



Biocircle

**FAFB presentation: Lesotho
NCP delegation**

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Contents

- National policy strategy: FAFB research priorities for South Africa
- Which are our centres of excellence?
- In which fields **international cooperation** is crucial for your South Africa?
- The BioCircle project

National Policy strategy: FAFB Research Priorities

- The Grand Challenges 10 year plan:
 - South African White paper (Department of Science and Technology)
- The “Farmer to Pharma” approach (Food, health, pharmaceuticals, biotechnology, agriculture, aquaculture, life sciences)
- Space science and technology
- Energy security
- Science and Technology in response to climate change
- Human and social dynamics



Networking projects

- TRAINNET FUTURE
- FOOD-N-CO
- BIOCIRCLE
- ESASTAP
- STEAP
- CAASTNET
- ERA NET
- INCONET



Areas of interest for South Africa as FP7 partner Theme 2

Sustainable production and management of biological resources

- Aquaculture and fisheries
- New biofuels feedstocks
- Drought resistant crops
- Biodiversity research (bioprospecting, Fauna and Flora resource management) *
- Alternative Farming practices (e.g. organic farming)
- Forestry resources management
- Waste beneficiation and value addition.

– Areas marked with * indicate projects entering negotiations for WP 2009 Theme 2

Areas of Interest continue

Food, health and well-being (“Fork to farm”)

- Plant biotechnology for food, feed, pharmaceuticals *
- Traceability (food and feed chain) *
- Innovative food and feed processing *
- Food by-product beneficiation
- Post harvest technology
- Fermentation and biotechnology *

Areas marked with * indicate projects entering negotiations for WP 2009 Theme 2



Areas of interest continue

Life Sciences:

- Crop improvement (plant pathogens, pests, yield, quality)
- Alternative bio-energy production
- Genetic modification (plants and microorganisms)
- Bio-catalysts for new materials
- Cleaner production
- Nano-technology/bioprocessing interface



Centres of Excellence

- South Africa – traditionally having CoE's at Universities and Science Councils, making summary complex
- Recently – Government promoting establishment of CoE's with multiple groups – to get Universities, Industry and Science Councils to work together.
- Still new – only a few of these CoE's formally established, not to be confused that traditional centres still exist.
- Some established CoE's: National Laser Centre, Centre for Advanced Manufacturing, South African National Energy Research Institute, Hydrogen Economy, National Metrology Laboratory
- Some new CoE's being discussed: Nuclear applications in Biosciences, Food Security, Bioprospecting, Veterinary science etc.

International cooperation fields

- Bio-informatics
- Structural biology
- TB/Malaria/HIV drug discovery
- Food security (Post harvest losses, drought tolerant cereals, indigenous crops, new food processing technologies)
- Food traceability and exports
- Biofuels (algae, novel oilseed crops, novel enzymes for alcohol production, cellulosic yeasts etc.)
- Plant Biotechnology for staple food crops, animal feeds, biofuels
- New farming practices (organic etc.)
- Aquaculture (novel feeds, new species) and fisheries management
- HCD
- Bioprospecting – Drakensberg Mountain example.

Project examples

- Fruit shelf-life



- Fish feed (bioprospecting of *Mortierella*)



The BioCircle Project

- Primary objective: To link FAFB NCP's and NIP's of third countries with NCP's in Europe
- Secondary objective: To provide means of initiating co-operation with Europe in the EU FP7 programmes by developing joint topics and linking scientists to tackle global challenges in food, agriculture, fisheries and biotechnology.
- Lesotho – to link with South Africa, for next round of BioCircle call for funding.

The role of the NCP

- Training of scientists
- Link with EU contacts
- Introducing the FP programmes
- Assist with proposals

