



How to effectively engage animal owners in research that involves animals as research subjects

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12th ANREC Conference

Hotel Africana, Kampala, 21st – 22nd October 2025

Sustainable Animal and Aquatic Foods (SAAF)



Vision: People's lives and well-being in low- and middle-income countries are improved by transforming animal and aquatic food systems so they foster inclusive, low-emission, healthy and nutrient-dense food supply chains.

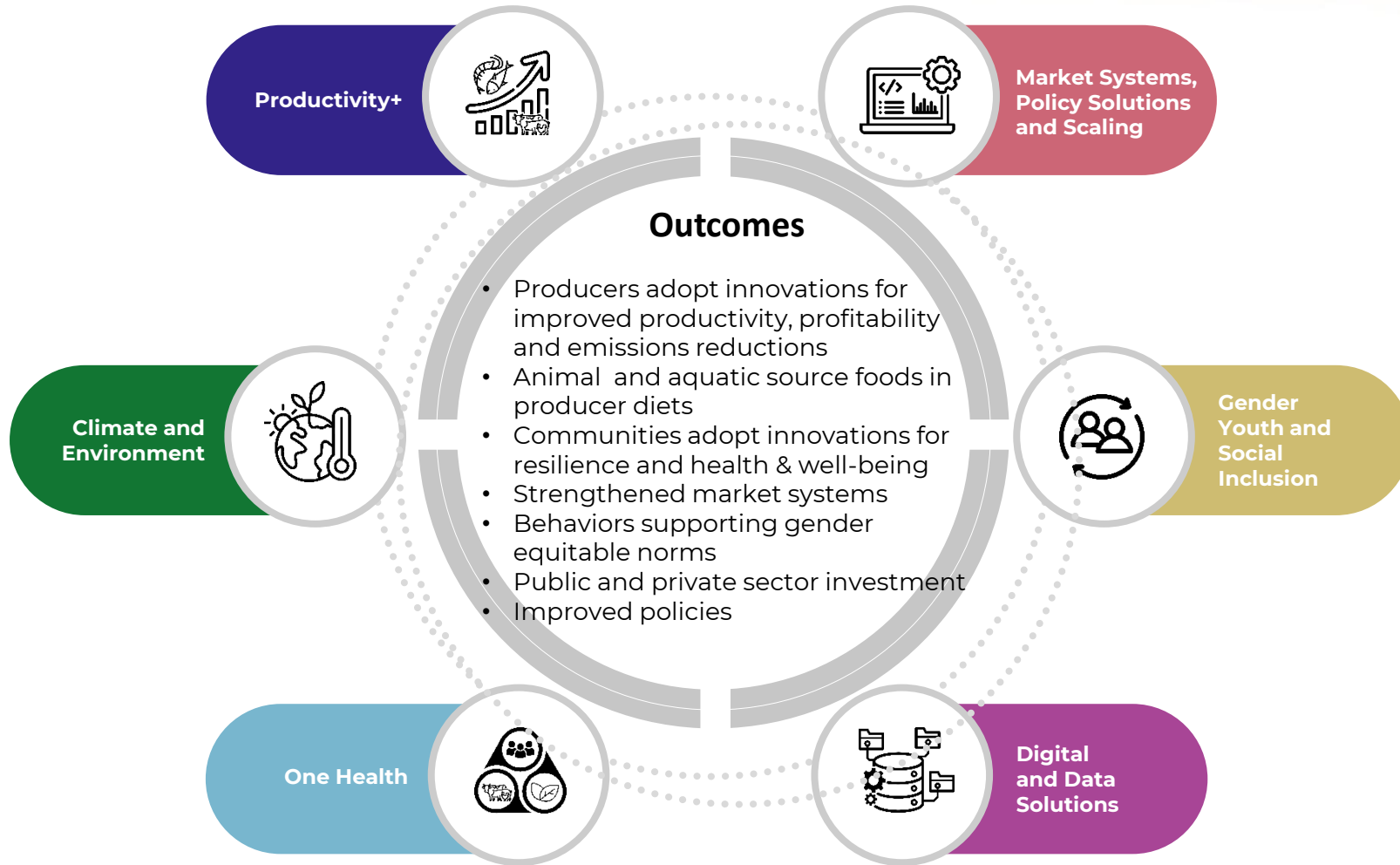
Opportunities

- Nutrition and health
- Income generation & poverty reduction
- Buffer to climate threats/shocks
- Socially inclusive

