Biosecurity and disease risks of the donkey skin trade: A global perspective

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Infectious diseases affecting donkeys

Donkeys are considered to be resistant or tolerant or resilient carriers of many diseases

• But they are potentially infected by many Bacterial, Viral, Parasitic and fungal diseases

• This is particularly the case given working donkeys live under stressful conditions and are often immunocompromised.
Epidemiological and zoonotic roles

Given that

- Many diseases affecting donkeys are endemic
- A number of them are zoonotic
- Their silent carriers or reservoirs of many infectious agents (even if not diseased).

- Donkeys are not covered by livestock development policies to contain the diseases.
- Free movement of animals across the countries and borders with no movement restrictions or quarantine measures in place

- Donkeys have a very close relationship with their owner in their day to day activities

** The epidemiological/zoonotic roles they may play in sustaining these diseases and transmitting to other animals and humans could be immense

** Developing countries are already under a significant biosecurity risk of disease transmission and spread across the countries and borders
What additional biosecurity risk has the donkey skin trade brought?

Important factors that make this trade quite alarming concerning biosecurity and disease risks are:

1. **The trade targeted countries over 90% of the world donkey population**
   - over 95% of the African donkey population
   - Over 91% of the South and Central America
   - Over 47% of Asian donkey population
   - Thousands of feral donkeys (Brazil, Australia).
   - Wild asses???

2. **The trade operates in countries where many equine diseases are**
   - Endemic
   - Notifiable
   - exotic to many developed world
   - zoonotic
3. The trade operates where

- Thousands of donkeys are transported across the country/or borders with no movement control

- Legal slaughter houses are not properly managed, regulated and monitored

- Biosecurity measures are not in place or enforced.

- Hundreds and thousands of donkeys are indiscriminately slaughtered daily (often beyond their capacity)

- Illegal trades are wide spread and thousands of donkeys are slaughtered/killed
Biosecurity and Disease risks of movement and transport of donkeys

- Animal movement is a significant factor in the spread of infectious agents and diseases.
- Under natural conditions working donkeys are already under constant stressful conditions
- These are the animals
  - That face long distance trekking or trucking without water, feed and vet care.
  - Transported indiscriminately irrespective of their health status, stage of pregnancy
  - Face trekking and trucking in adverse environmental condition
  - That are transported with high stocking density
  - Kept in holding or waiting kraals (collection points)
Such hardship conditions further exacerbate the stressful condition: further immunocompromised.

- making them highly vulnerable and easily succumb to diseases that they were tolerant, resilient for,
- Create suitable condition for the relapse of certain diseases (EHV);
- A number of donkeys die on the routes

- Predispose pregnant jennies to abortion (stress-triggered infectious diseases such as EHV)

- Sick animals are spreading the infectious agents to surrounding on the route (equids, other domestic and wild animals, human)
- Animals which die on the route are skinned leaving the carcasses behind;
- Aborted foetus are left behind
  - left carcasses and aborted foetus serve as a source of infectious agents
  - contaminate/pollute the environment
Biosecurity risks related with slaughterhouses, lairage and carcass disposal

The fact that

- Donkeys are transported to SH indiscriminately irrespective of their health status (sick, pregnant);
- No inspection of donkeys in the lairage or collection point before slaughtering;
- No attempt is made to segregate sick animals; all are slaughtered indiscriminately together
- Animals died in lairage are not inspected to determine the cause, rather only skinned disposing the carcasses
- Slaughterhouses in many countries are operating
  - Unhygienically
  - Without biosecurity measures in place
- Inappropriate carcass disposal and waste products

All of these clearly show grave biosecurity concerns for disease spread and environmental contamination/pollution, and public health hazard
Biosecurity risk of environmental contamination and public health

Carcass and waste products disposal operations should be within acceptable scientific principles
  • To destroy pathogenic agents and
  • To address public and environmental concerns

Improperly disposed carcass and waste products, apart from the stench and air pollution, can easily contaminate
  • Soil, grazing and farming lands;

  • ground water (water wells or boreholes) and surface water

  • pathogens can easily washed away by rain, streams irrigation, or river further spreading to other distant places
Carcasses & waste products as source of methane gas and Leachate

- Carcass and waste products decomposition generate methane, a greenhouse gas, which contributes to global climate change
- Leachate from carcass and waste products is known to contain over 12,000 mg/L of nitrogen as ammonium
- 900Kg carcass generates about 7 L of leachate (about 9-10 bodies of donkeys);
- WHO drinking water standard is 50 mg/L of Nitrate
- Excessive nitrate in drinking water can be fatal for children—methemoglobinemia
- Excessive nitrate if washed in water is fatal for fish
- These are alarming facts given
  - the rate at which donkeys are slaughtered per day
  - Wide spread illegal killings only for the skin, leaving carcasses to rot
  - improper disposal of carcasses and waste products
- This is particularly the case in areas
  - Where sandy soils predominate
  - Where slaughterhouse are built nearby water sources or
  - Illegal slaughtering is taking place such as around
    - Water wells/rivers/lakes/ponds/irrigation canals/streams/waterways
The impact of the trade on the global equine industry

Given that

- The indiscriminate and uncontrolled movement of donkeys and their products
- Lack of biosecurity measures or SPS measures
- The fact that the trade has a global trend or route involving many countries across the continents

It is alarming for the interconnected global equine industry in which horses travel long distances across the globe for equestrian events.

This might have a devastating effect given

- The rapid climate change which has a profound effect on the ecology of insect vectors favoring their expansion and
  - Hence the diseases they transmit to new areas or countries where they are absent or eradicated.

- This is particularly the case in illegal trade associated with poaching, and smuggling of products
Such unregulated and uncontrolled donkey trade operation clearly shows not only the interaction but also dangerous interconnection between

- animals (donkeys)
- human and
- the environment
  - that put all parties in danger of contracting and spreading infectious agents and diseases apart from its grave welfare and socio-economic issues.
The trade’s further impediment

One of the main factors why some countries, like developing countries, are poor, given enough resources, is due to:

- the widespread of livestock diseases
- zoonotic diseases
- absence or inadequate Sanitary and Phyto-sanitary (SPS) measures or biosecurity measures.

From the world wide disease control perspective, especially nowadays when:

- emerging and re-emerging infectious diseases from developing countries are considered a big threat to the developed world,

- It is clear that this donkey skin trade brought further impediment to the countries’ economy
  - by further escalating the already existing restriction of export of livestock and their products.
The trade may generate revenues and create job opportunities but it is at expense of:

- Severe animal welfare issues
- Livelihood of resource-limited donkey-dependent communities;
- Cultural and religious conflicts
- Significant decline of donkey population (unsustainability)
- Disease transmission and spread (outbreaks of diseases)
- Zoonotic diseases risks
- Environmental contamination and pollution and the resulting risks
- Further export restriction on livestock and their products;

Therefore, the industry must be scrutinised and weighed from these and other relevant angles;
Worth remembering

“The greatness of a nation and its moral progress can be judged by the way its animals are treated.”
- Gandhi

IF YOU WANT TO KNOW THE END, LOOK AT THE BEGINNING’
“African proverb”

Many thanks for your attention