

## ANTHRAX, AN ERADICABLE ZONOSIS?

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Traditionally, Bacillus anthracis spores are held to be effectively immortal in soil and therefore the related livestock disease a permanent fixture in the landscape. Fortunately, nature does not read the literature and the disease is disappearing from an increasing list of countries where it was once a scourge. For example, in the United States only 14 outbreaks occurred in 1990, in Mississippi (9), Texas (4), and Kansas (1), apart from an ongoing anthrax problem in White Tailed deer in western Texas. The United Kingdom is down to annual numbers of outbreaks in single digits, thanks to changes in the shipping industry and BSE, from a previous level of 200-500 outbreaks each year. A number of countries, such as South Africa and Czechoslovakia, have successfully reduced their annual incidence to truly sporadic cases. About a third of the 176 countries reporting to OIE/FAO/WHO are either free of anthrax (no cases in eight years) or probably free (the arbitrary eight years outbreak-free waiting period is not finished), with a limited number claiming to be free (which is always open to question).

However the disease is still a serious enzootic in tropical Africa, the Middle East, parts of Asia, and the USSR. With an annual incidence in excess of 200 human cases per year, anthrax is still a significant livestock problem in the USSR; depending on the form of human anthrax, livestock cases can be estimated to be 10 to 30+ times the human incidence. While anthrax is now infrequent in northern Europe, there are ongoing problems in Spain, Italy, Yugoslavia, Greece, and Turkey; with civil unrest the Yugoslavian incidence may increase. While civil wars result in major increases in incidence in the tropics (eg Zimbabwe), the associated reduction in livestock feed contamination in northern latitudes in time of war decreases incidence (eg World War II and Czechoslovakia, Norway, and the United Kingdom). We can expect the severe situation to continue for some years in some African and Middle-Eastern countries.

It is clear that this zoonotic disease can be efficiently and successfully controlled and even eradicated given time. Much of the present success follows from the efficient use of the effective Sterne vaccine, proper site and carcass control, and safe feedstuffs. In some areas cattle owners' promiscuous use of antibiotics in treating their stock without veterinary advice will have resulted in anthrax deaths with a sterile septicaemia and therefore no subsequent ground contamination. A WHO programme for the global elimination of anthrax is now in hand.

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