Challenges

- Systems face major threats from climate change impacts
- By 2050, 66% of global livestock emissions will be from LMICs
- Demand for aquatic foods to nearly double by 2050

How to meet the growing demand for accessible and nutritious foods whilst moving toward sustainable, low-emission animal and aquatic food systems



LINKAGES & CONTINUITY

Builds on the CGIAR initiatives:

- Sustainable Animal Productivity for Livelihoods, Nutrition and Gender (SAPLING)
- Resilient Aquatic Foods
- One Health
- Livestock and Climate

+ many bilaterals

Linking with other CGIAR Science Programs and Accelerators, and the Scaling program.

Why should we (researchers) engage animal owners?

- Better understanding of local knowledge and context
- Prioritization of problems that matter most to the community
- Co-creation of practical, relevant, effective, and sustainable solutions/innovations for animal agriculture
- Higher potential for adoption of innovations
- Empowerment and capacity building of animal owners – enhancement of skills and problem-solving
- Ownership of solutions – ability to determine and influence research and development programs
- Ethical safeguards - helps researchers navigate potential ethical issues, ensuring that the research is respectful and that any risks are identified and managed



How should we engage animal owners?

- Participatory process with local authorities and animal owners throughout the research – planning, goal setting, being treated as equal partners
- Effective communication for clarity, transparency, and foster trust and understanding
- Agreement on the research goals, articulation of the methodologies, and the roles of the animals involved in research (including sample collection, type, how)
- Communication on all risks (and mitigation), benefits, and procedures, before allowing their animals to participate
- Clarity on roles of each player – themselves and participating organizations



How should we engage animal owners?

- Critical to obtain consent from owners prior to enrolling their animals for research (PIC)
- Consent must be voluntary, obtained without coercion, and researchers should ensure the owner comprehends all information, potentially using non-written formats in low-literacy communities.
- Elements to be covered in the consent form;
 - Study objectives
 - Benefits to the animal owner and the community
 - Recruitment process and SoPs to be used
 - Risks to the animal and animal owner
 - Compensation e.g. death of animal
 - Freedom to withdraw animal from study - no penalty
 - Data types to be collected including samples
 - Data storage, usage, and data protection and privacy
 - Study feedback modalities



ILRI's research compliance

- ILRI is committed to promotion of the highest standards for research by ensuring both ethical and legal obligations are met
- Research compliance unit
 - Oversight and coordination of research compliance activities
 - Ethics approvals (animals and human)
 - Biosafety and or biosecurity related approvals
 - Application for research licenses and permissions for moving research materials
 - Research compliance committees – review and approve research activities



Institutional Research
Ethics Committee
(IREC)



Institutional Animal
Care & Use Committee
(IACUC)



Institutional Biosafety
Committee (IBC)

ILRI's Institutional Animal Care & Use Committee (IACUC)

- Ethical approvals for research that involves use of animals
- Subject to national and international laws, professional code of conduct and ILRI's SoPs
- Based on the 3R principles:
 - Replacement (using alternatives whenever possible)
 - Reduction (using the fewest number of animals)
 - Refinement (minimize pain and distress)
- Ensures humane care and treatment of animals (animal welfare)
- Handling by trained professionals
- Informed consent by animal owner
- Potential impact of the research on the animal owners' livelihoods



Content of an IACUC application

- Background information about the research, objectives, locations
- Selection of households / farms
- Selection, number of animals and grouping of animals
- Management of animals – housing, feeding, etc.
- Interventions – treatments to be undertaken
- Standard operating procedures (SOPs) e.g., collection of samples
- Expertise of technical staff - details of skills, training & competency of personnel handling animals
- Humane study end point
- Data handling and statistical analysis
- Benefits (to the animal owner) and potential risks
- Use of potential infectious / hazardous agents / substances in animals
– seek IBC approval

