

28th June, 1966

WFB/PEH

The Director of Veterinary Services.CATTLE DEATHS: INYANGA NORTH, T.T.L. : PRELIMINARY REPORT

On Saturday the 18th June, 1966, the Provincial Veterinary Officer, Untali reported that he had been informed by the Animal Health Inspector, Inyanga that upwards of 40 deaths had occurred in cattle from the inoculation centres, Chifambe, Samakande, Manwere and Matisi.

An excellent detailed post mortem report from Animal Health Inspector French, indicated extensive liver damage and the drug Iso-metamidium was thought to be the most likely cause.

Cattle at the affected centres were treated on the week beginning 9th May.

Berenil sanitivation was carried out (the usual routine x 2 yearly inoculation) about 10 days later.

Deaths commenced approximately 3 weeks later and increased to the end of the 4th week since when they have decreased in numbers.

On the 27th June, I travelled to the area together with the Senior Veterinary Research Officer (Trypanosomiasis) and attended inspections at Chifambe (including Samakande) and Chapatoronga. Visits were paid to the Elim Mission near Ruangwe.

24 blood specimens were taken from the centres mentioned and the following tests carried out in the field.

Hb, R.B.C. count W.B.C. count P.C.V. Sera were separated and brought back to Salisbury for examination of alkaline phosphatase and transaminase levels, bilirubin estimation, blood urea and Albumin/globulin. Smears were taken for a differential W.B.C. count.

Material was obtained from a typical advanced case, which was killed for the purpose, for histopathological examination, culture and transmission experiments.

EPIZOOTIOLOGY:

Deaths which have occurred so far total 152 with another 154 showing symptoms. These are likely to die.

TABLE I

Matisi	10	Dead	7	Sick	% Affected	4.4
Manwere	7	"	7	"	"	5.3
Samkande	13	"	18	"	"	4.2
Chifambe	6	"	14	"	"	4.5
Nyamasara	42	"	36	"	"	11.2
Chapatoronga	19	"	3	"	"	4.6
Ruangwe (50% only)	55	"	69	"	"	22.3
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	152		154			
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The incidence of the condition is widespread throughout this central area but with a tendency to be concentrated at certain kraals. e.g. one owner at Chapatoronga had lost 5/6, others had had no deaths.

Unaffected cattle vary from fair to good, better than usual for the time of year.

As far as is known at present, cases have occurred only at the centres mentioned in the table.

CENTRE	REGION	DATE LAST SAMORIN	TOTAL TREATS SAMORIN	LAST BER.
Matisi	Sam 1 mpk x 2 mthly	13.5	7	27.5
Manwere	" "	12.5	7	26.5
Chifambe	" "	10.5	7	24.5
Samakande	" "	11.5	7	25.5
Chapatoronga	" " x 3 mthly	17.5	5	24.5
Nyamasana	" "	18.5	5	25.5
Ruangwe	" "	19-20.5	5	26.27.5
Fombe	" "	.4	2	8.2 No deaths reported.
Nani	" "	29.30.3	2	28.4.65 " "

SYMPTOMS:

Affected cattle became ill and showed diarrhoea for from 4 days, to a week before death. In the late stages the animals appeared tucked up dehydrated, weak and thin. The temperatures were sub-normal. There was ruminal stasis and the faeces were hard dry and mucus covered.

/Many animals

Many animals showed evidence, by a crusting around the eyes of excessive lacrimation. A few of the affected showed excessive salivation and increased nasal discharge. Some sick had recovered. In all cases one of the early signs was a capricious appetite.

POST MORTEM

The Provincial Veterinary Officer, Umtali will give a separate detailed report.

The dehydration and ruminal stasis was confirmed.

The main lesion appeared to be a massive acute fatty degeneration of the liver. A similar state existed in the kidney.

Coronary petechiae were noted. Animal Health Inspector French's observations of hyperaemic patches in the intestinal wall were not repeated.

HISTOPATHOLOGY

The Veterinary Pathologist will no doubt issue a detailed report.

Extensive fatty change was noted in the liver and kidney.

SERA:

The bilirubin and transaminase (G.O.T. & G.P.T.) levels were within the range of normality. The results of Serum urea and alkaline phosphatase estimations are not yet to hand.

BLOOD:

No significant changes were noted in the other blood constituents. As expected there was haemo-concentration. The clotting time was greatly extended in many cases and clot retraction appeared abnormal.

Azurophilic granules in the large lymphocytes were marked in several cases.

DISCUSSION:

There is of course a strong tendency to incriminate the drugs but the following should be borne in mind.

- (1) No similar toxicity has been reported elsewhere.
- (2) At other centres in Rhodesia both experimental and otherwise and in some cases at higher dosages, no systemic toxicity due to Samorin has been noted.
- (3) Other members of the phenanthridenes with hepatotoxic properties produce focal necrosis and a raised serum transaminase. In the case of dimidium bromide photo-sensitisation is noted.
- (4) Reference to Table II will show that if accumulative toxicity has taken place it should not have appeared at the same time at all centres some being on 2 monthly and some on 3 with a different total number of treatments.
- (5) The lesions are acute and therefore should have appeared much sooner after the actual treatment.

EXPERIMENTATION

has been undertaken in Salisbury with a view to producing toxicity with

- (1) Isometamidium Alone.
- (2) Isometamidium + Berenil.
- (3) Berenil Alone.

The affected area will be visited from the 4th - 8th July by the Chief Veterinary Officer (Trypanosomiasis) The Senior Veterinary Research Officer (Trypanosomiasis) and possibly a Botanist.

Attention will be paid to the fringe areas where no prophylactic regimen is in force.

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