

Subject index

ONDERSTEPSOORT JOURNAL OF VETERINARY RESEARCH

Volume 63, Numbers 1–4, 1996

Abattoir	
Biochemical and haematological values in abattoir pigs with and without sub-clinical lesions—M.O. MAKINDE, A.A. MAJOK and F.W.G. HILL	11–14
Abundance	
Geographical distribution and relative abundance of stock-associated <i>Culicoides</i> species (Diptera: Ceratopogonidae) on southern Africa, in relation to their potential as viral vectors—G.J. VENTER, E.M. NEVILL and T.C. DE K. VAN DER LINDE	25–38
<i>Aethomys chrysophilus</i>	
The comparative host status of red veld rats (<i>Aethomys chrysophilus</i>) and bushveld gerbils (<i>Tatera leucogaster</i>) for epifaunal arthropods in the southern Kruger National Park, South Africa—L.E.O. BRAACK, I.G. HORAK, LEONORA C. JORDAAN, JOYCE SEGERMAN and J.P. LOUW	149–158
African buffalo	
An outbreak of bovine tuberculosis in a free-living African buffalo (<i>Syncerus caffer</i> —Sparrman) population in the Kruger National Park: a preliminary report—R.G. BENIGIS, N.P.J. KRIEK, D.F. KEET, J.P. RAATH, V. DE VOS and H.F.A.K. HUCHZERMEYER	15–18
African horsesickness virus	
Subcellular localization of the nonstructural protein NS3 of African horsesickness virus—M.A. STOLTZ, C.F. VAN DER MERWE, J. COETZEE and H. HUISMANS	57–61
African elephant	
The osteology of the African elephant (<i>Loxodonta africana</i>): vertebral column, ribs and sternum—A.J. BEZUIDENHOUT and C.D. SEEGERS	131–147
The intestine and endocrine pancreas of the African elephant: a histological, immunocytochemical and immunofluorescence study—G. VAN ASWEGEN, SUSAN VAN NOORDEN, SANET H. KOTZE, V. DE VOS and J.H. SCHOEMAN	335–340
Amitraz	
The efficacy of amitraz against cattle ticks in Tanzania—L.K. KAGARUKI	91–96
Anaplasma	
Field observations on the duration of immunity in cattle after vaccination against <i>Anaplasma</i> and <i>Babesia</i> species—K. TJORNEHOJ, J.A. LAWRENCE, A.P. WHITELAND and P.T. KAFUWA	1–5
Anti-thymocyte serum	
Effect of anti-thymocyte serum on acquisition of resistance to infestation by <i>Rhipicephalus appendiculatus</i> larvae in rabbits—M.G. BINTA, E.Z. MUSHI and F.R. RURANGIRWA	213–216
Arid regions	
The usefulness of faecal phosphorus and nitrogen in interpreting differences in livemass gain and the response to P supplementation in grazing cattle in arid regions—C.C. GRANT, H.C. BIGGS, H.H. MEISSNER and P.A. BASSON	121–126
Asinine strain	
Transmission of the South African asinine strain of equine arteritis virus (EAV) among horses and between donkeys and horses—J.T. PAWESKA, H. AITCHISON, E.D. CHIRNSIDE and B.J.H. BARNARD	189–196

β-glucosidase-treated saponin	
Photosensitivity in South Africa. IX. Structure elucidation of a β -glucosidase-treated saponin from <i>Tribulus terrestris</i> , and the identification of saponin chemotypes of South African <i>T. terrestris</i> —A.L. WILKINS, C.O. MILES, W.T. DE KOCK, G.L. ERASMUS, A.T. BASSON and T.S. KELLERMAN	327–334
<i>Babesia occultans</i>	
<i>In vitro</i> cultivation of <i>Babesia occultans</i> —C.J. VAN NIEKERK and E. ZWEYGARTH	259–261
<i>Babesia</i> species	
Field observations on the duration of immunity in cattle after vaccination against <i>Anaplasma</i> and <i>Babesia</i> species—K. TJORNEHOJ, J.A. LAWRENCE, A.P. WHITELAND and P.T. KAFUWA	1–5
Bacteriological (investigation)	
Brucellosis surveillance and control in Zimbabwe: Bacteriological and serological investigation in dairy herd—K. MOHAN, P.V. MAKAYA, P. MUVAVARIRWA, G. MATOPE, E. HAHEMBE and A. PAWANDIWA	47–51
Biochemical (values)	
Biochemical and haematological values in abattoir pigs with and without sub-clinical lesions—M.O. MAKINDE, A.A. MAJOK and F.W.G. HILL	11–14
Biotype 1	
<i>Brucella melitensis</i> biotype 1 outbreak in goats in northern KwaZulu-Natal—R. REICHEL, J.R. NEL, R. EMSLIE and G.C. BISHOP	183–185
Bovine anaplasmosis	
Improving the specificity of indirect immunofluorescence for the serological diagnosis of bovine anaplasmosis—J.A. LAWRENCE, A.P. WHITELAND, P.T. KAFUWA and L.M. NJUGUNA	53–55
Bovine tuberculosis	
An outbreak of bovine tuberculosis in a free-living African buffalo (<i>Syncerus caffer</i> —Sparrman) population in the Kruger National Park: a preliminary report—R.G. BENGIS, N.P.J. KRIEK, D.F. KEET, J.P. RAATH, V. DE VOS and H.F.A.K. HUCHZERMAYER	15–18
<i>Brucella melitensis</i>	
<i>Brucella melitensis</i> biotype 1 outbreak in goats in northern KwaZulu-Natal—R. REICHEL, J.R. NEL, R. EMSLIE and G.C. BISHOP	183–185
Brucellosis surveillance and control	
Brucellosis surveillance and control in Zimbabwe: Bacteriological and serological investigation in dairy herd—K. MOHAN, P.V. MAKAYA, P. MUVAVARIRWA, G. MATOPE, E. HAHEMBE and A. PAWANDIWA	47–51
Buffaloes	
Tuberculosis in buffaloes (<i>Syncerus caffer</i>) in the Kruger National Park: spread of the disease to other species—D.F. KEET, N.P.J. KRIEK, M.-L. PENRITH, A. MICHEL and H. HUCHZERMAYER	239–244
Bushveld gerbils	
The comparative host status of red veld rats (<i>Aethomys chrysophilus</i>) and bushveld gerbils (<i>Tatera leucogaster</i>) for epifaunal arthropods in the southern Kruger National Park, South Africa—L.E.O. BRAACK, I.G. HORAK, LEONORA C. JORDAAN, JOYCE SEGERMAN and J.P. LOUW	149–158
Canine malignant lymphoma	
Immunophenotypic classification of canine malignant lymphoma on formalin-fixed paraffin wax-embedded tissue by means of CD3 and CD79a cell markers—R.J. MILNER, J. PEARSON, J.W. NESBIT and P. CLOSE	309–313
Cardiomyocytes	
Screening of the venoms of two <i>Parabuthus</i> scorpion species on isolated cardiomyocytes—M.N. VAN AARDE, J.M. VAN ROOYEN and G. VAN ASWEGEN	127–130
Cattle breeds	
Adult ixodid ticks on two cattle breeds in the south-western Free State, and their seasonal dynamics—L.J. FOURIE, D.J. KOK and HELOISE HEYNE	19–23
Cattle	
Field observations on the duration of immunity in cattle after vaccination against <i>Anaplasma</i> and <i>Babesia</i> species—K. TJORNEHOJ, J.A. LAWRENCE, A.P. WHITELAND and P.T. KAFUWA	1–5
The usefulness of faecal phosphorus and nitrogen in interpreting differences in livemass gain and the response to P supplementation in grazing cattle in arid regions—C.C. GRANT, H.C. BIGGS, H.H. MEISSNER and P.A. BASSON	121–126
Experimentally induced chronic copper toxicity in cattle—B. GUMMOW	277–288

