The Nguni: A Case Study

J Bester, JM Rust and HJ Fourie

ARC • LNR

Animal Improvement Institute, Private Bag X2, Irene 0062, RSA
The Nguni

- Hardy traits
  - Hardy adapted breed
  - Suitable for extensive and intensive systems
Origin

Decline

Commercialisation and Development

Reintroduction

Bull Project

Australian Project

Conservation through Utilisation
Origin and Migration Routes of Domestic Cattle in Africa

Development in communities (daily life and incorporation into belief structures)
Origin

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Conservation through Utilisation
Colonisation and gene pool reduction

• Exotic influence
  – Gene replacement
  – Animal replacement
  – Perception problem

• Legislation
The Revival

- 1985 - Appointment of Technical Committee for the conservation of indigenous livestock
- Commercialisation and development ("improvement")
- Reintroduction into communities
“The Bull Project”

- Quality Nguni bulls introduced into selected communities
- Service and marketing support
Objectives

- Establish
  - A superior resource base
  - Effective community management institutions
- Develop
  - Agricultural production
  - Marketing skills
  - Opportunities
- Provide
  - Improvement in socio-economy
- Conserve
  - Genetic resource through sustainable utilisation
Methodology
Phase 1

Selection

- Selected bulls bought from commercial farmers
- EBV’s, reproduction and characterisation established
- Fertility examination
- Parentage confirmation
- Semen cryopreserved
Phase 2

Distribution

• Communities
  – Organised farmer groups
  – Able to contribute towards maintenance

• Distribution
  – 35 bulls in 5 communities – Northern Province
  – 14 bulls in 6 communities – E Cape Province
  – Extension to 500 bulls
Phase 3

Services and Marketing

• Beef package
  – Beef performance schemes, genetic evaluation
  – Reproduction and genetic resources
  – Quantitative genetics
  – Genetic services
  – Foreign service unit

• Agrilink
  – Linking farmers to the market
Phase 3 (Continued)

Services and Marketing

• Export
  – Mozambique
  – Australia
  – Brazil

• By product development
  – Hides
  – Ecotourism
  – Curio market
Restraints and Obstacles

- Monitoring
- Lack of:
  - Grazing management
  - Herd management
  - Reproductive management
  - Infrastructure
  - Record keeping
  - Parasite and disease control
- Community based decisions
- Land tenure
- Exotic breed influence
Risks and Assumptions

- Quality of animals suitable for the market
- Resources adequate to affect change
- Trained extension officers
- No major natural disasters
- Communal farmers can accept drastic change to current practices
The “Australian Project”

- Development through
  - Technology
  - Facilitation
  - Funding

- Stakeholders
  - Communal farmers
  - Individual farmers
  - National Department of Agriculture
  - Provincial Departments of Agriculture
  - Universities, technikons, agricultural colleges
The “Australian Project” (Continued)

• Provision of
  • Management skills
  • Training
  • Benchmarking
    – Carcass quality
      » Tenderness
      » Marbling
    – Information generation
    – Export
      » Identified genes remain the property of the owner
      » Lack of IPR structures
Origin

Decline

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Conservation through Utilisation
Conservation Through Utilisation

• Lack of control of satellite gene pools
• Selection
  – Heavy selection for marketable traits may
    • reduce the gene base
    • decrease the number of adaptive traits

Does conservation through utilisation negate the need for maintenance of the original gene pool in reference herds?