

## CHAPTER 7. REFERENCES

ACOCKS J.P.H. 1975. *Veld types of South Africa*. Killick D.J.B. (Ed). Botanical Research Institute. Department of Agricultural Technical Services. South Africa

ALVAREZ V., PÉREZ E. and HERRERO M.V. 1996. Epizootiologic instability of bovine populations against *Babesia bovis* (Piroplasmidia: Babesiidae) in the region of Poas, Costa Rica. *Annals of the New York Academy of Sciences* 79: 110-116

ANON. 1984. Ticks and tick-borne disease control. A practical field manual. Vol. II. *Tick Borne Disease Control*. Food and Agricultural Organization of the United Nations, Rome. pp 333-381

ARDINGTON P.C. 1982. The benefits of intensive tick control. *Proceedings of a symposium on ectoparasites of cattle*. South African Bureau of Standards, Pretoria. pp 136-140

ARTHUR D.R. and LOND'T, J.G.H. 1973. The parasitic cycle of *Boophilus decoloratus* (Koch 1844) (Acarina: Ixodidae). *Journal of the Entomological Society of southern Africa* 36: 87-116

BAKER J.A.F., SHAW R.D., THOMPSON G.E. and THORBURN J.A. 1968. Development of a composite dioxathion/chlorfenvinphos concentrate for control of single and multi-host ticks and their resistant strains in southern Africa. *Society for Chemical Industry* 33: 172-182

**University of Pretoria etd – Tonnesen, M (2005)**

BAKER J.A.F., JORDAAN J.O. and ROBERTSON W.D. 1981. A comparison of the resistance spectra to ixodicides of *Boophilus decoloratus* (Koch) and *Boophilus microplus* (Canestrini) in the Republic of South Africa and Transkei. In: Whitehead G.B. and Gibson J.D. (eds). *Tick Biology and control*. Tick Research Unit, Rhodes University. Grahamstown, South Africa. pp 103-108

BAKER J.A.F., DUCASSE F.B.W., SUTHERST R.W. and MAYWALD G.F. 1989. The seasonal tick populations on traditional and commercial cattle grazed at four altitudes in Natal. *Journal of the South African Veterinary Association* 60: 95-101

BAKER M.K. and DUCASSE F.B.W. 1967. Tick infestation of livestock in Natal. *Journal of South African Veterinary Medical Association* 38: 447-453

BARRÉ N., UILENBERG G., MOREL P.C. and CAMUS E. 1987. Danger of introducing heartwater onto the American mainland: potential role of indigenous and exotic *Amblyomma* ticks. *Onderstepoort Journal of Veterinary Research* 54: 405-417

BERKVENS D.L., GEYSEN D.M., CHAKA G., MADDER M. and BRANDT J.R.A. 1998. A survey of the ixodid ticks parasitising cattle in the Eastern Province of Zambia. *Medical and Veterinary Entomology* 12: 234-240

BESSENGER R. and SCHOE MAN J.H. 1983. Serological response of cattle to infection with *Babesia bigemina* and *Babesia bovis* in southern Africa. *Onderstepoort Journal of Veterinary Research* 50: 115-117

BIGALKE R.D., DE VOS A.J. and BARROWMAN R.P. 1976. The control of some tick-borne diseases in South Africa. *Bulletin de l'Office International des Epizooties* 86: 89-100

BIGGS H.C. and LANGENHOVEN J.W. 1984. Seasonal prevalence of ixodid ticks on cattle in the Windhoek district of South West Africa/Namibia. *Onderstepoort Journal of Veterinary Research* 51: 175-182

BOCK R.E., DE VOS A.J., KINGSTON T.G. and McLELLAN D.J. 1997. Effect of breed of cattle on innate resistance to infection with *Babesia bovis*, *B. bigemina* and *Anaplasma marginale*. *Australian Veterinary Journal* 75: 337-340

BOCK R.E., KINGSTON T.G. and DE VOS A.J. 1999a. Effect of breed of cattle on transmission rate and innate resistance to infection with *Babesia bovis* and *Babesia bigemina* transmitted by *Boophilus microplus*. *Australian Veterinary Journal* 77: 461-464

BOCK R.E., KINGSTON T.G., STANDFAST N.F. and DE VOS A.J. 1999b. Effect of cattle breed on innate resistance to inoculations of *Babesia bigemina*. *Australian Veterinary Journal* 77: 465-466

BOOMKER J., DU PLESSIS W.H. and BOOMKER E.A. 1983. Some helminth and arthropod parasites of the grey duiker, *Sylvicapra grimmia*. *Onderstepoort Journal of Veterinary Research* 50: 233-241

BONSMA J.C. 1981. Breeding tick-repellent cattle. In: Whitehead G.B. and Gibson J.D. (eds). *Tick Biology and control*. Tick Research Unit, Rhodes University. Grahamstown, South Africa. pp 67-77

BROWN C.G.D., HUNTER A.G. and LUCKINS A.G. 1990. Diseases caused by Protozoa. In: Sewell M.M.H. and Brocklesby D.W. (eds). *Handbook on animal diseases in the tropics*, 4<sup>th</sup> edition. Balliere Tindall, London

BRYANT B.A. and NORVAL R.A.I. 1985. Diseases affecting domestic animals in Manicaland. *Zimbabwe Veterinary Journal* 16: 9-17

BÜSCHER G. 1988. The infection of various tick species with *Babesia bigemina*, its transmission and identification. *Parasitology Research* 74: 324-330

CALLOW L.L. 1964. Strain immunology in babesiosis. *Nature* 204: 1213-1214

CALLOW L.L. 1965. *Babesia bigemina* in ticks grown on non-bovine hosts and its transmission to these hosts. *Parasitology* 55: 375-381