Cattle ticks	
The efficacy of amitraz against cattle ticks in Tanzania—L.K. KAGARUKI	91–96
CD3 (cell markers)	
Immunophenotypic classification of canine malignant lymphoma on formalin-fixed paraffin wax-embedded tissue by means of CD3 and CD79a cell markers—R.J. MILNER, J. PEARSON, J.W. NESBIT and P. CLOSE	309–313
CD79a cell markers	
Immunophenotypic classification of canine malignant lymphoma on formalin-fixed paraffin wax-embedded tissue by means of CD3 and CD79a cell markers—R.J. MILNER, J. PEARSON, J.W. NESBIT and P. CLOSE	309–313
Changes	
Changes in the incidences of the different serovars of <i>Haemophilus paragallinarum</i> in South Africa: a possible explanation for vaccination failures—R.R. BRAGG, L. COETZEE and J.A. VERSCHOOR	217–226
Chicken erythrocytes	
Heterophile antibodies to chicken erythrocytes in sheep infected with <i>Trypanosoma congolense</i> —R.A. JOSHUA, J.S. NEILS and L.A. OLADOSU	253–258
Chronic copper toxicity	
Experimentally induced chronic copper toxicity in cattle—B. GUMMOW	277–288
Comparative study	
Seasonal dynamics of the Karoo paralysis tick (<i>Ixodes rubicundus</i>): a comparative study on Merino and Dorper sheep—L.J. FOURIE and D.J. KOK	273–276
Cryopreservation	
Cryopreservation of sheathed third-stage larvae of <i>Nematodirus spathiger</i> —G.A.P. TITOY	63
Host range, survival in dead hosts, cryopreservation, periodicity and morphology of <i>Plasmodium durae</i> Herman in experimental infections—F.W. HUCHZERMEYER	227–238
Culicoides	
<i>Culicoides</i> (Diptera: Ceratopogonidae) associated with livestock in the Onderstepoort area, Gauteng, South Africa as determined by light-trap collections—G.J. VENTER, R. MEISWINKEL, E.M. NEVILL and M. EDWARDES	315–325
Culicoides species	
Geographical distribution and relative abundance of stock-associated <i>Culicoides</i> species (Diptera: Ceratopogonidae) in southern Africa, in relation to their potential as viral vectors—G.J. VENTER, E.M. NEVILL and T.C. DE K. VAN DER LINDE	25–38
Cyclophosphamide	
Effect of cyclophosphamide on the acquisition of resistance to infestation by <i>Rhipicephalus appendiculatus</i> in rabbits—M.G. BINTA, E.Z. MUSHI and F.R. RURANGIRWA	7–10
Dairy herd	
Brucellosis surveillance and control in Zimbabwe: Bacteriological and serological investigation in dairy herd—K. MOHAN, P.V. MAKAYA, P. MUVAVARIRWA, G. MATOPE, E. HAHEMBE and A. PAWANDIWA	47–51
Specificity	
Improving the specificity of indirect immunofluorescence for the serological diagnosis of bovine anaplasmosis—J.A. LAWRENCE, A.P. WHITELAND, P.T. KAFUWA and L.M. NJUGUNA	53–55
Demarcation	
Demarcation of potentially mineral-deficient areas in central and northern Namibia by means of natural classification systems—C.C. GRANT, H.C. BIGGS and H.H. MEISSNER	109–120
Diagnoses	
The distribution, diagnoses and estimated economic impact of plant poisonings and mycotoxicoses in South Africa—T.S. KELLERMAN, T.W. NAUDÉ and N. FOURIE	65–90
<i>Dichelyne (Dichelyne) rasheedae</i> Petter	
Redescriptions of <i>Dichelyne (Dichelyne) rasheedae</i> Petter, 1974 and <i>Spirocamallanus olseni</i> Campana-Rouget & Razarihelissoa, 1965, recorded for the first time from fish in Lake St. Lucia, South Africa—L.M. GIBBONS and J.E. SAAYMAN	39–46
Diptera: Simuliidae	
Control of pest blackflies (Diptera: Simuliidae) along the Orange River, South Africa: 1990–1995—R.W. PALMER, M. EDWARDES and E.M. NEVILL	289–304

