

Rinderpest – its eradication through vaccination

Dr. Patrick Craig

It is well-known that in the last century the deadly human disease smallpox was eradicated from the planet using the process of vaccination. But did you know that in 2011 a deadly animal disease was also declared eradicated?



Rinderpest, also called cattle plague, was a catastrophic viral disease of livestock responsible for continent-wide famine and poverty due to massive losses of cattle and wildlife in Africa, Europe and parts of Asia. It was first recorded historically in 376-386 A.D. – the great European epizootic. Due to the devastation caused by Rinderpest, the first veterinary institution was established in France in the early 1760's to find control strategies.

The spread of the disease was mainly associated with human activities, including a rapidly growing human population dependent on cattle for food, transport, trade and waging war. The 4th to the 20th centuries saw large cattle herds traveling with

armies to feed soldiers and for hauling their baggage trains. Victorious armies usually amassed large herds of cattle as the spoils of war to take home allowing Rinderpest to be introduced to new areas.



1 Cow with Rinderpest

From the early years when Rinderpest was becoming more destructive, cattle were

often slaughtered in an effort to halt on the spread, but this was found to be ineffective and cumbersome. In the 1920s, a breakthrough discovery was made and they found that a diluted Rinderpest-virus preparation (vaccine-like) inoculated in cattle protected the animals for life.

After World War 2, the Food and Agriculture Organization (FAO) assisted in the development of new, improved, inexpensive vaccines to combat Rinderpest. By 1960, the first coordinated effort for its eradication in all of Africa by vaccination was initiated –an important milestone in the control of the disease. Despite this, serious outbreaks continued especially in Africa in the early 1980's that killed millions of animals. The late 1980's saw the development of a new vaccine that did not need refrigeration and this made the campaign far more effective.



The global effort of vaccination against Rinderpest over the decades finally paid off and the last mild infection was seen in Kenya in wild buffalo in late 2001. Vaccination ceased and there was provisional freedom from Rinderpest up to 2006. All field surveillance operations ended in 2010 and the global declaration of Rinderpest eradication through vaccination was made in 2011. After Smallpox this is the second disease, the first animal disease, that has been eradicated by the use of vaccines as part of a global effort.

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