CALLOW L.L. 1967. Sterile immunity, coinfectious immunity and strain differences in *Babesia bigemina* infections. *Parasitology* 57: 455-465

CALLOW L.L. 1968. A note on homologous strain immunity in *Babesia argentina* infections. *Australian Veterinary Journal* 44: 268-269

CALLOW L.L. 1977. Vaccination against bovine babesiosis. In: Miller L.H., Pino J.A. and McKelvey J.J. Jr. (eds). *Immunity to blood parasites of animals and man*. Plenum Press, New York. pp 121-149

CALLOW L.L. 1979. Some aspects of the epidemiology and control of bovine babesiosis in Australia. *Journal of the South African Veterinary Association* 50: 353-356

CALLOW L. L. 1984. Babesiosis. Comparative aspects. In: *Animal health in Australia. Protozoal and Rickettsial diseases*. Volume 5. Australian Government Publishing Service, Canberra. pp123-160

CALLOW L.L. and HOYTE H.M.D. 1961. Transmission experiments using *Babesia bigemina*, *Theileria mutans*, *Borrelia* sp. and the cattle tick, *Boophilus microplus*. *Australian Veterinary Journal* 73: 381-390

CALLOW L.L., McGREGOR Q.D.A.H., PARKER R.J. and DALGLIESH R.J. 1974a. The immunity of cattle to *Babesia argentina* after drug sterilisation of infections of varying duration. *Australian Veterinary Journal* 50: 6-11

CALLOW L.L., McGREGOR Q.D.A.H., PARKER R.J. and DALGLIESH R.J. 1974b. Immunity of cattle to *Babesia bigemina* following its elimination from the host, with observations on antibody levels detected by the Indirect Fluorescent Antibody test. *Australian Veterinary Journal* 50: 12-15

CALLOW L.L., EMMERSON F.R., PARKER R.J. and KNOTT S.G. 1976a. Infection rates and outbreaks of disease due to *Babesia argentina* in unvaccinated cattle on 5 beef properties in south-eastern Queensland. *Australian Veterinary Journal* 52: 446-450

CALLOW L.L., QUIROGA Q.C. and MCCOSKER P.J. 1976b. Serological comparison of Australian and South American strains of *Babesia argentina* and *Anaplasma marginale*. *International Journal for Parasitology* 6: 307-310

CALLOW L.L. and STEWART N.P. 1978. Immunosuppression by *Babesia bovis* expressed against its tick vector, *Boophilus microplus*. *Nature* 272: 818-819

CALLOW L.L., KANHAI G.K. and VANDENBERGHE A. 1981. Serological comparison of strains of *Babesia bovis* occurring in Australia and Mozambique. *Tropical Animal Health and Production* 13: 79-82

CALLOW L.L. and DALGLIESH R.J. 1982. Immunity and immunopathology in babesiosis. In: Cohen S. and Warren K.S. (eds). *Immunology of parasitic infections*. Blackwell, Oxford , London, Edinburgh, Boston. pp 475-526

CALLOW L.L., ROGERS R. J. and de VOS A. J. 1993. Tick-borne diseases: Cattle – pathology and serology. In: Corner L.A. and Bagust T.J. (eds). *Australian standard diagnostic techniques for animal diseases*. Australian Agriculture Council, CSIRO Information Services, Melbourne. pp 1–21

CURNOW J.A. 1973a. Studies on antigenic changes and strain differences in *Babesia argentina* infections. *Australian Veterinary Journal* 49: 279-283

CURNOW J.A. 1973b. Studies on the epizootiology of bovine babesiosis in north eastern New South Wales. *Australian Veterinary Journal* 49: 284-289

DALGLIESH R.J. and STEWART N.P. 1979. Observations on the morphology and infectivity for cattle of *Babesia bovis* parasites in unfed *Boophilus microplus* larvae after incubation at various temperatures. *International Journal for Parasitology* 9: 115-120

DALGLIESH R.J., STEWART N.P. and MELLORS L.T. 1979. Some effects of temperature on the life-cycles of *Babesia bovis* and *Babesia bigemina* in the tick *Boophilus microplus*. *Australian Advances in Veterinary Science* 73-74

DALGLIESH R.J., CALLOW L.L., MELLORS L.T. and McGREGOR W. 1981. Development of a highly infective *Babesia bigemina* vaccine of reduced virulence. *Australian Veterinary Journal* 57: 8-11

DALGLIESH R.J. and STEWART N.P. 1982. Some effects of time, temperature and feeding on infection rates with *Babesia bovis* and *Babesia bigemina* in *Boophilus microplus* larvae. *International Journal for Parasitology* 12: 323-326

DALGLIESH R.J. and STEWART N.P. 1983. The use of tick transmission by *Boophilus microplus* to isolate pure strains of *Babesia bovis*, *Babesia bigemina* and *Anaplasma marginale* from cattle with mixed infections. *Veterinary Parasitology* 13: 317-323

DALLWITZ M.J., YOUNG A.S., MAHONEY D.F. and SUTHERST R.W. 1986. Comparative epidemiology of tick-borne diseases of cattle with emphasis on modelling. *International Journal for Parasitology* 17: 629-637

DALY G.D. and HALL W.T.K. 1955. A note on the susceptibility of British and some Zebu-type cattle to tick fever (Babesiosis). *Australian Veterinary Journal* 6: 152

DE LA FUENTE J., GARCÍA-GARCÍA J.C., GONZÁLEZ D.M., IZQUIERDO G. and OCHAGAVIA M.E. 2000. Molecular analysis of *Boophilus* spp. (Acari: Ixodidae) tick strains. *Veterinary Parasitology* 92: 209-222