Diptera: Ceratopogonidae	
Geographical distribution and relative abundance of stock-associated <i>Culicoides</i> species (Diptera: Ceratopogonidae) in southern Africa, in relation to their potential as viral vectors—G.J. VENTER, E.M. NEVILL and T.C. DE K. VAN DER LINDE	25–38
<i>Culicoides</i> (Diptera: Ceratopogonidae) associated with livestock in the Onderstepoort area, Gauteng, South Africa as determined by light-trap collections—G.J. VENTER, R. MEISWINKEL, E.M. NEVILL and M. EDWARDES	315–325
Disease	
Tuberculosis in buffaloes (<i>Syncerus caffer</i>) in the Kruger National Park: spread of the disease to other species—D.F. KEET, N.P.J. KRIEK, M.-L. PENRITH, A. MICHEL and H. HUCHZERMEYER	239–244
Distribution	
The distribution, diagnoses and estimated economic impact of plant poisonings and mycotoxicoeses in South Africa—T.S. KELLERMAN, T.W. NAUDÉ and N. FOURIE	65–90
Distribution of viral antigen in tissues of new-born lambs infected with Rift Valley fever virus—J.J. VAN DER LUGT, J.A.W. COETZER and M.M.E. SMIT	341–347
Donkeys	
Transmission of the South African asinine strain of equine arteritis virus (EAV) among horses and between donkeys and horses—J.T. PAWESKA, H. AITCHISON, E.D. CHIRNSIDE and B.J.H. BARNARD	189–196
Dorper sheep	
Seasonal dynamics of the Karoo paralysis tick (<i>Ixodes rubicundus</i>): a comparative study on Merino and Dorper sheep—L.J. FOURIE and D.J. KOK	273–276
Economic impact	
The distribution, diagnoses and estimated economic impact of plant poisonings and mycotoxicoeses in South Africa—T.S. KELLERMAN, T.W. NAUDÉ and N. FOURIE	65–90
Effect	
Effect of anti-thymocyte serum on acquisition of resistance to infestation by <i>Rhipicephalus appendiculatus</i> larvae in rabbits—M.G. BINTA, E.Z. MUSHI and F.R. RURANGIRWA	213–216
Efficacy	
The efficacy of amitraz against cattle ticks in Tanzania—L.K. KAGARUKI	91–96
Eggs	
Radiolabelled adult <i>Haemonchus contortus</i> obtained from eggs voided in the faeces of a sheep injected with ⁵⁹ Fe—J.A. VAN WYK and G.A.P. TITTOY	263–264
Endocrine pancreas	
The intestine and endocrine pancreas of the African elephant: a histological, immunocytochemical and immunofluorescence study—G. VAN ASWEGEN, SUSAN VAN NOORDEN, SANET H. KOTZE, V. DE VOS and J.H. SCHOEMAN	335–340
Epifaunal arthropods	
The comparative host status of red veld rats (<i>Aethomys chrysophilus</i>) and bushveld gerbils (<i>Tatera leucogaster</i>) for epifaunal arthropods in the southern Kruger National Park, South Africa—L.E.O. BRAACK, I.G. HORAK, LEONORA C. JORDAAN, JOYCE SEGERMAN and J.P. LOUW	149–158
Equine arteritis virus (EAV)	
Transmission of the South African asinine strain of equine arteritis virus (EAV) among horses and between donkeys and horses—J.T. PAWESKA, H. AITCHISON, E.D. CHIRNSIDE and B.J.H. BARNARD	189–196
Ergot-alkaloid toxicity	
First report of field outbreaks of ergot-alkaloid toxicity in South Africa—D.J. SCHNEIDER, C.O. MILES, I. GARTHWAITE, A. VAN HALDEREN, J.C. WESSELS and H.J. LATEGAN	97–108
Experimental infections	
Host range, survival in dead hosts, cryopreservation, periodicity and morphology of <i>Plasmodium durae</i> Herman in experimental infections—F.W. HUCHZERMEYER	227–238
Experimentally induced	
Experimentally induced chronic copper toxicity in cattle—B. GUMMOW	277–288
Faecal phosphorus	
The usefulness of faecal phosphorus and nitrogen in interpreting differences in livemass gain and the response to P supplementation in grazing cattle in arid regions—C.C. GRANT, H.C. BIGGS, H.H. MEISSNER and P.A. BASSON	121–126

- Faeces**
Radiolabelled adult *Haemonchus contortus* obtained from eggs voided in the faeces of a sheep injected with ⁵⁹Fe—J.A. VAN WYK and G.A.P. TITTOY 263–264
- Field observations**
Field observations on the duration of immunity in cattle after vaccination against *Anaplasma* and *Babesia* species—K. TJORNEHOJ, J.A. LAWRENCE, A.P. WHITELAND and P.T. KAFUWA 1–5
- Fish**
Redescriptions of *Dichelyne (Dichelyne) rasheedae* Petter, 1974 and *Spirocamallanus olseni* Campana-Rouget & Razarihelissoa, 1965, recorded for the first time from fish in Lake St. Lucia, South Africa—L.M. GIBBONS and J.E. SAAYMAN 39–46
- Focal symmetrical poliomyelomalacia**
Selenium toxicosis with focal symmetrical poliomyelomalacia in postweaning pigs in South Africa—MARY-LOUISE PENRITH and J.T.R. ROBINSON 171–179
- Formalin-fixed**
Immunophenotypic classification of canine malignant lymphoma on formalin-fixed paraffin wax-embedded tissue by means of CD3 and CD79a cell markers—R.J. MILNER, J. PEARSON, J.W. NESBIT and P. CLOSE 309–313
- Free State**
Adult ixodid ticks on two cattle breeds in the south-western Free State, and their seasonal dynamics—L.J. FOURIE, D.J. KOK and HELOISE HEYNE 19–23
- Gauteng**
Culicoides (Diptera: Ceratopogonidae) associated with livestock in the Onderstepoort area, Gauteng, South Africa as determined by light-trap collections—G.J. VENTER, R. MEISWINKEL, E.M. NEVILL and M. EDWARDES 315–325
- Geographical distribution**
Geographical distribution and relative abundance of stock-associated *Culicoides* species (Diptera: Ceratopogonidae) in southern Africa, in relation to their potential as viral vectors—G.J. VENTER, E.M. NEVILL and T.C. DE K. VAN DER LINDE 25–38
- Goats**
Heartwater in sheep and goats: a review—CONRAD E. YUNKER 159–170
Brucella melitensis biotype 1 outbreak in goats in northern KwaZulu-Natal— R. REICHEL, J.R. NEL, R. EMSLIE and G.C. BISHOP 183–85
- Haematological values**
Biochemical and haematological values in abattoir pigs with and without sub-clinical lesions—M.O. MAKINDE, A.A. MAJOK and F.W.G. HILL 11–14
- Haemonchus contortus***
Radiolabelled adult *Haemonchus contortus* obtained from eggs voided in the faeces of a sheep injected with ⁵⁹Fe—J.A. VAN WYK and G.A.P. TITTOY 263–264
- Haemophilus paragallinarum***
Changes in the incidences of the different serovars of *Haemophilus paragallinarum* in South Africa: a possible explanation for vaccination failures—R.R. BRAGG, L. COETZEE and J.A. VERSCHOOR 217–226
- Heartwater**
Heartwater in sheep and goats: a review—CONRAD E. YUNKER 159–170
- Helminths**
Parasites of South African wildlife. XIV. Helminths of nyalas (*Tragelaphus angasii*) in the Mkuzi Game Reserve, KwaZulu-Natal—J. BOOMKER, D.G. BOOYSE, R. WATERMEYER, I.L. DE VILLIERS, I.G. HORAK and J.R.B. FLAMAND 265–271
- Heterophile antibodies**
Heterophile antibodies to chicken erythrocytes in sheep infected with *Trypanosoma congolense*—R.A. JOSHUA, J.S. NEILS and L.A. OLADOSU 253–258
- Histological (study)**
The intestine and endocrine pancreas of the African elephant: a histological, immunocytochemical and immunofluorescence study—G. VAN ASWEGEN, SUSAN VAN NOORDEN, SANET H. KOTZE, V. DE VOS and J.H. SCHOEMAN 335–340
- Horses**
Transmission of the South African asinine strain of equine arteritis virus (EAV) among horses and between donkeys and horses—J.T. PAWESKA, H. AITCHISON, E.D. CHIRNSIDE and B.J.H. BARNARD 189–196

