Dr. Paul Kitching, previous Head of Canadian Food Inspection Agency, National Centre For Foreign Animal Disease, current post as a chief government provincial veterinary officer in British Columbia, Canada, world renowned expert on Capripoxviruses, especially sheep pox and goat pox

# Members of the capripoxvirus group

- Dr. Shawn Babiuk, Canadian Food Inspection Agency, National Centre for Foreign Animal Disease, laboratory tests for capripoxviruses, development of ELISA test for Capripoxviruses
- Dr. Timothy Bowden from CSIRO, Australia, laboratory tests for capripoxviruses, development of ELISA test for Capripoxviruses
- Dr. Adama Diallo from International Atomic Energy Agency, Austria, molecular characterization of sheep pox and goat pox, development of recombinant vaccines, strong experience on field work in Africa
- Dr. Faisal A. Dayem, Jordan Bio-Industries Center (JOVAC) from sheep pox, goat pox vaccine and LSD production in the Middle East region

# Things that were more difficult to do

- It was a relatively lot work to combine the input of different experts into the main document
- The sheep and goat pox template provided by Discontools required quite a lot of improvement by the experts
- The instructions for the group leaders were not clear

## Areas where consensus was difficult to achieve

- Consensus for disease scoring and gap analysis has to be achieved in a meeting as it is extremely time consuming and inefficient to achieve using e-mails from all the experts

# Recommendations in relation to the DISCONTTOOLS model

- The Product Gap document is confusing
  - antigen and antibody detecting test should be specified
  - market potential for vaccines
  - diagnostic tools and drugs in endemic and non-endemic areas should be separate

# Recommendations in relation to the DISCONTTOOLS model

- The disease scoring document could also be more specific
  - with different consequences if an outbreak occurs in endemic area versus outbreak in non-endemic area

## DISCONTTOOLS SCORING MODEL DISEASE: Sheep pox and Goat pox

Disease knowledge	1	2	3	4	5
1. Speed of spread				x	
2. Number of livestock species involved			x		
3. Persistence of infectious agent In the environment			x		
4. Risk of spread to susceptible populations				x	
5. Potential for silent spread			x		
6. Wildlife reservoir and potential spread	x				
7. Vector reservoir and potential spread		x			
8. Variability of the agent		x			
9. Understanding of fundamental immunology			x		
10 Host pathogen interaction			x		

<b>Impact on wider society</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
1. Disease impact on production				x	
2. Economic direct impact (including cumulative cost (eg. Enzootic vs epizootic))					x
3. Economic indirect impact (social, trade)					x
<b>Impact on public health</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
1. Impact of occurrence on human Health	x				
2. Likelihood of occurrence	x				
3. Impact of occurrence on Food Safety		x			
4. Transmissibility (spread from animals to humans)		x			
5. Spread in humans	x				
6. Bioterrorism potential					x

<b>Impact on trade</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
1. Impact on international Trade due to existing regulations					x
2. Impact on EC Trade due to existing regulations					x
3. Potential for zoning		x			
4. Impact on Security of Food supply		x			
<b>Animal welfare</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
1. Duration of animal welfare impact				x	
2. Proportion of animals affected suffering pain/injury/distress as a result of the disease					x
<b>Control Tools</b>	<b>2</b>	<b>1</b>	<b>0</b>	<b>-1</b>	<b>-2</b>
1 Appropriate tools for diagnosis				x	
2 Appropriate tools for prevention				x	
3. Appropriate tools for control				x	

# DISCONTTOOLS PRODUCT GAP ANALYSIS DISEASE: Sheep pox and goat pox

Vaccination tools	2	1	0	-1	-2
1. Commercial availability			x		
2. Monitoring for infection in a vaccinated population	x				
3. Strategic reserve	x				
4. Capacity of production		x			
5. Market potential		x			
6 Affordable					x
7. Quality/stability				x	
8. Safety of vaccines			x		
9. Efficacy					x
10. Immunity			x		
11. Convenience of use		x			

<b>Diagnostic tools</b>	<b>2</b>	<b>1</b>	<b>0</b>	<b>-1</b>	<b>-2</b>
1. Availability		X			
2. Prevention and control Differentiation of infected from vaccinated (DIVA)		X			
3. Strategic reserve		X			
4. Capacity of production		X			
5. Market potential *		X			
6. Affordable		X			
7. Quality/stability durability		X			
8. Sensitivity				X	
9. Specificity				X	
10. Reproducibility				X	
11. Simplicity/ease of use			X		
12. Speed			X		

\* May be high in endemic countries

<b>Pharmaceutical tools</b>	<b>2</b>	<b>1</b>	<b>0</b>	<b>-1</b>	<b>-2</b>
1. Availability	x				
2. Prevention and control	x				
3. Strategic reserve	x				
4. Capacity of production	x				
5. Market potential		x			
6. Cost	x				
7. Quality	x				
8. Safety Animal	N/A				
9. Safety Consumer/user concerns	N/A				
10. Safety Environment	N/A				
11. Resistance	N/A				