DE VOS A.J. 1978. Immunogenicity and pathogenicity of three South African strains of *Babesia bovis* in *Bos indicus* cattle. *Onderstepoort Journal of Veterinary Research* 45: 119-124

DE VOS A. J. 1979. Epidemiology and control of bovine babesiosis in South Africa. *Journal of the South African Veterinary Association* 50: 357-362

DE VOS A.J. 1981. *Rhipicephalus appendiculatus*: Cause and vector of disease in South Africa. *Journal of the South African Veterinary Association* 52: 315-322

DE VOS A.J. and EVERY R. 1981. Epidemiology and control of bovine babesiosis in the Natal Midlands. In: Whitehead G.B. and Gibson J.D. (eds). *Tick biology and control*. Tick Research Unit, Rhodes University. Grahamstown, South Africa. pp 57-60

DE VOS A. J. and POTGIETER F. T. 1983. The effect of tick control on the epidemiology of bovine babesiosis. *Onderstepoort Journal of Veterinary Research* 50: 3-5

DE VOS A. J. and POTGIETER F. T. 1994. Bovine babesiosis. In: Coetzer J.A.W., Thomson G.R. and Tustin R.C. (eds.). *Infectious diseases of livestock, with special reference to southern Africa*. Oxford University Press, Cape Town. pp 278-291.

DOYLE, J.J. 1977. Antigenic variation in *Babesia*. In: Miller L.H., Pino J.A. and McKelvey J.J. Jr. (eds). *Immunity to blood parasites of animals and man*. Plenum Press, New York. pp 27-29

DREYER K., FOURIE L.J. and KOK D.J. 1998a. Tick diversity, abundance and seasonal dynamics in a resource-poor urban environment in the Free State Province. *Onderstepoort Journal of Veterinary Research* 65: 305-316

DREYER K., FOURIE L.J. and KOK D.J. 1998b. Individual host variations in tick infestations of cattle in a resource-poor community. *Onderstepoort Journal of Veterinary Research* 65: 291-296

**University of Pretoria etd – Tonnesen, M (2005)**

DREYER K., FOURIE L.J. and KOK D.J. 1998c. Epidemiology of tick-borne diseases of cattle in Botshabelo and Thaba Nchu in the Free State Province. *Onderstepoort Journal of Veterinary Research* 65: 285-289

DU PLESSIS J.L., LOOCK P.J. and LÜDEMANN C.J.F. 1992. Adult *Amblyomma hebraeum* burdens and heartwater endemic stability in cattle. *Onderstepoort Journal of Veterinary Research* 59: 75-89

FOURIE L.J., KOK D.J. and HEYNE H. 1996. Adult ixodid ticks on two cattle breeds in the south-western Free State, and their seasonal dynamics. *Onderstepoort Journal of Veterinary Research* 63: 19-23

FRANCIS J. 1966. Resistance of Zebu and other cattle to tick infestation and babesiosis with special reference to Australia: an historical review. *British Veterinary Journal* 122: 301-307

GITAU G.K., PERRY B.D., KATENDE J.M., McDERMOTT J.J., MORZARIA S.P. and YOUNG A.S. 1997. The prevalence of serum antibodies to tick-borne infections in cattle in smallholder dairy farms in Murang'a District, Kenya; a cross-sectional study. *Preventive Veterinary Medicine* 30: 95-107

GOTHE R. 1967a. Ticks in the South African Zoological Survey Collection. Part XII – the genera *Boophilus* Curtice, 1891 and *Margaropus* Karsch, 1879. *Onderstepoort Journal of Veterinary Research* 34: 81-108

GOTHE R. 1967b. Investigations into the cold resistance of the eggs and larvae of *Boophilus decoloratus* (Koch, 1844), *Boophilus microplus* (Canestrini, 1888) and *Margaropus winthemi* (Karsch, 1879). *Onderstepoort Journal of Veterinary Research* 34: 109-128

GRAY J.S. and POTGIETER F.T. 1981. The retention of *Babesia bigemina* infection by *Boophilus decoloratus* exposed to imidocarb dipropionate during engorgement. *Onderstepoort Journal of Veterinary Research* 48: 221-227

GRAY J.S. and DE VOS A.J. 1981. Studies on a bovine *Babesia* transmitted by *Hyalomma marginatum rufipes* Koch, 1844. *Onderstepoort Journal of Veterinary Research* 48: 215-223

HALL W.T.K. 1963. The immunity of calves to tick-transmitted *Babesia argentina* infection. *Australian Veterinary Journal* 39: 386-389

HALL W.T.K, TAMMEMAGI L. and JOHNSTON L.A.Y. 1968. Bovine babesiosis: The immunity of calves to *Babesia bigemina* infection. *Australian Veterinary Journal* 44: 259-264

HEWETSON R.W. 1981. Results of selection for cattle tick resistance in cattle. In: Whitehead G.B. and Gibson J.D. (eds). *Tick Biology and control*. Tick Research Unit, Rhodes University. Grahamstown, South Africa. pp 91-93.

HEYNE H. 1986. Differentiation of *Boophilus decoloratus* and *Boophilus microplus*.

*Journal of the South African Veterinary Association* 57: 251-252

HILBURN L.R., DAVEY R.B., GEORGE J.E. and POUND J.M. 1991. Non-random mating between *Boophilus microplus* and hybrids of *B. microplus* females and *B. annulatus* males, and its possible effect on sterile male hybrid control releases.

