

A case study on the impact of glanders on the livelihoods of equine owning families working in brick kilns in India



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Background: The problem

Equine owners working in brick kilns are often paid low wages, and are often in debt to brick kiln owners, as a result equids are often over worked, resulting in compromised welfare for both people and animals. Uttar Pradesh is one of the largest states of India with the highest equine population of 0.2 million. The majority (60–70%) work in brick kilns for a period of 5–6 months (from January to May/June) each year.

For many, the equine is the sole source of their livelihoods, and on an average 5–6 family members are dependent on one equine. Glanders, which is a highly fatal, contagious and zoonotic disease¹, is becoming the biggest health threat to equines working in brick kilns.

A study identified a total of 489 cases of glanders of which 445 equines were euthanized during the study period (1st January 2017 to December 2018²). Glanders has multiple negative effects, including compromised equine welfare, threats to human health and a tremendous impact on the livelihoods of equine owning communities.



Aim

The study aimed to understand the potential impact of loss of equines (due to glanders) on the livelihoods of brick kiln workers in Uttar Pradesh, India.

Methodology

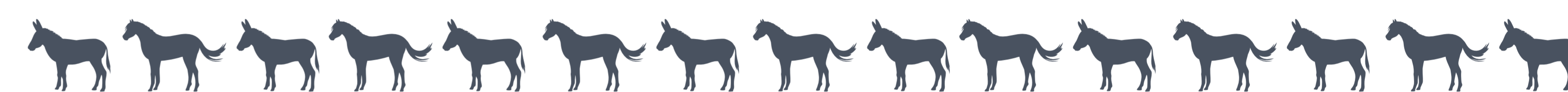
- During 2016, Brooke India staff visited nine brick kilns in Western Uttar Pradesh, India
- Fifteen equines (11 horses and 4 mules) demonstrating physical symptoms of glanders were identified.
- These cases were notified to the Animal Husbandry Department, Government of Uttar Pradesh who confirmed the presence of the disease.
- Equine owners (n=10) were interviewed to obtain information in regards to the potential economic consequences of losing their animals.
- The findings were analyzed to calculate the estimated economic impact.

Results: Economic loss to equine owning families

- On average 5–6 people in each family are dependent on equines for their livelihood.
- Fifteen animals tested positive for glanders and had to be euthanized, 15 families comprising of approximately 75 members were impacted.
- The horses and mules diagnosed with glanders were quarantined and prohibited from working. This caused a loss of wages for one month.

Economic breakdown

- Estimated salary in brick kiln season (5–6 months) 1,404,000 (INR) 19,745 (\$)
- Payment to brick kiln owner at the start of the season 225,000 (INR) 3,164 (\$)
- Value of 15 equines = INR 680000 (GBP 7556)
- Compensation received due to loss of equine 339000 (INR) 5,415 (\$).
- Loss of wages (for whole brick kiln season) 717,600 (INR) 10,092 (\$)



Value of 15 equines = 680,000 (INR) 9,500 (\$)



Estimated earnings during brick kiln season **without glanders**
1,179,000 (INR)
16,581 (\$)



Estimated earnings during brick kiln season **after glanders outbreak**
76,400 (INR)
1,074 (\$)

As a result of the glanders outbreak, it is estimated that **15 families** could only earn **6%** of their potential earnings.

Conclusions

- This preliminary study indicates that the outbreak of glanders can have devastating effects on the household economy of equine owners.
- Working equids (used for work in brick kilns) are generally owned by poor, illiterate, marginalized and excluded members of society, who have no other livelihood options.
- More research is needed to explore the prevalence of glanders in equids working in brick kilns. Such research can help inform preventative measures.
- There is a need to make local paravets and equine owning communities more aware of the symptoms of glanders.
- The government should be encouraged to provide compensation to equine owners and introduce a system where they are compensated for loss of earnings.

¹Malik P., Singha H., Khurana S. K., Kumar R., Kumar S., Raut A. A., Riyesh T., Vaid R. K., Virmani N., Singh B. K., Pathak S. V., Parkale D. D., Singh B., Pandey S. B., Sharma T. R., Chauhan B. C., Awasthi V., Jain S. & Singh R. K. (2012) Emergence and reemergence of glanders in India: a description of outbreaks from 2006 to 2011. Veterinaria italiana 48, 167–178.

²Disease control unit, Department of Animal Husbandry, UP.

