



GOOD PRACTICE CASE EXAMPLES –

Food Safety

NAME OF THE PROJECT	The Role of Animal Welfare in Influencing Food Safety (TRAWIFS)
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Organisation	Vétérinaires Sans Frontières Germany Tierärzte ohne Grenzen e. V.
Position	Technical Project Manager
Country	Uganda
Project Period	2022
Budget/ Funding	10,000 Euros, funded by WTS/WTG
Short description of Organisation	Vétérinaires Sans Frontières Germany (VSF Germany, Ger.: Tierärzte ohne Grenzen e. V.) is a German non-profit organisation with its headquarters based in Berlin, Germany. It is a dynamic organization whose work is driven by a strong commitment towards the health and well-being of humans, animals and the environment that surrounds them, supporting efforts aimed at saving lives and ending suffering in Eastern Africa – a work that transcends international borders and sector boundaries to achieve the One Health Agenda in a global setting. VSF Germany has been implementing projects in the Horn of Africa since 1998. The organization has a Regional Office in Nairobi (RON), Kenya, and Country Offices (CO) in Kenya, Somalia, Ethiopia, South Sudan, Sudan and Uganda.
Background to the intervention	<p>In Uganda a surge in pig farming as an essential component of its livestock industry has been witnessed. The production settings are massively intensive driven due to the growing demand for animal-source foods, urbanization, and economic development. However, this intensification has raised concerns about the welfare of pigs and the safety of food products, particularly within the context of industrialized production systems.</p> <p>Mukono and Wakiso districts, chosen as the project’s focal areas, represent significant pig farming regions in Uganda.</p> <p>Poor animal welfare practices can compromise animal health and welfare, leading to stress, disease, and suffering. Moreover, suboptimal conditions in livestock production systems can increase the risk of foodborne pathogens entering the food chain, posing threats to consumer health and food safety.</p> <p>The research underscores the multifaceted nature of the intervention, acknowledging the intricate web of factors influencing food safety in pork production. It highlights the need for a paradigm shift, moving beyond conventional approaches to incorporate a holistic understanding of animal welfare and its direct correlation with other aspects like the safety and quality of pork products consumed by the population.</p>

Project location (Country, district/state/province)	Uganda, Mukono and Wakiso districts, Central Uganda
Objectives	<p>Goal: To demonstrate and strengthen the role of animal welfare practices on enhancing food safety and promoting sustainable livestock production, focusing initially on the pig value chain in Uganda.</p> <ol style="list-style-type: none"> 1. Determine and evaluate selected food safety indicators for monitoring animal welfare in pigs 2. Create linkages between on-farm welfare measures (feeding, housing, health, behaviour) and the occurrence of food safety risks in pigs
Key activities	<ol style="list-style-type: none"> a. Training of field and laboratory teams b. Sample and data collection c. Laboratory analysis d. Monitoring of field and laboratory activities e. Data analysis and report writing
Impact of intervention on animal welfare and livelihoods	<p>The project identified linkages between animal welfare conditions and some food safety outcomes evidenced by:</p> <ul style="list-style-type: none"> • Average performance indicator index for the welfare principles (feeding, health, housing, appropriate behaviour) was 0.4 for Mukono farms and 0.7 for Wakiso farms. • Prevalence of <i>Salmonellae</i> was detected only in Mukono district farms which had lower animal welfare performance scores compared to those of Wakiso. • Higher prevalence of antibiotic resistance in Mukono farms. • Health issues like malnutrition and parasitic infestation in pigs raised under poor welfare contexts. <p>This was a knowledge generating research to motivate improvement; thus recommendations were provided to adopt better animal welfare practices, contributing to safer and sustainable pork production.</p>
Challenges	<ol style="list-style-type: none"> a. Limited study farms in Mukono: Adhered to the directive on African Swine Fever; solution – focused on quality data from the selected sub-county. b. Submission of improper blood samples: Mitigation – enhanced training and supervision. c. Lack of consumables: Solution – proactive planning and alternative sourcing.

<p>Lessons learned</p>	<p>The research highlighted: Complex interconnectedness of animal welfare and food safety.</p> <p>Importance of integrated approaches to food safety: Recognizing the interconnectedness of animal welfare, animal health, and food safety can highlight the need for interdisciplinary collaboration and coordinated efforts among stakeholders involved in pig production and food safety regulation.</p> <p>Need for continuous research and innovation: These welfare aspects were not studied; high faecal parasitism (also associated with hypo-proteinemia) indicated possible herd health management issues with deworming practices, high antimicrobial resistance burden likely due to poor infection prevention and control aspects like biosecurity practices, detection dynamics of cortisol.</p> <p>Need for awareness and continuous learning schemes: farmers and animal health workers require training on sustainable pig production with animal welfare as an integral aspect.</p> <p>Importance of stakeholder collaborations: The alliance with key stakeholders, including researchers, district veterinary offices, and farmers, was pivotal to the project’s success, by ensuring a comprehensive and inclusive approach.</p> <p>Welfare implications for sustainable pig farming: Recognizing the long-term benefits of investing in animal welfare improvements for both animals and consumers can support the adoption of more ethical and resilient production practices.</p>
<p>Source documents + Photos (include reports and/or relevant organisational website if possible)</p>	<p>Final report in the process of publication. VSF-Germany-2022-Annual-Report.pdf (vsfg.org)</p>
<div style="display: flex; justify-content: space-around;">   </div> <p>Poor rearing environments (A – wet beddings, B – tethering outside) on some farms could facilitate helminths infections (related with poor body condition as seen with the sow), survival and exposure to Salmonellae. © VSFSG</p>	

A story of success

When we gave the individual farms the feedback results of our study and those from the tests done on their animals, the majority were amazed at how we used Lab results to detect welfare issues they were facing in line with nutrition, stress, deworming issues, infections etc. To us this was an eye opener about the utilization of veterinary services to promote animal welfare and in particular herd health monitoring. There was low awareness on utilization of diagnostics to support evidence-based decisions supporting animal welfare on farms. Most of the farmers we visited now submit samples to the national veterinary laboratories in case they suspect health related issues in their pigs. The food safety implication is that the improved use of veterinary diagnostics in this context is enhancing herd health management, a step to reducing disease burden, promoting judicious use of antimicrobials, and, ultimately, supporting food safety by ensuring healthier livestock and reducing the potential contamination of animal-derived food products.

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