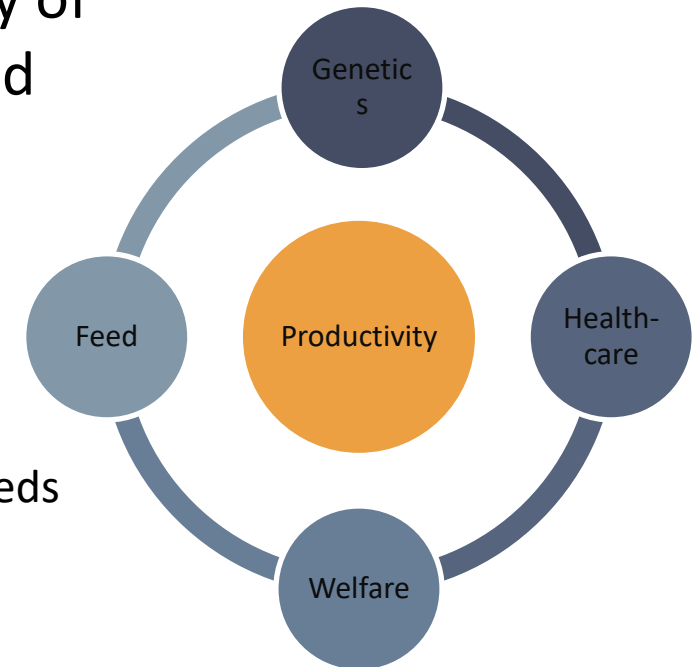


Summary – proper engagement of animal owners in research ensures

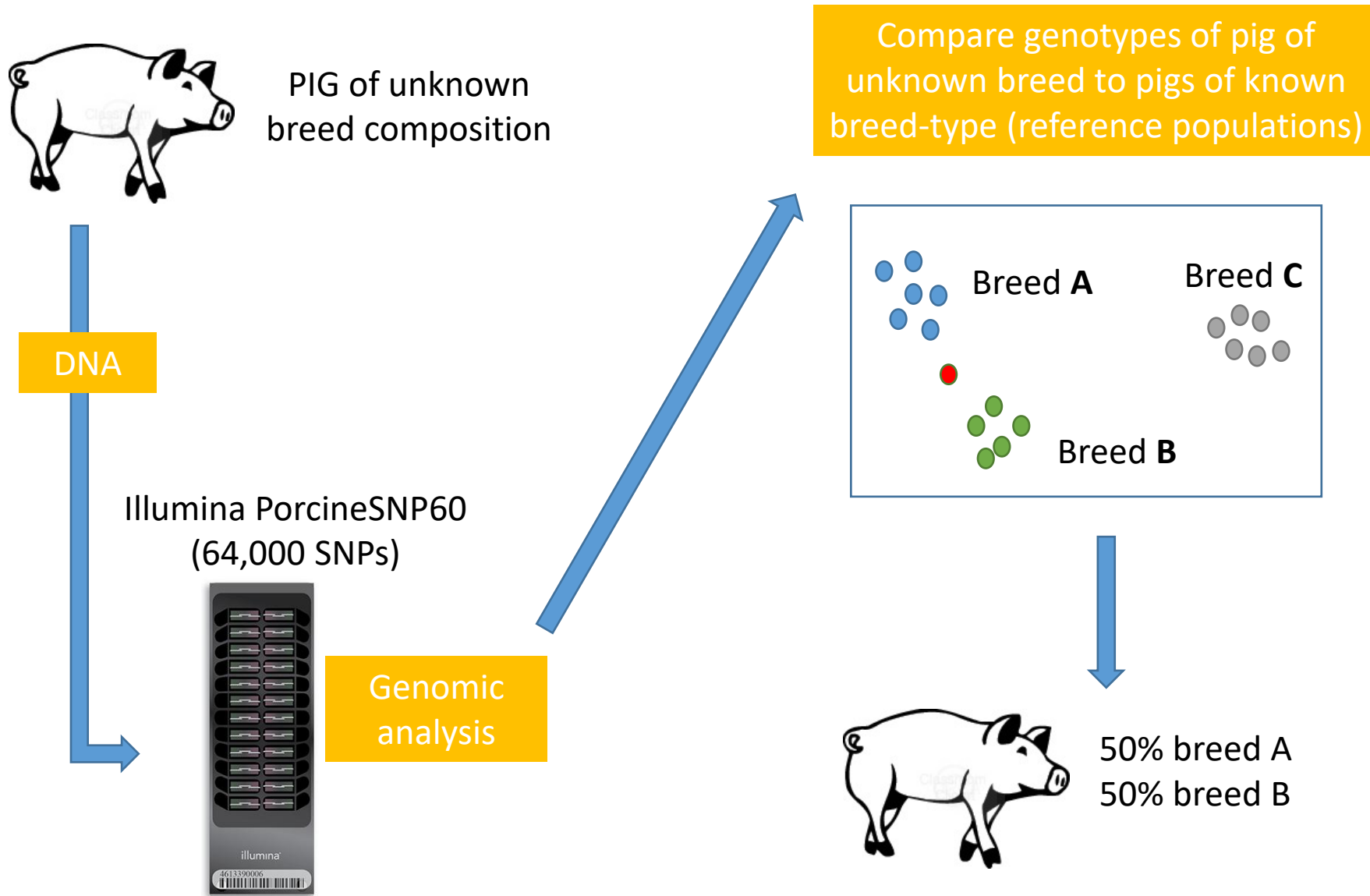
- The rights of animal owners are not compromised during studies
- Animals are not subjected to harm or inhumane treatment during research
- Potential risks and hazards to research participants and animals are minimized
- The roles and obligations of research institutions, researchers and animal owners are clearly spelt out - minimizes possible misunderstandings and conflicts
- How and when to provide feedback of research findings to animal owners is stated
- Benefits to animal owners are well elaborated, which increases community acceptance of future research studies

