



# Some insights into the state of pig genetic resources in Southern Africa

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# Structure of the presentation

- **What do we know?**
  - Brief information on the production systems
- **What are the threats?**
  - Highlights of what could lead to disappearance
- **What are the opportunities?**
  - Some key observations on what can be done to actually use the breeds

# The pigs



# Will they withstand the 21<sup>st</sup> century?

- **The most probable answer is yes**
  - Not because of efforts on the part of scientists and researchers
  - ...but the farmers
  - Most smallholder production systems are resistant to change
    - Including changing the breeds
    - & where efforts have been made to change the breed there is no matching change in care leading to the system resetting itself to something close to the original

# Pig ownership

- Pigs mostly owned by women
- Why?
  - Ownership spread through kinship networks within the gender
  - Major supplementary feed resources (kitchen waste, brewers waste, weeds) come from spheres controlled by the gender
  - Traditional focus of men is on big livestock
- Opportunity for poverty alleviation through improving productivity – networks will still exist

# Feeds and feeding

- **Poor feed resource base with free ranging**
- **Contradictory outcomes of feed scarcity**
  - Low numbers at household level leading to risk of inbreeding
  - But the low numbers are designed to match production to resources
  - Equally important farmers seek smaller pigs which favours the local breeds
- **Opportunity – improve nutrition, find alternatives**

# Feeding





# Free range production system & housing

- **Value – increase feed resource-base ( $\approx 80\%$  of nutrient needs)**
- **Negatives**
  - Difficult to keep records
  - Disease – biosecurity difficult to enforce
    - Impact of outbreak of classical swine fever in Eastern Cape – loss of whole populations & mistrust between authorities and livestock keepers
    - Risk of zoonoses
  - Conflicts
- **Opportunities – feeds, housing & disease surveillance**

# Free ranging



# Impact of income

- **Co-occurrence between poverty & biodiversity**
- **Income impacts**
  - Farmer breed preference
    - More affluent farmers (ALive – ‘small livestock keepers’) favour crossbreeds & exotics
  - Farmer production objectives
    - Poorer farmers (ALive – ‘marginal livestock keepers’) produce for subsistence first
  - Farmer opportunities
    - Access to skills, drugs, feed, information
- **Opportunities – incentives to produce local pigs**

# Markets

- **Clearly inadequate in most communities**
  - Pigs sold only where there is a need for cash
  
- **Opportunities**
  - Contract farming as a conduit to formal markets
    - Loans, housing, feeding, veterinary support
  - Crossbreeding
    - Conservation farms
  - Special branding – niche markets

# Farmer organisations

- **Farmers too fragmented & ill informed, lack skills**
  - Organise farmers, establish infrastructure, standards, improve production, value chains, training
- **Markets improve**
  - Incomes, increase farmer focus on commercial production, raise pig numbers & ultimately make the pigs competitive
- **ALive**
  - “Livestock farmers have incentives to increase livestock production ... only when they have access to remunerative markets.”

# Genetic studies

- Recent genetic analyses indicate high degree of relatedness in indigenous pigs in Southern Africa
- The pigs show signs of both European & Asian founding populations
- Opportunities
  - Scope for regional efforts to conserve the pigs – lower investment per country in conservation efforts
  - Coordinated development of markets for the pigs

# Policies

- **Policy**
  - Deficits
  - Dissonance
  - Delays
  
- **ALive**
  - “... due to policy neglect, the sector is only marginally contributing to economic growth ...”
  
- **Lack of actual actionable programmes**
  - Leaves vacuum for development agencies

# Conclusion

- **The breeds are likely to withstand the 21<sup>st</sup> century**
  - At least the production systems have withstood the first decade
- **But a lot needs to be done – research**
- **Summary of some issues in review paper**
  - Halimani et al., 2010. Ecological Economics 69: 944 – 951
- **Thank you**