Subject index

Host range	
Host range, survival in dead hosts, cryopreservation, periodicity and morphology of <i>Plasmodium durae</i> Herman in experimental infections—F.W. HUCHZERMEYER	227–238
Host status	
The comparative host status of red veld rats (<i>Aethomys chrysophilus</i>) and bushveld gerbils (<i>Tatera leucogaster</i>) for epifaunal arthropods in the southern Kruger National Park, South Africa—L.E.O. BRAACK, I.G. HORAK, LEONORA C. JORDAAN, JOYCE SEGERMAN and J.P. LOUW	149–158
Hypophysis	
Macroscopic blood supply to the hypophysis and hypothalamus of the ostrich (<i>Struthio camelus</i>)—M.Z.J. ELIAS, A.J. BEZUIDENHOUT and H.B. GROENEWALD	245–252
Hypothalamus	
Macroscopic blood supply to the hypophysis and hypothalamus of the ostrich (<i>Struthio camelus</i>)—M.Z.J. ELIAS, A.J. BEZUIDENHOUT and H.B. GROENEWALD	245–252
Immunity	
Field observations on the duration of immunity in cattle after vaccination against <i>Anaplasma</i> and <i>Babesia</i> species—K. TJORNEHOJ, J.A. LAWRENCE, A.P. WHITELAND and P.T. KAFUWA	1–5
Immunocytochemical (study)	
The intestine and endocrine pancreas of the African elephant: a histological, immunocytochemical and immunofluorescence study—G. VAN ASWEGEN, SUSAN VAN NOORDEN, SANET H. KOTZE, V. DE VOS and J.H. SCHOEMAN	335–340
Immunofluorescence	
Improving the specificity of indirect immunofluorescence for the serological diagnosis of bovine anaplasmosis—J.A. LAWRENCE, A.P. WHITELAND, P.T. KAFUWA and L.M. NJUGUNA	53–55
Immunofluorescence study	
The intestine and endocrine pancreas of the African elephant: a histological, immunocytochemical and immunofluorescence study—G. VAN ASWEGEN, SUSAN VAN NOORDEN, SANET H. KOTZE, V. DE VOS and J.H. SCHOEMAN	335–340
Immunophenotypic classification	
Immunophenotypic classification of canine malignant lymphoma on formalin-fixed paraffin wax-embedded tissue by means of CD3 and CD79a cell markers—R.J. MILNER, J. PEARSON, J.W. NESBIT and P. CLOSE	309–313
In vitro cultivation	
<i>In vitro</i> cultivation of <i>Babesia occultans</i> —C.J. VAN NIEKERK and E. ZWEYGARTH	259–261
Infestation	
Effect of cyclophosphamide on the acquisition of resistance to infestation by <i>Rhipicephalus appendiculatus</i> in rabbits—M.G. BINTA, E.Z. MUSHI and F.R. RURANGIRWA	7–10
Intestine	
The intestine and endocrine pancreas of the African elephant: a histological, immunocytochemical and immunofluorescence study—G. VAN ASWEGEN, SUSAN VAN NOORDEN, SANET H. KOTZE, V. DE VOS and J.H. SCHOEMAN	335–340
Isolates	
Pathogenicity differences between South African isolates of <i>Ornithobacterium rhinotracheale</i> —A.F. TRAVERS, L. COETZEE and B. GUMMOW	197–207
<i>Ixodes rubicundus</i>	
Seasonal dynamics of the Karoo paralysis tick (<i>Ixodes rubicundus</i>): a comparative study on Merino and Dorper sheep—L.J. FOURIE and D.J. KOK	273–276
Spatial and temporal variations in the commencement of seasonal activity in the Karoo paralysis tick, <i>Ixodes rubicundus</i> —L.J. FOURIE, I.G. HORAK and D.J. KOK	305–308
Ixodid ticks	
Adult ixodid ticks on two cattle breeds in the south-western Free State, and their seasonal dynamics—L.J. FOURIE, D.J. KOK and HELOISE HEYNE	19–23
Karoo paralysis tick	
Spatial and temporal variations in the commencement of seasonal activity in the Karoo paralysis tick, <i>Ixodes rubicundus</i> —L.J. FOURIE, I.G. HORAK and D.J. KOK	305–308
Seasonal dynamics of the Karoo paralysis tick (<i>Ixodes rubicundus</i>): a comparative study on <i>Ixodes rubicundus</i> and Merino Dorper sheep—L.J. FOURIE and D.J. KOK	273–276

