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Advancing Environmental Sustainability through Better Livestock Health & Welfare

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GFFA expert panel 12: Advancing the Three Pillars of Sustainability
Through Better Livestock Health & Welfare: A Data and Evidence Review

Thursday 21 January 2021; 1300-1400hrs



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Purpose

Improving livestock productivity and health reduces environmental impacts

- Environmental impacts are key considerations for consumers, media and policymakers
- Improving productivity (yield, growth, quality) reduces resource use and greenhouse gas (GHG) emissions
- Livestock health is seldom accounted for in sustainability assessments



Photo credit: Dr Jude Capper, 2021

Urgent need to assess disease impacts, but little data available

According to the OIE, more than 20% of global animal protein is lost because of animal disease

- Disease type, incidence and severity vary considerably between systems and across the world
- Diseases have multifactorial impacts, from mild, subclinical symptoms, to devastating losses
- Literature searches show that very few studies quantify the resulting environmental impacts

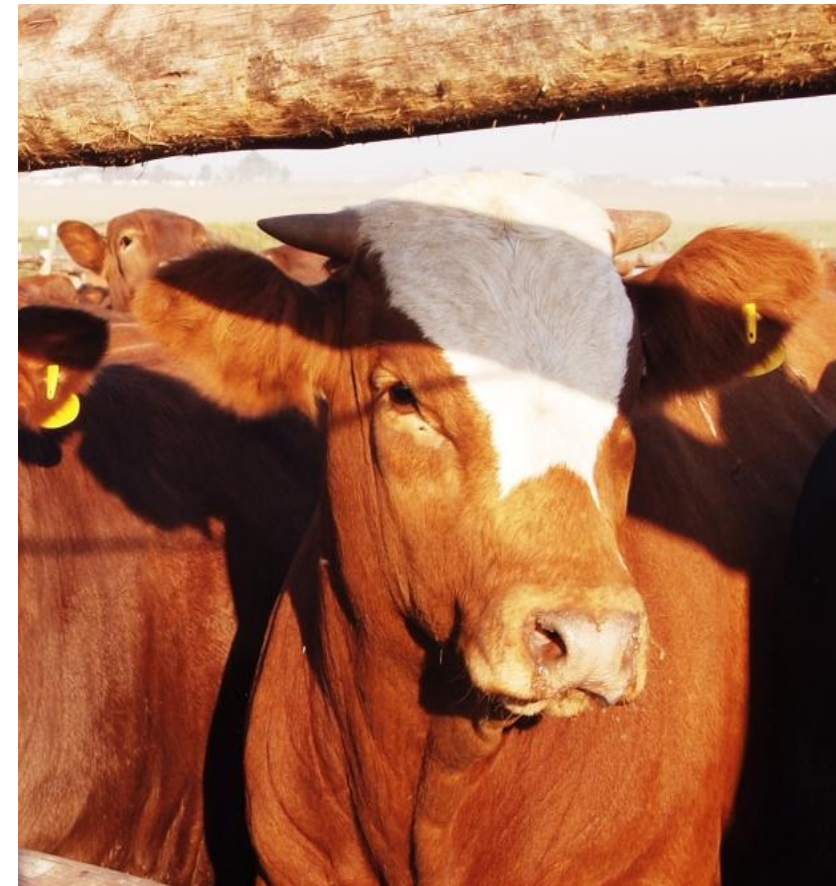


Photo credit: Dr Jude Capper, 2021

African Swine Fever (ASF)

Devastating pig disease, with no cure or vaccine available

- Up to 100% mortality, plus culling of infected or susceptible animals
- Takes <1 week for symptoms to be shown and death to occur
- Also present in and transmitted by wild boar
- Non-zoonotic – no human health effects
- Q4 2019: Economic losses of >\$141 billion USD in China alone¹, 4.6% jump in FAO Meat Price Index²



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Photo credit: Dr Jude Capper, 2021

¹ Berthe, F. 2019. OIE Bulletin.

<https://oiebulletin.com/?panorama=02-2-2-2020-1-economic>

² FAO Meat Price Index.

<http://www.fao.org/economic/est/est-commodities/meat/en/>

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African Swine Fever (ASF) impacts

Modelling exercise to examine effects on pork production and GHG emissions

- 100-150 million pigs¹ lost from death/culls
- 30.2-45.3 million tonnes of GHG emissions² invested in producing pigs that do not reach the global food supply chain³
- A further 126-189 million pigs⁴ indirectly lost due to sow deaths
- Total potential pigmeat loss⁵ = 12.7-19.0 million tonnes



Photo credit: Dr Jude Capper, 2021

¹ Rabobank (2019)

² Average GHG emissions of 6.07 kg CO₂-eq per kg pigmeat, weighted for age at death/culling

³ A very small proportion of pigs will have been consumed domestically

⁴ Extra 1.26 pigs lost per sow lost

⁵ Average boneless carcass weight of 56 kg

African Swine Fever (ASF) control

If ASF could have been controlled and the epidemic avoided:

- The pigmeat lost could have supplied 550-824 million people¹ with their annual pork consumption
- Pork would have remained affordable to millions
- The GHG emissions invested in producing pigs that died from ASF were equal to the average annual emissions of 16.7-25.1 million cars² (cf. 46 million cars in Germany in 2019)



Photo credit: Dr Jude Capper, 2021

¹ Annual per capita consumption of 23 kg boneless pork in 2019 (OECD/FAO)

² Average EU petrol car travels 11,909 km/yr and emits 0.152 kg CO₂ per km driven

Recommended policy actions

Explore, understand and mitigate effects of livestock health on environmental sustainability

- Greater investment in sustainability research
- Producer outreach to demonstrate links between animal health, economics and environment
- Adoption of regional (global?) GHG tools
- Improved disease reporting and data collection – notifiable, endemic and metabolic diseases
- Promote herd health planning and use of non-antimicrobial medicines (vaccines, etc)



Photo credit: Dr Jude Capper, 2021