

# Abstracts of Scientific Papers-WADEM Congress on Disaster and Emergency Medicine 2017

## Providing Empowerment for Rural Pastoralists after Natural Disasters

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**Study/Objective:** In developing nations, wealth and wellbeing is often linked to livestock. By extension, national food security depends on sustainable production. Natural disasters, disease, epidemics, and civil unrest create insurmountable obstacles for pastoral family herds. Providing preventative education for rural agronomists enables farmers to maintain herd health through challenging circumstances.

**Background:** Continued decline in human and animal health, following the Haitian earthquake in January 2010, resulted in the formation of Veterinarians Abroad Supporting and Teaching (VAST). Facing some of the highest political instability, infant mortality rates, illiteracy rates, and infectious disease rates found globally, the Haitian ability to rebuild after large-scale natural disasters and wide-scale emergencies was weakened. Problematically, a cholera epidemic devastated the working population, impairing the restoration of normal structural functionality. **Methods:** VAST began work in Haiti in May 2012. This included building key relationships with government, local veterinarians, and national universities. Guest lectures occurred at two universities, and two animal health clinics were held in remote rural locations. In October 2013, additional clinics and workshops occurred in two other Haitian regions, and two more university classes were provided.

**Results:** Lectures on disease surveillance, biosecurity measures, and basic zoonotic disease epidemiology were provided to more than 300 agronomy students in Haiti. Clinics and workshops supervising treatment of more than 550 food animals, and training 15 animal care workers in basic animal husbandry and disease, have occurred. Feedback shows ongoing improvement in food animal health and economic prosperity in the focus areas.

**Conclusion:** Teaching animal husbandry workers recognition of key diseases, implementation of prevention strategies, and treatment of chronic cases improves long-term economic sustainability. Educating whole families on animal management and health improves living conditions. Empowering people through the animals that provide the foundation of their security provides resilient, informed, connected, and uplifted community longevity and stability.

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## Flood Related Injuries and Diseases Occurring in Horses in Louisiana from 2001-2016

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**Study/Objective:** Horses exposed to flooding conditions may present with unique and potentially life-threatening injuries. This report summarizes the types of flood related injuries and diseases occurring in horses in Louisiana from 2001-2016 (Tropical Storm Allison, Hurricanes Katrina, Rita, Gustav, Ike, Isaac, the Historic Flood of 2016).

**Background:** Floods are common weather-related disasters threatening the lives of people and animals, with an average yearly financial loss due to floods in the US averaging \$6 billion. Flood-related livestock injuries and death make up a major component of these losses impacting the economic and emotional welfare of horse-owners. By working closely with producers and agricultural leaders, veterinarians and owners can lessen the impact of flood-disaster associated injuries and diseases with proper preparation and detailed planning.

**Methods:** Medical records and incident action reports from 2001-2016 were reviewed, categorized, and summarized:

**Results:** Euthanasia was required for horses sustaining fracture disease, septic tendonitis, aspiration pneumonia, fungal encephalopathy and colic. Severe dermatitis and cellulitis was observed in horses which had been standing in water for greater than 24 hours. Horses with water-line dermatitis and cellulitis, which were decontaminated appropriately and administered systemic anti-inflammatory and antimicrobial agents, had a more positive outcome than those which were not.

**Conclusion:** There is no way to prepare for every equine medical situation that arises in a flood situation, however,

System	
Integument & musculoskeletal	-Limb, head, neck, and trunk lacerations and abrasions -Lameness – fracture, cellulitis, tendonitis, -Hoof injuries -Myositis
Dermatitis/cellulitis/ sepsis	-Inflammation -Bacterial & fungal infection
Ophthalmic	-Corneal ulceration -Traumatic uveitis
Gastrointestinal dysfunction	-Colic (impaction, colitis) -Esophageal obstruction
Neurologic	-Head and neck injuries -Infectious neurologic conditions -Tetanus -Botulism
Respiratory	-Aspiration pneumonia -Upper respiratory tract obstruction -Infectious respiratory diseases

Veterinary