- Kruger National Park**
 An outbreak of bovine tuberculosis in a free-living African buffalo (*Syncerus caffer*—Sparrman) population in the Kruger National Park: a preliminary report—R.G. BENGIS, N.P.J. KRIEK, D.F. KEET, J.P. RAATH, V. DE VOS and H.F.A.K. HUCHZERMEYER 15–18
- The comparative host status of red veld rats (*Aethomys chrysophilus*) and bushveld gerbils (*Tatera leucogaster*) for epifaunal arthropods in the southern Kruger National Park, South Africa—L.E.O. BRAACK, I.G. HORAK, LEONORA C. JORDAAN, JOYCE SEGERMAN and J.P. LOUW 149–158
- Tuberculosis in buffaloes (*Syncerus caffer*) in the Kruger National Park: spread of the disease to other species—D.F. KEET, N.P.J. KRIEK, M.-L. PENRITH, A. MICHEL and H. HUCHZERMEYER 239–244
- KwaZulu-Natal**
Brucella melitensis biotype 1 outbreak in goats in northern KwaZulu-Natal— R. REICHEL, J.R. NEL, R. EMSLIE and G.C. BISHOP 183–185
- Parasites of South African wildlife. XIV. Helminths of nyalas (*Tragelaphus angasii*) in the Mkuzi Game Reserve, KwaZulu-Natal—J. BOOMKER, D.G. BOOYSE, R. WATERMEYER, I.L. DE VILLIERS, I.G. HORAK and J.R.B. FLAMAND 265–271
- Lake St Lucia**
 Redescriptions of *Dichelyne (Dichelyne) rasheedae* Petter, 1974 and *Spirocamallanus olseni* Campana-Rouget & Razarihelisoa, 1965, recorded for the first time from fish in Lake St. Lucia, South Africa—L.M. GIBBONS and J.E. SAAYMAN 39–46
- Light-trap collections**
Culicoides (Diptera: Ceratopogonidae) associated with livestock in the Onderstepoort area, Gauteng, South Africa as determined by light-trap collections—G.J. VENTER, R. MEISWINKEL, E.M. NEVILL and M. EDWARDES 315–325
- Livemass gain**
 The usefulness of faecal phosphorus and nitrogen in interpreting differences in livemass gain and the response to P supplementation in grazing cattle in arid regions—C.C. GRANT, H.C. BIGGS, H.H. MEISSNER and P.A. BASSON 121–126
- Livestock**
Culicoides (Diptera: Ceratopogonidae) associated with livestock in the Onderstepoort area, Gauteng, South Africa as determined by light-trap collections—G.J. VENTER, R. MEISWINKEL, E.M. NEVILL and M. EDWARDES 315–325
- Loxodonta africana**
 The osteology of the African elephant (*Loxodonta africana*): vertebral column, ribs and sternum—A.J. BEZUIDENHOUT and C.D. SEEGERS 131–147
- Macroscopic blood supply**
 Macroscopic blood supply to the hypophysis and hypothalamus of the ostrich (*Struthio camelus*)—M.Z.J. ELIAS, A.J. BEZUIDENHOUT and H.B. GROENEWALD 245–252
- Merino (sheep)**
 Seasonal dynamics of the Karoo paralysis tick (*Ixodes rubicundus*): a comparative study on Merino and Dorper sheep—L.J. FOURIE and D.J. KOK 273–276
- Mineral-deficient areas**
 Demarcation of potentially mineral-deficient areas in central and northern Namibia by means of natural classification systems—C.C. GRANT, H.C. BIGGS and H.H. MEISSNER 109–120
- Mkuzi Game Reserve**
 Parasites of South African wildlife. XIV. Helminths of nyalas (*Tragelaphus angasii*) in the Mkuzi Game Reserve, KwaZulu-Natal—J. BOOMKER, D.G. BOOYSE, R. WATERMEYER, I.L. DE VILLIERS, I.G. HORAK and J.R.B. FLAMAND 265–271
- Morphology**
 Host range, survival in dead hosts, cryopreservation, periodicity and morphology of *Plasmodium durae* Herman in experimental infections—F.W. HUCHZERMEYER 227–238
- Mycotoxicoeses**
 The distribution, diagnoses and estimated economic impact of plant poisonings and mycotoxicoeses in South Africa—T.S. KELLERMAN, T.W. NAUDÉ and N. FOURIE 65–90
- Namibia**
 Demarcation of potentially mineral-deficient areas in central and northern Namibia by means of natural classification systems—C.C. GRANT, H.C. BIGGS and H.H. MEISSNER 109–120
- Natural classification systems**
 Demarcation of potentially mineral-deficient areas in central and northern Namibia by means of natural classification systems—C.C. GRANT, H.C. BIGGS and H.H. MEISSNER 109–120

<i>Nematodirus spathiger</i>	
Cryopreservation of sheathed third-stage larvae of <i>Nematodirus spathiger</i> —G.A.P.TITOY	63
New-born lambs	
Distribution of viral antigen in tissues of new-born lambs infected with Rift Valley fever virus—J.J. VAN DER LUGT, J.A.W. COETZER and M.M.E. SMIT	341–347
Nitrogen	
The usefulness of faecal phosphorus and nitrogen in interpreting differences in livemass gain and the response to P supplementation in grazing cattle in arid regions—C.C. GRANT, H.C. BIGGS, H.H. MEISSNER and P.A. BASSON	121–126
Nonstructural protein NS3	
Subcellular localization of the nonstructural protein NS3 of African horsesickness virus—M.A. STOLTZ, C.F. VAN DER MERWE, J. COETZEE and H. HUISMANS	57–61
Nyalas	
Parasites of South African wildlife. XIV. Helminths of nyalas (<i>Tragelaphus angasii</i>) in the Mkuzi Game Reserve, KwaZulu-Natal—J. BOOMKER, D.G. BOOYSE, R. WATERMEYER, I.L. DE VILLIERS, I.G. HORAK and J.R.B. FLAMAND	265–271
Onderstepoort area	
<i>Culicoides</i> (Diptera: Ceratopogonidae) associated with livestock in the Onderstepoort area, Gauteng, South Africa as determined by light-trap collections—G.J. VENTER, R. MEISWINKEL, E.M. NEVILL and M. EDWARDES	315–325
Orange River	
Control of pest blackflies (Diptera: Simuliidae) along the Orange River, South Africa: 1990–1995—R.W. PALMER, M. EDWARDES and E.M. NEVILL	289–304
<i>Ornithobacterium rhinotracheale</i>	
Pathogenicity differences between South African isolates of <i>Ornithobacterium rhinotracheale</i> —A.F. TRAVERS, L. COETZEE and B. GUMMOW	197–207
Osteology	
The osteology of the African elephant (<i>Loxodonta africana</i>): vertebral column, ribs and sternum—A.J. BEZUIDENHOUT and C.D. SEEGERS	131–147
Ostrich	
Macroscopic blood supply to the hypophysis and hypothalamus of the ostrich (<i>Struthio camelus</i>)—M.Z.J. ELIAS, A.J. BEZUIDENHOUT and H.B. GROENEWALD	245–252
Outbreak(s)	
An outbreak of bovine tuberculosis in a free-living African buffalo (<i>Syncerus caffer</i> —Sparrman) population in the Kruger National Park: a preliminary report—R.G. BENGIS, N.P.J. KRIEK, D.F. KEET, J.P. RAATH, V. DE VOS and H.F.A.K. HUCHZERMEYER	15–18
First report of field outbreaks of ergot-alkaloid toxicity in South Africa—D.J. SCHNEIDER, C.O. MILES, I. GARTHWAITE, A. VAN HALDEREN, J.C. WESSELS and H.J. LATEGAN	97–108
P supplementation	
The usefulness of faecal phosphorus and nitrogen in interpreting differences in livemass gain and the response to P supplementation in grazing cattle in arid regions—C.C. GRANT, H.C. BIGGS, H.H. MEISSNER and P.A. BASSON	121–126
<i>Parabuthus scorpion</i> species	
Screening of the venoms of two <i>Parabuthus scorpion</i> species on isolated cardiomyocytes—M.N. VAN AARDE, J.M. VAN ROOYEN and G. VAN ASWEGEN	127–130
Paraffin wax-embedded tissue	
Immunophenotypic classification of canine malignant lymphoma on formalin-fixed paraffin wax-embedded tissue by means of CD3 and CD79a cell markers—R.J. MILNER, J. PEARSON, J.W. NESBIT and P. CLOSE	309–313
Parasites	
Parasites of South African wildlife. XIV. Helminths of nyalas (<i>Tragelaphus angasii</i>) in the Mkuzi Game Reserve, KwaZulu-Natal—J. BOOMKER, D.G. BOOYSE, R. WATERMEYER, I.L. DE VILLIERS, I.G. HORAK and J.R.B. FLAMAND	265–271
Pathogenicity	
Pathogenicity differences between South African isolates of <i>Ornithobacterium rhinotracheale</i> —A.F. TRAVERS, L. COETZEE and B. GUMMOW	197–207
Pest blackflies	
Control of pest blackflies (Diptera: Simuliidae) along the Orange River, South Africa: 1990–1995—R.W. PALMER, M. EDWARDES and E.M. NEVILL	289–304