*Experimental & Applied Acarology* 11: 23-36

HILBURN L.R. and DAVEY R.B. 1992. Test for assortative mating between *Boophilus microplus* and *Boophilus annulatus* (Acari: Ixodidae). *Journal of Medical Entomology* 29: 690-697

HORAK I.G. 1982. Parasites of domestic and wild animals in South Africa. XV. The seasonal prevalence of ectoparasites on impala and cattle in the Northern Transvaal. *Onderstepoort Journal of Veterinary Research* 49: 85-93

HORAK I.G., POTGIETER F.T., WALKER J.B., DE VOS V. and BOOMKER J. 1983. The ixodid tick burdens of various large ruminant species in South African nature reserves. *Onderstepoort Journal of Veterinary Research* 50: 221-228

HORAK I.G., DE VOS V. and DE KLERK B.D. 1984. Parasites of domestic and wild animals in South Africa. XVII. Arthropod parasites of Burchell's zebra, *Equus burchelli*, in the Eastern Transvaal lowveld. *Onderstepoort Journal of Veterinary Research* 51: 145-154

HORAK I.G., SHEPPEY K., KNIGHT M.M. and BEUTHIN C.L. 1986. Parasites of domestic and wild animals in South Africa. XXI. Arthropod parasites of vaal ribbok, bontebok and scrub hares in the Western Cape Province. *Onderstepoort Journal of Veterinary Research* 53: 187-197

HORAK I.G., BOOMKER J., DE VOS V. and POTGIETER F.T. 1988. Parasites of domestic and wild animals in South Africa. XXIII. Helminth and arthropod parasites of warthogs, *Phacochoerus aethiopicus*, in the Eastern Transvaal lowveld. *Onderstepoort Journal of Veterinary Research* 55: 145-152

HOWELL C.J., WALKER J.B.S and NEVILLE, E.M. 1978. Ticks, mites and insects infesting domestic animals in South Africa. Part 1. Description and biology. *Science Bulletin no. 393*. Entomology section, Veterinary Research Institute, Onderstepoort 0110, South Africa.

HOYTE H.M.D. 1976. The tick-fever parasites of cattle. *Proceedings of the Royal Society of Queensland* 87: 5-8

JAGGER T.D., WEDDERBURN P.A., McCARTAN B. and HUNTER A.G. 1985. The distribution of *Boophilus* ticks in Swaziland. University of Edinburgh Royal (Dick) School of Veterinary Studies. Veterinary expedition to Swaziland 1985. Center for Tropical Veterinary Medicine, Edinburgh.

JAMES M.A., CORONADO A., LOPEZ W., MELENDEZ R. and RISTIC M. 1985.

Seroepidemiology of bovine anaplasmosis and babesiosis in Venezuela. *Tropical Animal Health and Production* 17: 9-18

JOHNSTON L. A. Y. 1967. Epidemiology of bovine babesiosis in northern Queensland. *Australian Veterinary Journal* 43: 427-432

JOHNSTON L. A. Y. 1968. The incidence of clinical babesiosis in cattle in Queensland. *Australian Veterinary Journal* 44: 265-267

JOHNSTON L.A.Y. AND TAMMEMAGI L. 1969. Bovine babesiosis: duration of latent infection and immunity to *Babesia argentina*. *Australian Veterinary Journal* 45: 445-449

JOHNSTON L.A.Y., PEARSON R.D. and LEATCH G. 1973. Evaluation of an Indirect Fluorescent Antibody test for detecting *Babesia argentina* infection in cattle. *Australian Veterinary Journal* 49: 373-377

JOHNSTON L. A. Y., LEATCH G. and JONES P.N. 1978. The duration of latent infection and functional immunity in Droughtmaster and Hereford cattle following natural infection with *Babesia argentina* and *Babesia bigemina*. *Australian Veterinary Journal* 54: 14-18

[\*\*University of Pretoria etd – Tonnesen, M \(2005\)\*\*](#)

JOHNSTON L. A. Y., HAYDOCK K.P. and LEATCH G. 1981. The effect of two systems of cattle tick (*Boophilus microplus*) control on tick populations, transmission of *Babesia* spp. and *Anaplasma* spp. and production of Brahman crossbred cattle in the dry tropics. *Australian Journal of Experimental Animal Husbandry* 21: 256-267

JONGEJAN F., PERRY B.D., MOOREHOUSE P.D.S., MUSISI F.L., PEGRAM R.G. and SNACKEN M. 1988. Epidemiology of bovine babesiosis and anaplasmosis in Zambia. *Tropical Animal Health and Production* 20: 234-242

JOOSTE K.F. 1966. A two-year study of the seasonal occurrence of adult ticks on a herd of red poll cows. *Rhodesia Agricultural Journal* 63: 97-99

JOYNER L.P., DONNELLY J., PAYNE R. and BROCKLESBY D.W. 1972. The Indirect Fluorescent Antibody Test for the differentiation of infections with *Babesia divergens* or *Babesia major*. *Research in Veterinary Science* 13: 515-518

KAISER M.N., SUTHERST R.W. and BOURNE A.S. 1982. Relationship between ticks and Zebu cattle in southern Uganda. *Tropical Animal Health and Production* 14: 63-74

KATSANDE T.C., MAZHOUWU W., TURTON J.A. and MUNODZANA D. 1996. *Babesia bovis* case reports and the current distribution of *Boophilus microplus* in Zimbabwe. *Zimbabwe Veterinary Journal* 27: 33-36

[\*\*University of Pretoria etd – Tonnesen, M \(2005\)\*\*](#)

KATSANDE T.C., MORE S.J., BOCK R.E., MABIKACHECHE L., MOLLOY J.B. and NCUBE C. 1999. A serological survey of bovine babesiosis in northern and eastern Zimbabwe. *Onderstepoort Journal of Veterinary Research* 66: 255-263

KELLER G. and WARRACK B. 2000. *Statistics for Management and Economics*. Duxbury. Thompson Learning. Pacific Grove, USA

