

Fifth session  
Geneva, 16-27 September 1996

## **ANIMAL PATHOGENS IMPORTANT FOR THE BWC**

### **Working Paper by South Africa**

Using the information available, and measuring the current list of animal pathogens against the criteria discussed by the Group during its Fourth Session, the following has been found:

1. **African swine fever**

Endemic in South Africa, reservoir in warthogs and bush pigs. Virus is very stable in environment. Pathogenic for pigs. Highly contagious. High morbidity and mortality. No vaccine available. Low infection dose. Very suitable BW.

2. **Avian influenza, fowl plague**

Pathogenic for chicken, ducks, geese, turkeys and waterfowl. Some virulent, strains observed in South Africa. Highly contagious, high mortality. Vaccine available. Suitable BW.

3. **Blue tongue**

Endemic in South Africa. Pathogenic mainly for sheep. Twenty-four serotypes with differing cross immunity. Transmission by culicoides midges. Vaccines available. Use as BW only in countries where carrier system exists (Australia, USA).

4. **Camel pox**

Orthopox virus very species specific for camel. Commercial vaccine is presently produced. Possible BW for use in countries with high camel populations (North Africa, Middle East, Asia, Australia).

5. **Classic swine fever**

Pathogenic for pigs. Not diagnosed in South Africa since 1918. Highly contagious, high mortality. Virus is relatively stable. Vaccines available. Very suitable BW.

6. **CBPP (lung sickness)**

Eradicated in South Africa since 1924. Pathogenic for cattle. Highly contagious, high morbidity. Successful transmission only by carrier animal. Vaccines available. BW use limited.

7. **CCPP caprine**

No reports in South Africa. Pathogenic for goats only. Vaccines available. BW use doubtful.

8. **Foot and mouth**

Pathogenic for ruminants and pigs. South Africa classified free of foot and mouth, but virus present in buffaloes. Highly contagious, high morbidity. Virus is very stable in environment. Carrier animals can form hidden pockets. Seven different serotypes with no cross protection. Vaccines available. Very suitable BW.

9. **Herpes B monkey**

Not regarded important for South Africa. Causes encephalomyelitis in humans. Transmission by biting and scratching. BW use doubtful.

10. **Swine vesicular disease (stomatitis) - to replace hog cholera disease**

Never diagnosed in South Africa. Mildly pathogenic for pigs. Important only as differential diagnosis for foot and mouth. Use as BW doubtful.

11. **Newcastle disease**

Endemic in South Africa. Highly contagious, high mortality. Virus is very stable in environment. Vaccines available. Very suitable as BW.

12. **Peste des Petits Ruminants**

Never diagnosed in South Africa. Pathogenic mostly for goats but sheep can become infected as well. Virus not very stable in environment. Highly contagious, high mortality. No vaccine available but cross immunity with rinderpest. Possible use as BW only where goats are economically important.

13. **Porcine enterovirus (?)**

Most probably Teschen Talfan disease (17) or enterovirus encephalomyelitis.

14. **Rabies**

Endemic in South Africa and most countries. Transmission like herpes B monkey. Use as BW doubtful.

15. **Rinderpest**

Eradicated in South Africa since 1905. Pathogenic mainly for cattle. Highly contagious, high mortality. Virus not very stable in environment. Vaccines available. Very suitable BW.

16. **Sheep pox**

Never diagnosed in South Africa. Pathogenic for sheep. Highly contagious, high mortality. Vaccines available. Suitable to use as BW in countries with high sheep populations.

17. **Teschen disease**

Enterovirus complex of pigs, nine serotypes. Never diagnosed in South Africa. Pathogenic for pigs. Causes polio encephalomyelitis. Transmission via faeces. Vaccines available. Possible BW.

18. **Vesicular stomatitis**

Enzootic in the Americas, never diagnosed in South Africa. Pathogenic for horses, cattle and pigs. Man can become infected. Important differential diagnosis to foot and mouth. Mode of transmission unclear, possibly insect transmitted. Use as BW carrier dependent. No commercial vaccine available. BW use doubtful.

**CRITERIA**

<b>ANIMAL PATHOGENS</b>		1*	2	2a	2b	2c	2d	2e	2f	2g
1	African swine fever virus		+	+	+	+	+	+	+	+
2	Avian influenza virus (fowl plague virus)		+	+	+	+	-	+		+
3	Blue tongue virus	+	+	+-	-	-	-	-	+	+
4	Camel pox virus		+		+	+	-	+		+
5	Classic swine fever virus		+	+	+	+	-	+	+	+
6	Contagious bovine (pleuro/pneumonia)/mycoplasma mycoides var. mycoides		+	+	-	+-	-	+	+	+
7	Contagious caprine (pleuropneumonia)/mycoplasma mycoides var. capri					-	-	+		+
8	Foot and mouth virus		+	+	+	+	-	+	+	+
9	Herpes B virus (monkey)		-	-	-	+	+	+		
10	Hog cholera stomatitis virus (possibly the same as classic swine fever or swine vesicular disease (stomatitis))	+	+	-	-	-		-		
11	Newcastle disease virus	+	+	+	+	+	-	+	+	+
12	Peste des petits ruminants virus			+	+	+	*-	+	-	-
13	Porcine enterovirus type 9 (same as Teschen disease virus - #17)									
14	Rabies virus		-	+	+	-	-	+		+
15	Rinderpest virus (cattle plague virus)	+	+	+	+	+	-	+	-	+
16	Sheep pox virus		+	+	+	+	-	+		+
17	Teschen disease virus		+	+	+		-	+	+	+
18	Vesicular stomatitis virus		+	+	-	-	-	+		+

1\*.: The United Kingdom Informal Paper dated 7 December 1995, based on the BTWC CBM Declarations of 1992 and UNSCOM'S Eighth Biannual UNSCR 715 Report.

+: Meet the Criterium

-: Does not meet the criterium

\*-: Cross immunity with rinderpest for which a vaccine is available