- Photosensitivity**
Photosensitivity in South Africa. IX. Structure elucidation of a β -glucosidase-treated saponin from *Tribulus terrestris*, and the identification of saponin chemotypes of South African *T. terrestris*—A.L. WILKINS, C.O. MILES, W.T. DE KOCK, G.L. ERASMUS, A.T. BASSON and T.S. KELLERMAN 327–334
- Pigs**
Biochemical and haematological values in abattoir pigs with and without sub-clinical lesions—M.O. MAKINDE, A.A. MAJOK and F.W.G. HILL 11–14
Selenium toxicosis with focal symmetrical poliomyelomalacia in postweaning pigs in South Africa—MARY-LOUISE PENRITH and J.T.R. ROBINSON 171–179
- Plant poisonings**
The distribution, diagnoses and estimated economic impact of plant poisonings and mycotoxicoses in South Africa—T.S. KELLERMAN, T.W. NAUDÉ and N. FOURIE 65–90
- Plasmodium durae**
Host range, survival in dead hosts, cryopreservation, periodicity and morphology of *Plasmodium durae* Herman in experimental infections—F.W. HUCHZERMEYER 227–238
- Postweaning**
Selenium toxicosis with focal symmetrical poliomyelomalacia in postweaning pigs in South Africa—MARY-LOUISE PENRITH and J.T.R. ROBINSON 171–179
- Rabbits**
Effect of cyclophosphamide on the acquisition of resistance to infestation by *Rhipicephalus appendiculatus* in rabbits—M.G. BINTA, E.Z. MUSHI and F.R. RURANGIRWA 7–10
- Radiolabelled**
Radiolabelled adult *Haemonchus contortus* obtained from eggs voided in the faeces of a sheep injected with ^{59}Fe —J.A. VAN WYK and G.A.P. TITTOY 263–264
- Red veld rats**
The comparative host status of red veld rats (*Aethomys chrysophilus*) and bushveld gerbils (*Tatera leucogaster*) for epifaunal arthropods in the southern Kruger National Park, South Africa—L.E.O. BRAACK, I.G. HORAK, LEONORA C. JORDAAN, JOYCE SEGERMAN and J.P. LOUW 149–158
- Redescriptions**
Redescriptions of *Dichelyne (Dichelyne) rasheedae* Petter, 1974 and *Spirocamallanus olseni* Campana-Rouget & Razarihelissoa, 1965, recorded for the first time from fish in Lake St. Lucia, South Africa—L.M. GIBBONS and J.E. SAAYMAN 39–46
- Report**
First report of field outbreaks of ergot-alkaloid toxicity in South Africa—D.J. SCHNEIDER, C.O. MILES, I. GARTHWAITE, A. VAN HALDEREN, J.C. WESSELS and H.J. LATEGAN 97–108
- Resistance**
Effect of cyclophosphamide on the acquisition of resistance to infestation by *Rhipicephalus appendiculatus* in rabbits—M.G. BINTA, E.Z. MUSHI and F.R. RURANGIRWA 7–10
- Response**
The usefulness of faecal phosphorus and nitrogen in interpreting differences in livemass gain and the response to P supplementation in grazing cattle in arid regions—C.C. GRANT, H.C. BIGGS, H.H. MEISSNER and P.A. BASSON 121–126
- Rhipicephalus appendiculatus**
Effect of cyclophosphamide on the acquisition of resistance to infestation by *Rhipicephalus appendiculatus* in rabbits—M.G. BINTA, E.Z. MUSHI and F.R. RURANGIRWA 7–10
- Ribs**
The osteology of the African elephant (*Loxodonta africana*): vertebral column, ribs and sternum—A.J. BEZUIDENHOUT and C.D. SEEGERS 131–147
- Rift Valley fever virus**
Distribution of viral antigen in tissues of new-born lambs infected with Rift Valley fever virus—J.J. VAN DER LUGT, J.A.W. COETZER and M.M.E. SMIT 341–347
- Saponin chemotypes**
Photosensitivity in South Africa. IX. Structure elucidation of a β -glucosidase-treated saponin from *Tribulus terrestris*, and the identification of saponin chemotypes of South African *T. terrestris*—A.L. WILKINS, C.O. MILES, W.T. DE KOCK, G.L. ERASMUS, A.T. BASSON and T.S. KELLERMAN 327–334