LATIF B.M.A., SAID M.S. and ALI S.R. 1979. Effect of age on the immune response of cattle experimentally infected with *Babesia bigemina*. *Veterinary Parasitology* 5: 307-314

LATIF A.A., PUNYUA S., NOKOE S. and CAPSTIC P.B. 1991. Tick infestations on Zebu cattle in Western Kenya: individual host variation. *Entomological Society of America* 28: 114-121

LAWRENCE J. A. and NORVAL R.A.I. 1979. A history of ticks and tick-borne diseases of cattle in Rhodesia. *Rhodesian Veterinary Journal* 10: 28-40

LEVINE N.D. 1971. Taxonomy of the piroplasms. *Transactions of the American Microscopical Society* 90: 2-33

LEVINE N.D. 1985. *Veterinary Protozoology*. Iowa State University Press, Ames

LÖHR K.F. 1972. Immunity to *Babesia bigemina* in experimentally infected cattle. *Journal of Protozoology* 19: 658-660

**University of Pretoria etd – Tonnesen, M (2005)**

LOND T J.G.H. 1976. Fertilization capacity of *Boophilus decoloratus* (Koch, 1844) (Acarina: Ixodidae). *Onderstepoort Journal of Veterinary Research* 43: 143-146

LOND T J.G.H., HORAK I.G. and DE VILLIERS I.L. 1979. Parasites of domestic and wild animals in South Africa. XIII. The seasonal incidence of adult ticks (Acarina: Ixodidae) on cattle in the Northern Transvaal. *Onderstepoort Journal of Veterinary Research* 46: 31-39

LOW A.B. and REBELO A.G. (eds). 1996. *Vegetation of South Africa, Lesotho and Swaziland*. Department of Environmental Affairs & Tourism, Pretoria. pp 20-29

MACLEOD J. 1970. Tick infestation patterns in the southern province of Zambia. *Bulletin of Entomological Research* 60: 253-274

MACLEOD J. and MWANAUMO B. 1978. Ecological studies of ixodid ticks (Acari: Ixodidae) in Zambia. IV. Some anomalous infestation patterns in the northern and eastern regions. *Bulletin of Entomological Research* 68: 409-429

MAHONEY D. F. 1969. Bovine babesiosis: a study of factors concerned in transmission. *Annals of Tropical Medicine and Parasitology* 63: 1-14

MAHONEY D. F. 1974. The application of epizootiological principles in the control of babesiosis in cattle. *Bulletin de l'Office International des Epizooties* 81: 123 - 138.

MAHONEY D. F. 1979. The epidemiology of babesiosis. *Proceedings of the 56<sup>th</sup> Annual conference of the Australian Veterinary Association*. Townsville, Australia. pp 9-11

MAHONEY D. F. and MIRRE G. B. 1971. Bovine babesiosis: estimation of infection rates in the tick vector *Boophilus microplus* (Canestrini). *Annals of Tropical Medicine and Parasitology* 65: 309-317

MAHONEY D.F. and ROSS D. R. 1972. Epizootiological factors in the control of bovine babesiosis. *Australian Veterinary Journal* 48: 292-298

MAHONEY D. F., WRIGHT I.G. and MIRRE G. B., 1973. Bovine babesiosis: The persistence of immunity to *Babesia argentina* and *B. bigemina* in calves (*Bos taurus*) after naturally acquired infection. *Annals of Tropical Medicine and Parasitology* 67: 197-203

MAHONEY D. F. and MIRRE G. B. 1979. A note on the transmission of *Babesia bovis* (syn *B. argentina*) by the one-host tick, *Boophilus microplus*. *Research in Veterinary Science* 26: 253-254

MAHONEY D. F., KERR J.D., GOODGER B. V. and WRIGHT I. G. 1979a. The immune response of cattle to *Babesia bovis* (syn. *B. argentina*). Studies on the nature and specificity of protection. *International Journal for Parasitology* 9: 297-306

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MAHONEY D.F., WRIGHT I.G. and GOODGER B.V. 1979b. Immunity in cattle to *Babesia bovis* after single infections with parasites of various origin. *Australian Veterinary Journal* 55: 10-12

MAHONEY D.F., WRIGHT I.G., GOODGER B.V., MIRRE G.B., SUTHERST R.W. and UTECH K.B.W. 1981. The transmission of *Babesia bovis* in herds of European and Zebu X European cattle infested with the tick, *Boophilus microplus*. *Australian Veterinary Journal* 57: 461-469

MARTIN, S.W, MEEK A.H. and WILLEBERG P. 1987. *Veterinary Epidemiology*. Iowa State University Press, Ames.

MASON C.A. and NORVAL R.A.I. 1980. The ticks of Zimbabwe. 1. The genus *Boophilus*. *Zimbabwe Veterinary Journal* 11: 36-43

MASON C.A. and NORVAL R.A.I. 1981. The transfer of *Boophilus microplus* (Acarina: Ixodidae) from infested to uninfested cattle under field conditions. *Veterinary Parasitology* 8: 185-188

MATSON B.A. and NORVAL R.A.I. 1977. The seasonal occurrence of adult ixodid ticks on cattle on a Rhodesian highveld farm. *Rhodesian Veterinary Journal* 8: 2-6

McCOSKER P.J. 1981. Global importance of babesiosis. In: Ristic M. and Kreier J.P. (eds). *Babesiosis*. Academic Press, New York. pp 2-24

MOHAMMED A.N. 1976. Prevalence and experimental transmission of bovine piroplasms in northern Nigeria. *Bulletin of Animal Health and Production in Africa* 24: 171-180

NEITZ W.O. 1941. The occurrence of *Babesia bovis* in South Africa. *Journal of the South African Veterinary Medical Association* 12: 62-66

