Ceratopogonidae). *Onderstepoort Journal of veterinary Research* 59: 183–189
12. Venter G J, Nevill E M, Van Der Linde T C de K 1996 Geographical distribution and relative abundance of stock-associated *Culicoides* species (Diptera: Ceratopogonidae) in southern Africa, in relation to their potential as virus vectors. *Onderstepoort Journal of Veterinary Research* 63: 25–38
13. Venter G J, Paweska J T, Hamblin C, 1999 Is *Culicoides imicola* the only vector of bluetongue, African horse sickness and equine encephalosis viruses in southern Africa? *Annual Conference of the Zimbabwe Veterinary Association,* Kariba, Zimbabwe, 16–18 September: 8

G N Musuka[a], R Meiswinkel[b], M Baylis[c], P J Kelly[a] and P S Mellor[d]

[a]Biomedical Research and Training Institute, Harare, Zimbabwe
[b]Onderstepoort Veterinary Institute, Onderstepoort, South Africa
[c]Institute for Animal Health, Pirbright, Surrey, UK
[d]Institute for Animal Health, Compton, Berkshire, UK

Chlamydial abortion in goats in the Umzimkulu district of Eastern Cape

Goats aborted in the Bossenfontein and Ngozi administrative areas of Umzimkulu district, Eastern Cape Province, during the period December 1998 to March 1999. All abortions occurred in the last month of gestation and in primiparous goats that had never been immunised against any reproductive diseases and that had not experienced abortion storms. The prevalence of abortion at Bossenfontein and Ngozi were 4 % and 5.66 % respectively.

Umzimkulu district, which adjoins and is surrounded by KwaZulu-Natal Province, has many small scale-farms where grazing is communal. Most of the livestock farmers own on average 5–15 goats that are of indigenous origin or crossbred. The goats are not provided with proper housing and are exposed to environmental hazards. Furthermore they depend entirely on pasture for nutrition and receive no supplementary feed. They are not vaccinated.

Factors that predispose to the prevalence of chlamydiosis include environmental and host factors. Communal grazing enables easy transmission through shedding of *Chlamydia* within genital discharges that contaminate the pastures at the time of parturition. The goats that aborted did not have vaccine-induced or naturally-acquired antibodies to enable them to resist infection.

The investigation was carried out on 2 small-scale farms in Bossenfontein during February 1999 and on 10 small-scale farms in Ngozi during March and May 1999. Blood samples from goats 4–5 weeks after abortion from Bossenfontein and Ngozi as well as from randomly-selected goats from Ngozi were collected in plain evacuated tubes for serological studies. Following blood clotting, the serum was separated and forwarded to the Ixopo state veterinarian, who submitted them to Allerton Provincial Veterinary Laboratory.

Complement fixation revealed antibody titres for *Chlamydia* in aborted goats from both the above administrative areas, confirming the outbreak, while randomly-selected goats had no complement-fixing antibody, indicating that there was no subclinical chlamydiosis, and were also negative for other reproductive diseases, namely brucellosis, Wesselsbron and Rift Valley fever (Table 1).

Serological results from Bossenfontein administrative area indicated that samples 3, 7, 8, 9 and 10 were anti-complementary and there was therefore no result for the complement fixation test for *Chlamydia.* Titres of >24 for *Chlamydia* are regarded as positive. The sera tested for Rift Valley fever by the haemagglutination inhibition test had negative titres.

Serological studies from aborted goats from Ngozi administrative area revealed low complement fixation antibody titres compared to the positive titres for *Chlamydia* in Bossenfontein. The sera tested negative for Rift Valley fever, *Brucella melitensis* and Wesselsbron.

It is interesting to note that no abortions have been reported from the above-mentioned administrative areas since December 1999. This is ascribed to the administration of ovine enzootic abortion vaccine to all susceptible goats during April and June 1999 in the Bossenfontein and Ngozi areas respectively.

I thank Dr J Randles of the Allerton Provincial Veterinary Laboratory for her assistance.

Table 1: **Serological results for aborted and randomly-selected goats.**

Sample number	Chlamydiosis Complement fixation titre	Rift Valley fever Haemagglutination inhibition titre	*Brucella melitensis*	Wesselsbron
Aborted – Bossenfontein				
1	32	Not done	Not done	Not done
2	32	Negative	Not done	Not done
3	Anti-complement	Negative	Not done	Not done
4	32	Negative	Not done	Not done
5	32	Negative	Not done	Not done
6	24	Negative	Not done	Not done
7	Anti-complement	Negative	Not done	Not done
8	Anti-complement	Negative	Not done	Not done
9	Anti-complement	Negative	Not done	Not done
10	Anti-complement	Negative	Not done	Not done
Aborted – Ngozi				
1	6	Negative	Negative	Negative
2	8	Negative	Negative	Negative
Randomly-selected – Ngozi				
3rd – 58th	Negative	Negative	Negative	Negative

C Sri Jeyakumar
Department of Agriculture, Private Bag 527, Umzimkulu, 3297 South Africa