First Global Multi-Stakeholder Meeting on RESPONSIBLE LIVESTOCK

WATER IN LIVESTOCK

Julio Cesar Pascale Palhares

Embrapa Cattle Southeast
WE MUST STUDY WATER MANAGEMENT, BUT ALSO STUDY HYDROPHILOSOPHY IN LIVESTOCK
WHY WE DISCUSS ANIMAL PRODUCTION AND WATER SOURCES?

BECAUSE WE PRODUCE WATER-INTENSIVE COMMODITIES
LIVESTOCK will face increasing competition for natural resources. WATER is one of them. BRAZIL has water in quantity and quality.
WE NEED:

✓ PRESERVE and CONSERVE

✓ WATER EFFICIENCY

(Domain – Farm)

✓ LIVESTOCK WATER PRODUCTIVITY

(Domain – Society)

✓ UNDERSTAND WATER IN ANIMAL PRODUCTION

(Dimensions)
WATER DIMENSIONS IN LIVESTOCK

FEED

INPUT

NATURAL SOURCE
STUDIES
PALHARES, J.C.P. Water footprint of pigs slaughtered in the states of south-central Brazil. DOI: 10.4025/actascianimsci.v33i3.9924
The direct and indirect water footprint in each stage of the supply chain of an animal product

PIG GROWING-FINISHING: WATER PRODUCTIVITY (M³/T) – YEAR 2008
PIG GROWING-FINISHING: GREEN AND BLUE WATER (%) – YEAR 2008
MONITORING WATER QUALITY IN A CISTERN USED TO PIG AND CATTLE DRINKING WATER (Coldebellla et al. 2010)
Fecal Coliform and E. coli (UFC/ml)

- CF
- Ec
Clean technologies applied to swine production: establishment of sanitary and physico-chemical standards for swine wastewater reuse

Coordinator: Airton Kunz

Embrapa Swine and Poultry
MICROBIOLOGICAL QUALITY OF EFFLUENT

Kunz et al., Biores. Technol. (100), 5585, 2009

![Bar chart showing microbial counts for different points (P1, P2, P3, P4) in UFC mL⁻¹.](chart)

- E. coli
- Coliformes Totais
- Salmonella
CHALLENGES

- Understanding relations between water and livestock;
- Internalize a hidroculture in livestock;
- Measure the water consumption in production systems;
- Using nutrition technologies to improve water efficiency
- Evaluate wastewater treatment systems, considering environmental, social and economic aspects;
CHALLENGES

- Establish water efficiency indicators;
- Water Best Management Practices;
- Use animal waste as fertilizer, considering nutrient balance;
- Plan programs, policies and laws to diffuse pollution;
- Economic value of water ??????
- Promote WATER EDUCATION to livestock actors chains.
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THANK YOU

Julio Cesar Pascale Palhares

palhares@cppse.embrapa.br