NORVAL R.A.I. 1978. The effects of partial breakdown of dipping in African areas in Rhodesia. *Rhodesian Veterinary Journal* 9: 9-16

NORVAL R.A.I. 1979. Tick infestations and tick-borne diseases in Zimbabwe/Rhodesia. *Journal of the South African Veterinary Association* 50: 289-292

NORVAL R.A.I. 1982. Arguments against intensive dipping. In: *Proceedings of a symposium on ectoparasites of cattle*. South African Bureau of Standards. Pretoria. pp 141-148

NORVAL R.A.I. 1983. The ticks of Zimbabwe. VII. The genus *Amblyomma*. *Zimbabwe Veterinary Journal* 14: 3-18

NORVAL R.A.I., FIVAZ B.H., LAWRENCE J.A. and DAILLECOURT T. 1983. Epidemiology of tick-borne diseases of cattle in Zimbabwe. 1. Babesiosis. *Tropical Animal Health and Production* 15: 87-94

NORVAL R.A.I. and SHORT N.J. 1984. Interspecific competition between *Boophilus decoloratus* and *Boophilus microplus* in southern Africa. In: Griffiths D.A. and Bowman C.E. (eds). *Acarology VI*. Ellis Horwood Limited, Chichester. pp 1242-1246

NORVAL R.A.I. and SUTHERST R.W. 1986. Assortative mating between *Boophilus decoloratus* and *Boophilus microplus* (Acari: Ixodidae). *Journal of Medical Entomology* 23: 459-460

NORVAL R.A.I. and PERRY B.D. 1990. Introduction, spread and subsequent disappearance of the brown ear-tick, *Rhipicephalus appendiculatus*, from the southern lowveld of Zimbabwe. *Experimental & Applied Acarology* 9: 103-111

NORVAL R.A.I., PERRY B.D. and HARGREAVES S.K. 1992a. Tick and tick-borne disease control in Zimbabwe: what might the future hold? *Zimbabwe Veterinary Journal* 23: 1-15

NORVAL R.A.I., BARRET J.C., PERRY B.D. and MUKHEBI A.W. 1992b. Economics, epidemiology and ecology: a multidisciplinary approach to the planning and appraisal of ticks and tick-borne disease control in southern Africa. In: Fivaz B., Petney T. and Horak I. (eds). *Tick vector biology, medical and veterinary aspects*. Springer-Verlag, Berlin. pp 35-54

*OIE Manual of Standards for Diagnostic Tests and Vaccines*. 3<sup>rd</sup> edition, 1996. Office International des Epizooties, Paris

[\*\*University of Pretoria etd – Tonnesen, M \(2005\)\*\*](#)

O'KELLY J.C. and SEIFERT G.W. 1969. Relationships between resistance to *Boophilus microplus*, nutritional status, and blood composition in Shorthorn X Hereford cattle. *Australian Journal of Biological Science* 22: 1497-1506

OUHELLI H. and SCHEIN E. 1988. Effect of temperature on transovarial transmission of *Babesia bigemina* (Smith and Kilborne, 1893) in *Boophilus annulatus* (Say, 1821). *Veterinary Parasitology* 26: 229-235

PAPADOPoulos B, PERIÉ N.M. and UILENBERG G. 1996. Piroplasms of domestic animals in the Macedonia region of Greece. 1. Serological cross-reactions. *Veterinary Parasitology* 63: 41-56

PAYNE R.C. and OSORIO O. 1990. Tick-borne diseases of cattle in Paraguay. 1. Seroepidemiological studies on anaplasmosis and babesiosis. *Tropical Animal Health and Production* 22: 53-60

PEGRAM R.G., PERRY B.D., MUSISI F.L. and MWANAUMO B. 1986. Ecology and phenology of ticks in Zambia: Seasonal dynamics on cattle. *Experimental & Applied Acarology* 2: 25-45

PERRY B.D., MWANAUMO B., SCHELS H.F., EICHER E and ZAMAN M.R. 1984. A study of health and productivity of traditionally managed cattle in Zambia. *Preventive Veterinary Medicine* 2: 633-653

PETER T.F., PERRY B.D., O'CALLAGHAN C.J., MEDLEY G.F., SHUMBA W., MADZIMA W., BURRIDGE M.J. and MAHAN S.M. 1998. The distribution of heartwater in the highveld of Zimbabwe, 1980-1997. *Onderstepoort Journal of Veterinary Research* 65: 177-187

PETNEY T.N., VAN ARK H. and SPICKETT A.M. 1990. On sampling tick populations: the problem of overdispensation. *Onderstepoort Journal of Veterinary Research* 57:123-127

POTGIETER F.T. 1977. The life cycle of *Babesia bovis* and *Babesia bigemina* in ticks and in cattle in South Africa. Ph.D. Thesis, Rand Afrikaans University, South Africa.

POTGIETER F.T. and ELS H.J. 1977. Light and electron microscopic observations on the development of *Babesia bigemina* in larvae, nymphae and non-replete females of *Boophilus decoloratus*. *Onderstepoort Journal of Veterinary Research* 44: 213-232

POTGIETER F.T. and ELS H.J. 1979. An electron microscopic study of intra-erythrocytic stages of *Babesia bovis* in the brain capillaries of infected splenectomized calves. *Onderstepoort Journal of Veterinary Research* 46: 41-49

RECHAV Y. 1982. Dynamics of tick populations (Acaris: Ixodidae) in the Eastern Cape Province of South Africa. *Journal of Medical Entomology* 19: 679-700.