Seasonal dynamics	
Adult ixodid ticks on two cattle breeds in the south-western Free State, and their seasonal dynamics—L.J. FOURIE, D.J. KOK and HELOISE HEYNE	19–23
Seasonal dynamics of the Karoo paralysis tick (<i>Ixodes rubicundus</i>): a comparative study on Merino and Dorper sheep—L.J. FOURIE and D.J. KOK	273–276
Seasonal activity	
Spatial and temporal variations in the commencement of seasonal activity in the Karoo paralysis tick, <i>Ixodes rubicundus</i> —L.J. FOURIE, I.G. HORAK and D.J. KOK	305–308
Selenium toxicosis	
Selenium toxicosis with focal symmetrical poliomyelomalacia in postweaning pigs in South Africa—MARY-LOUISE PENRITH and J.T.R. ROBINSON	171–179
Serological investigation	
Brucellosis surveillance and control in Zimbabwe: Bacteriological and serological investigation in dairy herd—K. MOHAN, P.V. MAKAYA, P. MUVAVARIRWA, G. MATOPE, E. HAHEMBE and A. PAWANDIWA	47–51
Serological diagnosis	
Improving the specificity of indirect immunofluorescence for the serological diagnosis of bovine anaplasmosis—J.A. LAWRENCE, A.P. WHITELAND, P.T. KAFUWA and L.M. NJUGUNA	53–55
Serovars	
Changes in the incidences of the different serovars of <i>Haemophilus paragallinarum</i> in South Africa: a possible explanation for vaccination failures—R.R. BRAGG, L. COETZEE and J.A. VERSCHOOR	217–226
Sheep	
Heartwater in sheep and goats: a review—CONRAD E. YUNKER	159–170
Heterophile antibodies to chicken erythrocytes in sheep infected with <i>Trypanosoma congolense</i> —R.A. JOSHUA, J.S. NEILS and L.A. OLADOSU	253–258
Radiolabelled adult <i>Haemonchus contortus</i> obtained from eggs voided in the faeces of a sheep injected with ⁵⁹ Fe—J.A. VAN WYK and G.A.P. TITOY	263–264
Sheep plasma	
Solid-phase extraction and HPLC determination of levamisole hydrochloride in sheep plasma—J.L. DU PREEZ and A.P. LÖTTER	209–211
South Africa	
Redescriptions of <i>Dichelyne (Dichelyne) rasheedae</i> Petter, 1974 and <i>Spirocamallanus olseni</i> Campana-Rouget & Razarihelissoa, 1965, recorded for the first time from fish in Lake St. Lucia, South Africa—L.M. GIBBONS and J.E. SAAYMAN	39–46
The distribution, diagnoses and estimated economic impact of plant poisonings and mycotoxicoses in South Africa—T.S. KELLERMAN, T.W. NAUDÉ and N. FOURIE	65–90
First report of field outbreaks of ergot-alkaloid toxicity in South Africa—D.J. SCHNEIDER, C.O. MILES, I. GARTHWAITE, A. VAN HALDEREN, J.C. WESSELS and H.J. LATEGAN	97–108
The comparative host status of red veld rats (<i>Aethomys chrysophilus</i>) and bushveld gerbils (<i>Tatera leucogaster</i>) for epifaunal arthropods in the southern Kruger National Park, South Africa—L.E.O. BRAACK, I.G. HORAK, LEONORA C. JORDAAN, JOYCE SEGERMAN and J.P. LOUW	149–158
Selenium toxicosis with focal symmetrical poliomyelomalacia in postweaning pigs in South Africa—MARY-LOUISE PENRITH and J.T.R. ROBINSON	171–179
Changes in the incidences of the different serovars of <i>Haemophilus paragallinarum</i> in South Africa: a possible explanation for vaccination failures—R.R. BRAGG, L. COETZEE and J.A. VERSCHOOR	217–226
Control of pest blackflies (Diptera: Simuliidae) along the Orange River, South Africa: 1990–1995—R.W. PALMER, M. EDWARDES and E.M.s NEVILL	289–304
South African wildlife	
Parasites of South African wildlife. XIV. Helminths of nyalas (<i>Tragelaphus angasii</i>) in the Mkuzi Game Reserve, KwaZulu-Natal—J. BOOMKER, D.G. BOOYSE, R. WATERMEYER, I.L. DE VILLIERS, I.G. HORAK and J.R.B. FLAMAND	265–271
Culicoides (Diptera: Ceratopogonidae) associated with livestock in the Onderstepoort area, Gauteng, South Africa as determined by light-trap collections—G.J. VENTER, R. MEISWINKEL, E.M. NEVILL and M. EDWARDES	315–325

South Africa
 Photosensitivity in South Africa. IX. Structure elucidation of a β -glucosidase-treated saponin from *Tribulus terrestris*, and the identification of saponin chemotypes of South African *T. terrestris*—A.L. WILKINS, C.O. MILES, W.T. DE KOCK, G.L. ERASMUS, A.T. BASSON and T.S. KELLERMAN 327–334

Southern Africa
 Geographical distribution and relative abundance of stock-associated *Culicoides* species (Diptera: Ceratopogonidae) in southern Africa, in relation to their potential as viral vectors—G.J. VENTER, E.M. NEVILL and T.C. DE K. VAN DER LINDE 25–38

Spatial (variations)
 Spatial and temporal variations in the commencement of seasonal activity in the Karoo paralysis tick, *Ixodes rubicundus*—L.J. FOURIE, I.G. HORAK and D.J. KOK 305–308

Species
 Tuberculosis in buffaloes (*Syncerus caffer*) in the Kruger National Park: spread of the disease to other species—D.F. KEET, N.P.J. KRIEK, M.-L. PENRITH, A. MICHEL and H. HUCHZERMEYER 239–244

***Spirocamallanus olseni* Campana-Rouget & Razarihelissoa**
 Redescriptions of *Dichelyne (Dichelyne) rasheedae* Petter, 1974 and *Spirocamallanus olseni* Campana-Rouget & Razarihelissoa, 1965, recorded for the first time from fish in Lake St. Lucia, South Africa—L.M. GIBBONS and J.E. SAAYMAN 39–46

Sternum
 The osteology of the African elephant (*Loxodonta africana*): vertebral column, ribs and sternum—A.J. BEZUIDENHOUT and C.D. SEEGERS 131–147

