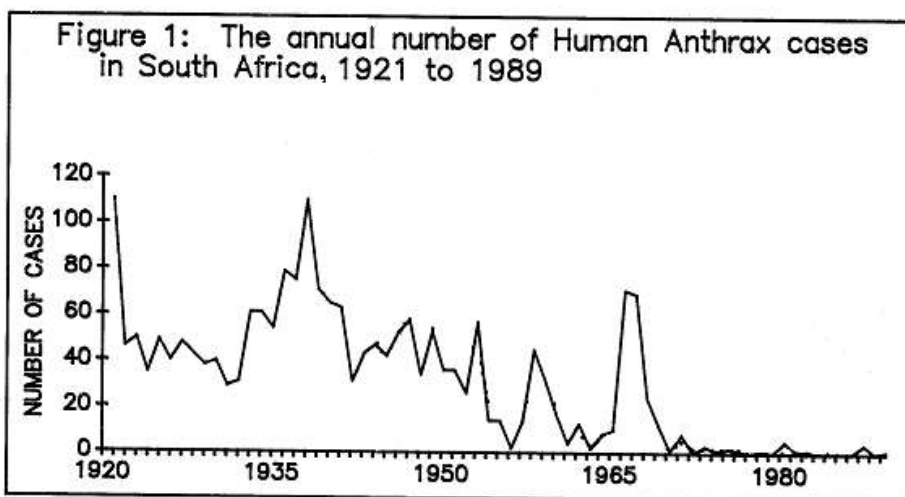
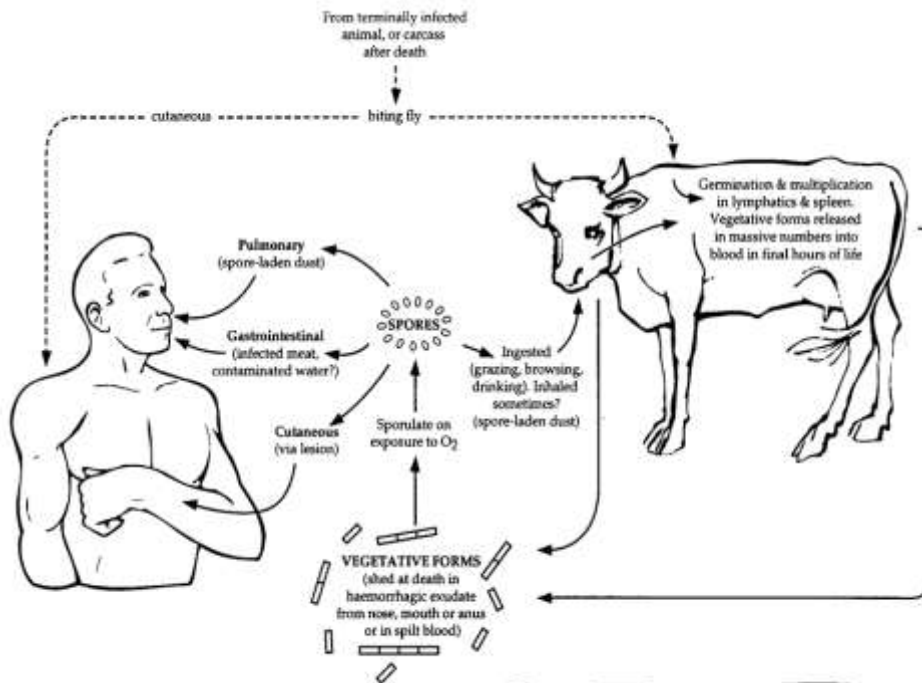


As anthrax spreads: a human health perspective

John Frean, National Institute for Communicable Diseases

Anthrax in South Africa





2004/2005 outbreak

- 24 December 2004: dead cow was butchered in Delporthoop
- meat was sold or given to residents of Delpoldshoop and Schmidtsdrif, 50 km away
- 31 December: 2 cases admitted to Kimberley Hospital, with papular ulceration of hands and arms and marked oedema extending to upper arms
- later the typical 'malignant pustule' was observed





- active surveillance: 12 additional cases by 7 January 2005
- 3 cases were confirmed on culture
- 2 from pus swabs
- 1 from blood culture in a patient who subsequently died
- remaining cases responded to antibiotic therapy and recovered
- case fatality was 7.1%



- animal health records: the farmer's cattle were not vaccinated in 2004
- interdepartmental Outbreak Response Team instituted aggressive public health interventions in partnership with the local communities
- effective in controlling further spread of the outbreak
- cases were all in members of the Batlhaping people
- anthrax is almost unheard of among the San: different cultural practices

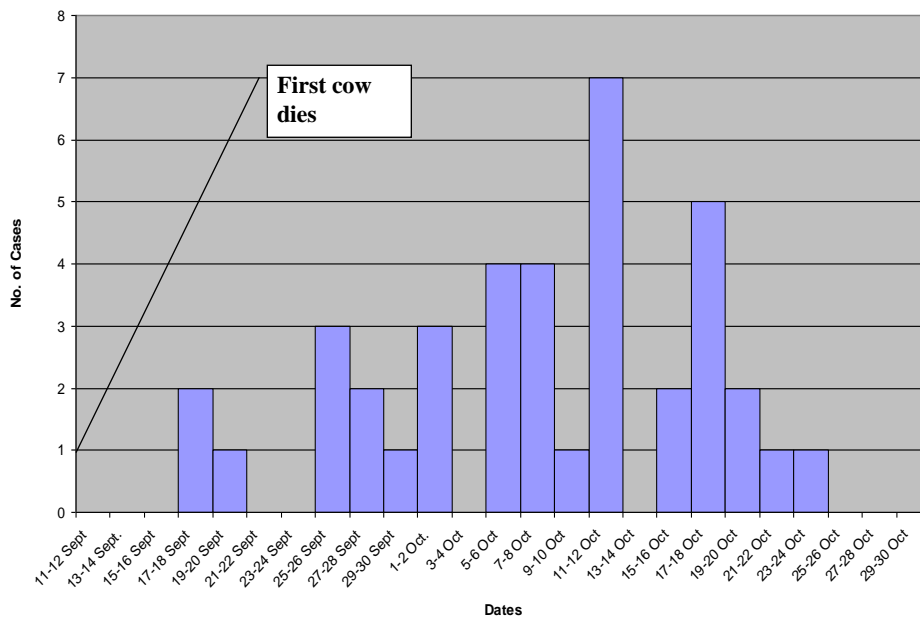








Musadzi Anthrax Epi- Curve Sept-Oct 2004



Musadzi outbreak Sept-Oct '04

Risk factors	Odds Ratio	p
Skinning of animal that has died of unknown causes	3.8	0.009
Preparation of such meat	3.1	0.02
Member of religious sect that allows consumption of such meat	5.2	0.001
Cattle deaths in household	2.9	0.05
Cattle deaths in village	4	0.08

Anthrax in Humans

- 1 human cutaneous case to 10 livestock deaths
- 1 human enteric case to 30-60 infected animals eaten
- 100-200 cutaneous cases for each enteric case

Cultural context

- In much of Africa: cattle herders do not necessarily own their charges
- If a cow dies: horns and skin kept as proof to show owners
- May be obligation to buy meat to help compensate for loss
- Community education is vital