RECHAV Y., NORVAL R.A.I. and OLIVER J.H. Jr. 1982. Interspecific mating of *Amblyomma hebraeum* and *Amblyomma variegatum* (Acari: Ixodidae). *Journal of Medical Entomology* 19: 139-142

RECHAV Y. and ZEEDERBERG M.E. 1986. Tick populations of two breeds of cattle under field conditions, with a note on blood components related to host resistance. In: Sauer J.R. and Hair J.A. (eds). *Morphology, physiology and behavioral biology of ticks*. Ellis Horwood, Chichester. pp 446-456

RECHAV Y. and KOSTRZEWSKI M.W. 1991. Relative resistance of six cattle breeds to the tick *Boophilus decoloratus* in South Africa. *Onderstepoort Journal of Veterinary Research* 58: 181-186

RIEK R.F. 1963. Immunity to babesiosis. In: Garnham P.C.C, Pierce A.E. and Roitt I. (eds). *Immunity to protozoa*. A symposium of The British Society for Immunology. Blackwell Scientific Publications, Oxford

RIEK R.F. 1964. The life cycle of *Babesia bigemina* (Smith and Kilborne, 1893) in the tick vector *Boophilus microplus* (Canestrini). *Australian Journal of Agricultural Research* 15: 802-821

RIEK R.F. 1966. The life cycle of *Babesia argentina* (Lignières, 1903) (Sporozoa: Piroplasmidea) in the tick vector *Boophilus microplus* (Canestrini). *Australian Journal of Agricultural Research* 17: 247-254

RIEK R. F. 1968. Babesiosis. In: Weinman D. and Ristic M. (eds). *Infectious blood diseases in man and animal*. Vol. 2. Academic Press, New York. pp 246-256

ROBERTSON W.D. 1981. A four-year study of the seasonal fluctuations in the occurrence of the blue tick *Boophilus decoloratus* (Koch) in the coastal regions of the Eastern Cape. In: Whitehead G.B. and Gibson J.D. (eds). *Tick Biology and control*. Tick Research Unit, Rhodes University, Grahamstown, South Africa. pp 199-204

ROSS J.P.J. and LÖHR K.F. 1970. Transmission and persistence of colostral antibodies to *Babesia bigemina* and *Anaplasma marginale*. *Zeitschrift für Tropenmedizin und Parasitologie* 21: 410-411

SMEENK I., KELLY P.J., WRAY K., MUSUKA G., TREES A.J. and JONGEJAN F. 2000. *Babesia bovis* and *B. bigemina* DNA detected in cattle and ticks from Zimbabwe by polymerase chain reaction. *Journal of the South African Veterinary Association* 71: 21-24

SMITH R.D. 1983. *Babesia bovis*: Computer simulation of the relationship between the tick vector, parasite, and bovine host. *Experimental Parasitology* 56: 27-40

SMITH R.D., MOLINAR E., LARIOS F., MONROY J., TRIGO F. and RISTIC M. 1980. Bovine babesiosis: Pathogenicity and heterologous species immunity of tick-borne *Babesia bovis* and *B. bigemina* infections. *American Journal of Veterinary Research* 41: 1957-1965

SMITH R.D. and KAKOMA I. 1989. A reappraisal of vector control strategies for babesiosis. *Transactions of the Royal Society of Tropical Medicine and Hygiene* 83: 43-52

SOLOMON K.R., HEYNE H. and VAN KLEF J. 1979. The use of a population approach in the survey of resistance to pesticides in ticks in southern Africa. In: Rodriguez J.G. (ed). *Recent advances in Acarology*. Vol. II. Academic Press. New York. pp 65-69

SOLORIO-RIVERA J.L., RODRÍGUEZ-VIVAS R.I., PÉREZ-GUTIERREZ E. and WAGNER G. 1999. Management factors associated with *Babesia bovis* seroprevalence in cattle from eastern Yucatán, Mexico. *Preventive Veterinary Medicine* 40: 261-269

SPICKETT A.M. and MALAN J.R. 1978. Genetic incompatibility between *Boophilus decoloratus* (Koch, 1844) and *Boophilus microplus* (Canestrini, 1888) and hybrid sterility of Australian and South African *Boophilus microplus* (Acarina: Ixodidae). *Onderstepoort Journal of Veterinary Research* 45: 149-153

SPICKETT A.M., DE KLERK D., ENSLIN C.B. and SCHOLTZ M.M. 1989. Resistance of Nguni, Bonsmara and Hereford cattle to ticks in a bushveld region of South Africa. *Onderstepoort Journal of Veterinary Research* 56: 245-250

SUTHERST R.W. 1987a. The role of models in tick control. In: Hughes K.B. (ed). *Proceedings of the International Conference of Veterinary Preventive Medicine and Animal Production*. Australian Veterinary Association, Melbourne. pp 32-37

[University of Pretoria etd – Tonnesen, M \(2005\)](#)

SUTHERST R.W. 1987b. The dynamics of hybrid zones between tick (Acari) species.

*International Journal for Parasitology* 17: 921-926

SUTHERST R.W. 1998. Implications of global change and climate variability for vector-borne diseases: generic approaches to impact assessments. *International Journal for Parasitology* 28: 935-945

SUTHERST R.W., WHARTON R.H., COOK I.M., SUTHERLAND I.D. and BOURNE A.S. 1979. Long-term population studies on the cattle tick (*Boophilus microplus*) on untreated cattle selected for different levels of tick resistance. *Australian Journal of Agricultural Research* 30: 353-368

SUTHERST R.W. and COMINS H.N. 1979. The management of acaricide resistance in the cattle tick, *Boophilus microplus* (Canestrini) (Acari: Ixodidae), in Australia. *Bulletin of Entomological Research* 69: 519-537

SUTHERST R.W. and UTECH K.B.W. 1981. Controlling livestock parasites with host resistance. In: Pimentel D. (Ed). *CRC Handbook of pest management in agriculture*. Vol. II. CRC Press, Boca Raton, Florida. pp 385-407

