

## THE ROLE OF THE ARC IN CACTUS PEAR RESEARCH AND DEVELOPMENT

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**ARC • LNR**  
Excellence in Research and Development



## OBJECTIVES OF THE ARC

➤ CONDUCT RESEARCH, DEVELOPMENT AND TECHNOLOGY TRANSFER IN ORDER TO:

- Promote agriculture & industry;
- Contribute to better quality of life;
- Facilitate/ensure natural resource conservation



## ARC BROAD STRATEGIC FRAMEWORK

- Sustainable use and management of natural resources
- Enhance nutrition & food security
- Improve ability of the sector to manage & mitigate agricultural risks
- Improve efficiency and competitiveness of the sector
- Ensure support for a transformed agrarian landscape




## ARC PROGRAMMES


- Crop production, improvement & protection
- Animal production, Improvement & health
- Natural Resource Management
- Agriculture Engineering
- Agro – processing, food technology & safety
- Small Holder Agricultural development
- Agricultural economics, business development & commercialization
- Training & Extension

### SUPPORTED BY ARC TECHNOLOGY PLATFORMS



## OUTCOMES INDICATORS FOR ARC

SCIENCE COUNCIL	AGRIC. DEVELOPMENT
<ul style="list-style-type: none"> <li>▪ Innovation in science</li> <li>▪ Basic/fundamental research</li> <li>▪ Applied research (technologies)</li> <li>▪ Intellectual assets</li> <li>▪ Skilled scientists &amp; engineers</li> <li>▪ Volume &amp; quality publications</li> <li>▪ Scientist ratings</li> <li>▪ Number of PhDs</li> <li>▪ Number of doctoral fellows</li> <li>▪ Number of postdoc fellows</li> <li>▪ Scientific awards</li> </ul>	<ul style="list-style-type: none"> <li>○ Economic link to Innovation</li> <li>○ Applied research</li> <li>○ Technology Transfer/dissemination</li> <li>○ Intellectual Asset Use</li> <li>○ Agricultural Production &amp; productivity</li> <li>○ Food Security – hunger</li> <li>○ Environmental Sustainability</li> <li>○ Import Substitution</li> <li>○ Export Promotion</li> <li>○ Agrarian Transformation</li> <li>○ New products (vaccines, cultivars etc.)</li> </ul>



## KEY ISSUES TO CONSIDER

- Emphasis on Research & Development
- Delivering on Value Chain
- Multi-sectorial across value chain
- Leadership on Agricultural Research
  - Partnerships
  - Funding arrangements
  - Coordination
  - Clear link to national priorities
    - Food Security
    - Job Creation and Competitiveness
    - Skills development




## KEY AREAS TO CONSIDER

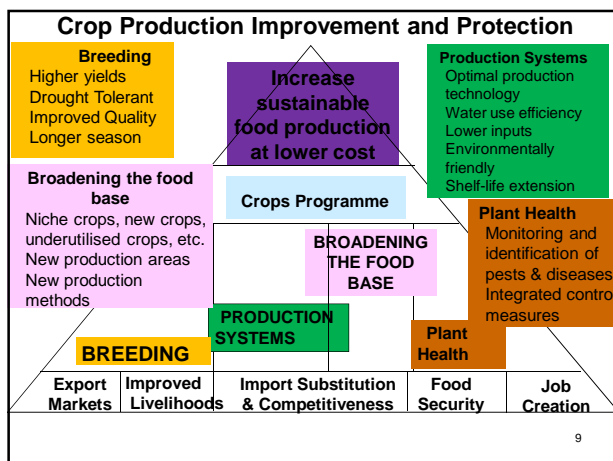
- Small Holder Farmers
- Agro-processing
- Nat Resources and Economic Support
  - Conservation Agriculture
  - Climate Change
  - Renewable Energy
  - Water Resource management
- Linking Research with Extension



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## Smallholder Agriculture Development

- Two areas of focus
  - Support to smallholder farmers in respect of
    - Establishment of agro-enterprise incubators
    - Smallholder enterprise support to provide services related to land-use and farm enterprise planning
    - Impact assessment studies on ARC interventions in support of smallholder farmers
  - R&D focused on smallholder farming
    - Farming Systems research
    - Needs based research
    - Technical and information support

## ARC- UNIVERSITY COLLABORATION CENTRE ON BROADENING THE FOOD BASE

- **ARC, UFS, DUT AND INTERNATIONAL PARTNERS**
  - Research and development of full value chain of neglected-, under-utilised, indigenous- crops with potential to develop niche markets, dual/multi purpose crops, dual/multi purpose uses of crops
  - Develop and strengthen partnerships, establish multi-disciplinary research teams, create critical mass of expertise and experience in full value chain development of the crops and leverage international collaboration
  - Student development, capacity development and researcher collaboration, specifically in critical and scarce skills disciplines and new technology development
  - Small holder and commercial producers support and development
  - Leverage international collaboration
  - Leverage more project funding
  - Engagement for innovation
  - Amaranths, Cactus Pear, Cowpeas, Amadumbe and others



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## LOOKING FORWARD TO PLAY AN ACTIVE ROLE IN DEVELOPING THE CACTUS PEAR INDUSTRY IN SOUTH AND SOUTHERN AFRICA AND BE A PARTNER IN THE INTERNATIONAL RESEARCH NETWORK