Structure elucidation
 Photosensitivity in South Africa. IX. Structure elucidation of a β -glucosidase-treated saponin from *Tribulus terrestris*, and the identification of saponin chemotypes of South African *T. terrestris*—A.L. WILKINS, C.O. MILES, W.T. DE KOCK, G.L. ERASMUS, A.T. BASSON and T.S. KELLERMAN 327–334

Struthio camelus
 Macroscopic blood supply to the hypophysis and hypothalamus of the ostrich (*Struthio camelus*)—M.Z.J. ELIAS, A.J. BEZUIDENHOUT and H.B. GROENEWALD 245–252

Sub-clinical lesions
 Biochemical and haematological values in abattoir pigs with and without sub-clinical lesions—M.O. MAKINDE, A.A. MAJOK and F.W.G. HILL 11–14

Subcellular localization
 Subcellular localization of the nonstructural protein NS3 of African horsesickness virus—M.A. STOLTZ, C.F. VAN DER MERWE, J. COETZEE and H. HUISMANS 57–61

Survival
 Host range, survival in dead hosts, cryopreservation, periodicity and morphology of *Plasmodium durae* Herman in experimental infections—F.W. HUCHZERMEYER 227–238

***Syncerus caffer*—Sparrman**
 An outbreak of bovine tuberculosis in a free-living African buffalo (*Syncerus caffer*—Sparrman) population in the Kruger National Park: a preliminary report—R.G. BENGIS, N.P.J. KRIEK, D.F. KEET, J.P. RAATH, V. DE VOS and H.F.A.K. HUCHZERMEYER 15–18

Syncerus caffer
 Tuberculosis in buffaloes (*Syncerus caffer*) in the: spread of the disease to other species—D.F. KEET, N.P.J. KRIEK, M.-L. PENRITH, A. MICHEL and H. HUCHZERMEYER 239–244

Tanzania
 The efficacy of amitraz against cattle ticks in Tanzania—L.K. KAGARUKI 91–96

Tatera leucogaster
 The comparative host status of red veld rats (*Aethomys chrysophilus*) and bushveld gerbils (*Tatera leucogaster*) for epifaunal arthropods in the southern Kruger National Park, South Africa—L.E.O. BRAACK, I.G. HORAK, LEONORA C. JORDAAN, JOYCE SEGERMAN and J.P. LOUW 149–158

Temporal variations
 Spatial and temporal variations in the commencement of seasonal activity in the Karoo paralysis tick, *Ixodes rubicundus*—L.J. FOURIE, I.G. HORAK and D.J. KOK 305–308

Third-stage larvae
 Cryopreservation of sheathed third-stage larvae of *Nematodirus spathiger*—G.A.P. TITTOY 63

Tissues	
Distribution of viral antigen in tissues of new-born lambs infected with Rift Valley fever virus—J.J. VAN DER LUGT, J.A.W. COETZER and M.M.E. SMIT	341–347
<i>Tragelaphus angasii</i>	
Parasites of South African wildlife. XIV. Helminths of nyalas (<i>Tragelaphus angasii</i>) in the Mkuzi Game Reserve, KwaZulu-Natal—J. BOOMKER, D.G. BOOYSE, R. WATERMEYER, I.L. DE VILLIERS, I.G. HORAK and J.R.B. FLAMAND	265–271
Transmission	
Transmission of the South African asinine strain of equine arteritis virus (EAV) among horses and between donkeys and horses—J.T. PAWESKA, H. AITCHISON, E.D. CHIRNSIDE and B.J.H. BARNARD	189–196
<i>Tribulus terrestris</i>	
Photosensitivity in South Africa. IX. Structure elucidation of a β -glucosidase-treated saponin from <i>Tribulus terrestris</i> , and the identification of saponin chemotypes of South African <i>T. terrestris</i> —A.L. WILKINS, C.O. MILES, W.T. DE KOCK, G.L. ERASMUS, A.T. BASSON and T.S. KELLERMAN	327–334
<i>Trypanosoma congolense</i>	
Heterophile antibodies to chicken erythrocytes in sheep infected with <i>Trypanosoma congolense</i> —R.A. JOSHUA, J.S. NEILS and L.A. OLADOSU	253–258
Tuberculosis	
Tuberculosis in buffaloes (<i>Syncerus caffer</i>) in the Kruger National Park: spread of the disease to other species—D.F. KEET, N.P.J. KRIEK, M.-L. PENRITH, A. MICHEL and H. HUCHZERMEYER	239–244
Usefulness	
The usefulness of faecal phosphorus and nitrogen in interpreting differences in livemass gain and the response to P supplementation in grazing cattle in arid regions—C.C. GRANT, H.C. BIGGS, H.H. MEISSNER and P.A. BASSON	121–126
Vaccination	
Field observations on the duration of immunity in cattle after vaccination against <i>Anaplasma</i> and <i>Babesia</i> species—K. TJORNEHOJ, J.A. LAWRENCE, A.P. WHITELAND and P.T. KAFUWA	1–5
Vaccination failures	
Changes in the incidences of the different serovars of <i>Haemophilus paragallinarum</i> in South Africa: a possible explanation for vaccination failures—R.R. BRAGG, L. COETZEE and J.A. VERSCHOOR	217–226
Venoms	
Screening of the venoms of two <i>Parabuthus scorpion</i> species on isolated cardiomyocytes—M.N. VAN AARDE, J.M. VAN ROOYEN and G. VAN ASWEGEN	127–130
Vertebral column	
The osteology of the African elephant (<i>Loxodonta africana</i>): vertebral column, ribs and sternum—A.J. BEZUIDENHOUT and C.D. SEEGERs	131–147
Viral antigen	
Distribution of viral antigen in tissues of new-born lambs infected with Rift Valley fever virus—J.J. VAN DER LUGT, J.A.W. COETZER and M.M.E. SMIT	341–347
Viral vectors	
Geographical distribution and relative abundance of stock-associated <i>Culicoides</i> species (Diptera: Ceratopogonidae) in southern Africa, in relation to their potential as viral vectors—G.J. VENTER, E.M. NEVILL and T.C. DE K. VAN DER LINDE	25–38
Zimbabwe	
Brucellosis surveillance and control in Zimbabwe: Bacteriological and serological investigation in dairy herd—K. MOHAN, P.V. MAKAYA, P. MUVAVARIRWA, G. MATOPE, E. HAHEMBE and A. PAWANDIWA	47–51