SUTHERST R.W. and MAYWALD G.F. 1985. A computerised system for matching climates in ecology. *Agriculture, Ecosystem and Environment* 13: 281-299

SUTHERST R.W. and MAYWALD G.F. 1986. Modelling tick management. 2. The role of CLIMEX. In: *Ticks and Tick-borne Diseases*. Proceedings of an international workshop on the ecology of ticks and epidemiology of tick-borne diseases, Zimbabwe. ACIAR Proceedings 17: 137-140

SUTHERST R.W., MAYWALD G.F. and BOTTOMLEY W. 1991. From CLIMEX to PESKY, a generic expert system for pest risk assessment. *Bulletin OEPP EPPO Bulletin* 21: 595-608

SUTHERST R.W., FLOYD R.B., MAYWALD G.F. and YEOMANS A.F. 1995. Modelling for management of African ticks. In: *Second International Conference on Tick-borne Pathogens at the Host-Vector Interface*. Vol. I. A Global Perspective. Proceedings and Abstracts. Kruger National Park, South Africa. pp 36-44

THEILER G. 1949. Zoological survey of the Union of South Africa: Tick survey. Part II. Distribution of *Boophilus (Palpoboophilus) decoloratus*, the blue tick. *Onderstepoort Journal of Veterinary Science and Animal Industry* 22: 255-268

THEILER, G. 1962. The Ixodidae parasites of vertebrates in Africa south of the Sahara. Project S 9958. *Report to the Director of Veterinary Services*. Onderstepoort, South Africa. pp 154-159

THEILER G. 1975. Past workers on tick and tick-borne diseases in southern Africa. *Journal of the South African Veterinary Association* 46: 303-310

THEILER G. and ROBINSON B. 1954. Tick survey VIII. Checklists of ticks recorded from the Belgian Congo and Ruanda Urundi, from Angola and from Northern Rhodesia.

*Onderstepoort Journal of Veterinary Research* 3: 447-461

THOMPSON K.C., TODOROVIC R.A. and HIDALGO R.J. 1977. Antigenic variation of *Babesia bigemina*. *Research in Veterinary Science* 23: 51-54

THRUSFIELD, M. 1995. *Veterinary epidemiology*, (2<sup>nd</sup> ed.) Blackwell Science, Oxford

TICE G. A. 1997. Tick population dynamics and the serological prevalence of tick-borne diseases in four communally grazed areas in southern Africa. M. Med. Vet. thesis, Medical University of South Africa.

TICE G. A., BRYSON N. R., STEWART C. G., DU PLESSIS B. and DE WAAL D. T. 1998. The absence of clinical disease in cattle in communal grazing areas where farmers are changing from an intensive dipping programme to one of endemic stability to tick-borne diseases. *Onderstepoort Journal of Veterinary Research* 65: 169–175

TJORNEHOJ K., LAWRENCE J.A., WHITELAND A.P. and KAFUWA P.T. 1996. Field observations on the duration of immunity in cattle after vaccination against *Anaplasma* and *Babesia* species. *Onderstepoort Journal of Veterinary Research* 63: 1-5

TODOROVIC R.A. and LONG R.F. 1976. Comparison of Indirect Fluorescent Antibody Test (IFA) with Complement Fixation (CF) Test for diagnosis of *Babesia* spp infections in Colombian cattle. *Tropenmedizinische Parasitologie* 27: 169-181

TRUEMAN K.F. and BLIGHT G.W. 1978. The effect of age on resistance of cattle to *Babesia bovis*. *Australian Veterinary Journal* 54: 301-305

UTECH K.B.W., WHARTON R.H. and KERR J.D. 1978. Resistance to *Boophilus microplus* (Canestrini) in different breeds of cattle. *Australian Journal of Agricultural Research* 29: 885-95

WAGLAND B. M. 1975. Host resistance to cattle tick (*Boophilus microplus*) in Brahman (*Bos indicus*) cattle. I. Responses of previously unexposed cattle to four infestations with 20,000 larvae. *Australian Journal of Agricultural Research* 26: 1073-1080

WAGLAND B. M. 1978. Host resistance to cattle tick (*Boophilus microplus*) in Brahman (*Bos indicus*) cattle. II. The dynamics of resistance in previously unexposed and exposed cattle. *Australian Journal of Agricultural Research* 29: 395-400

WALKER J.B. 1987. The tick vectors of *Cowdria ruminantium* (Ixodoidea, Ixodidae, genus *Amblyomma*) and their distribution. *Onderstepoort Journal of Veterinary Research* 54: 353-379

WALKER J.B. 1991. A review of the ixodid ticks (Acari, Ixodidae) occurring in southern Africa. *Onderstepoort Journal of Veterinary Research* 58: 81-105

WALKER J.B., MEHLITZ D and JONES G.E. 1978. Genus *Boophilus* – the blue ticks. *Notes on the ticks of Botswana*. GTZ, Eschborn. pp 30-35

WEDDERBURN P.A., JAGGER T.D., McCARTAN B. and HUNTER A.G. 1991.  
Distribution of *Boophilus* species ticks in Swaziland. *Tropical Animal Health and Production* 23: 167-171

WRIGHT I.G., GOODGER B.V., LEATCH G., AYLWARD J.H., RODE-BRAMANIS K. and WALTISBUHL D.J. 1987. Protection of *Babesia bigemina*-immune animals against subsequent challenge with virulent *Babesia bovis*. *Infection and Immunity* 55: 364-368

ZWART D. and BROCKLESBY D.W. 1979. Babesiosis: non-specific resistance, immunological factors and pathogenesis. *Advances in Parasitology* 17: 49-113