Example 1: Uganda pig genetics project

- **Project objective:** increase the productivity and profitability of the smallholder pig enterprises in Uganda through improved genetics
- **Project sites:** Hoima and Lira districts
- **Issues**
 - Smallholder farmers in Uganda keep pigs of mostly unknown genetic background i.e. they are non-descript breeds
 - From VCA meetings, pig farmers would like access to improved pig breeds
 - Farmers do not keep breeding information on the pigs they keep
- **Methodology**
 - Deoxyribonucleic acid (DNA) extraction from a tissue sample taken from the animal is sequenced and compared against a breed reference sequence
 - For exotic pig breeds such a sequence exists but not for indigenous local Uganda pigs
 - Need to identify farmers who keep indigenous Uganda pigs and obtain consent from them for samples to be taken from the pigs they own
 - Access permit needed
 - Genotyping done by a lab outside Uganda



Genomic approach to breed assignment



Engagement processes

- IACUC and IREC application for the project (ILRI and in Uganda for research permit)
- Meetings with DVOs in the 3 districts (Soroti, Kumi and Pallisa) to sensitize them on the research issue and seek support to identify a sample of 30 farmers from 3 sub-counties who kept local pigs
- Village level meetings with farmers, DVOs and research team to discuss the focus of the research and the process, and how the local pigs will be identified phenotypically
- Information sharing with farmers - a hair sample to be taken from the pigs during a second visit for the laboratory to identify local Ugandan pigs
- Regulations and guidelines of research in Uganda
 - PIC for the samples to be taken from their pigs – using local dialect
 - Access permit from UNCST
 - Material Transfer Agreement (MTA) through the commissioner animal health (CAH) at MAAIF
 - Animal owners were informed of all plan(s) to export their pig samples, and how they would be processed – part of informed consent
 - Feedback to animal owners – implications of the research
 - Reports to REC, UNCST and ILRI committees





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