Antibiotic use and misuse in low-income countries: Research at the International Livestock Research Institute

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- 37 billion livestock
  - After rice, second most important source of food
  - 31 billion in developing countries
  - 1 billion poor people depend on livestock
    - 600 million in South Asia
    - 300 million in Sub-Saharan Africa
    - 25% urban

- Antibiotic use in developing country agriculture is not well understood
  - More antibiotics used in developing countries than in developed
  - More antibiotics used in agriculture than in human medicine

India - the world’s largest consumer of antibiotics, no prescription required

Antibiotic residues in Assam - a pilot

- Milk samples from 150 randomly selected farms, 74 that had had previous training in hygienic milk production, and 76 without training.
- Most advised by veterinarian or veterinary field assistant on which antibiotic to use
- 28.5% of trained farmers were aware that there could be antibiotic residues in milk after treatment, 10.5% of untrained farmers.
- Most stated that they did not use nor sell the milk after during treatment.
- Milk samples tested with Charm EZ reader
  - 88.6% positive for aminoglycoside residues
  - 22.8% positive for sulphonamides
- Very few farmers could name the antibiotic they used.

Risk factors for antibiotic residues
An upstarting project in peri-urban dairy farms in 3 Indian cities:

- Antibiotic use
- Levels of antibiotic residues
- A risk assessment