

AGRICULTURAL RESEARCH COUNCIL

ANNUAL PERFORMANCE
PLAN 2023/24



ARC TEAM

- 1. Ms Joyene Isaacs: Chairperson
- 2. Dr Mono Mashaba: Deputy Chairperson
- 3. Dr Litha Magingxa: CEO
- 4. Dr Nthabiseng Motete: GE-Crop Sciences
- 5. Dr Andrew Magadlela: GE-Animal Sciences
- 6. Dr Petronella Chaminuka: Acting GE-Impact and Partnerships
- 7. Dr Hilton Vergotine: Acting GE-Human Capital Management
- 8. Dr Tebogo Sethibe: GE-ICT, Security & Infrastructure
- 9. Mr Abdul Carim: Chief Financial Officer



MEDIUM TERM STRATEGIC FOCUS PRIORITIES FOR 2019 – 2024

MTSF PRIORITIES FOR ARC:

- a) Priority 1: A Capable, Ethical and Developmental State
- b) Priority 2: Economic Transformation and Job Creation
- c) Priority 3: Education, Skills and Health
- d) Priority 5: Spatial Integration, Human Settlements and Local Government
- e) Priority 7: A better Africa and World

Cross Cutting Focus Areas:

- > Women
- > Youth
- > People with Disabilities
- > Climate Change



OUR MANDATE

To conduct agricultural research and development and drive technology development and dissemination in order to:

- Promote sustainability and equitable economic participation in the agricultural sector;
- Promote agriculture development and growth in related industries;
- Facilitate sector skills development and knowledge management;
- Facilitate and ensure natural resource conservation;
- Promote national food and nutrition security, and
- Contribute to improved health and better quality of life.

OUR VISION

Excellence in research and innovation for sustainable agricultural systems and socio-economic development

OUR MISSION

To conduct research, develop partnerships and human capital and foster innovation for a sustainable agricultural sector

OUR IMPACT

Sustainable agricultural systems for agrarian transformation, food and nutrition security

OUR VALUES I CAIRE I - INTEGRITY C - COMMITMENT A - ACCOUNTABILITY 1 - INNOVATION R - RESPECT - EXCELLENCE

1.Increase agricultural production and productivity	2.Sustainable ecosystem and natural resources	3.Improved nutritional value, quality and safety of agricultural products	4.A skilled and capable agriculture sector	5.Enhanced resilience of agriculture	6. A high performing and sustainable organisation
⇒Crops with improved characteristics ⇒Animal Improvement services ⇒Diagnostic and analytical services	⇒Biodiversity management ⇒Soil health assessment ⇒Weed biocontrol ⇒Low carbon technologies	⇒Product development ⇒Broadening the foodbase ⇒Processing, preservation and storage methods	⇒Skills development ⇒Technology development and dissemination ⇒Smallholder farmer supported ⇒Farmer support ⇒Knowledge generated	⇒Climate resilient solutions ⇒Vaccine production ⇒Diagnostic and analytical services	⇒Governance, financial management and internal controls ⇒Revenue generation and financial sustainability ⇒Asset utilisation ⇒ICT Strategy Implementation ⇒Effective human capital planning

OUR VISION

EXTERNAL ENVIRONMENT ANALYSIS

Global & Local Economies

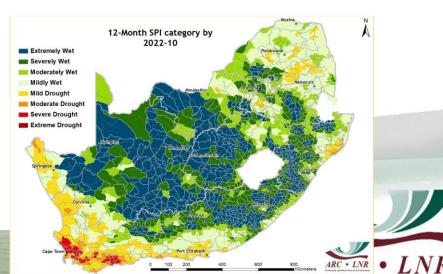
For 2023, global growth is projected to slow even further than 2022, to 2.7%, with global GDP anticipated to be at least USD2.8 trillion lower in 2023.8 This again reflected significant slowdowns for the largest economies, the significant disruption of activities and trade due to the invasion of Russia of Ukraine, withdrawn policy support, and fading pent-up demand amidst high inflation. With predictions of more pandemics on the way, the aim is not to end them but to learn how to manage them better in terms of response time about relevant actions, financial controls, and education.

Agriculture Outlook (Global & Local)

According to BFAP (2022), ²⁰ South Africa's seasonally adjusted GDP increased by 1.6% in the Q3 of 2022, with agriculture being one of the main drivers of its growth, along with banking, transportation, manufacturing, and mining. Seasonally adjusted, the agriculture industry expanded by 19.2% between the Q2 and Q3 of 2022. However, the sector exhibits a rise of 22.3% compared to the third quarter of 2021. Accordingly, the disaggregated Gross Value of Production (GVP) per industry compiled by the

Climate Emergency

Above-normal rainfall occurred over the summer rainfall region since mid-October 2022, similar to the previous summer (2021/22), which was characterised by above-normal rainfall over large parts of the country. The above-normal rainfall over the central to eastern interior is reflected by the Standardised Precipitation Index (SPI) map below for the 12-month period from November 2021 to October 2022, based on data from the ARC and South African Weather Service (SAWS) weather station networks. Above-normal rainfall continued through November into early December, and the outlook for the remainder of the summer remains favourable for rainfall, given the current La Niña in progress.



AGRICULTURE SECTOR ADVISORIES

The article below was written by ARC researchers for the Mail and Guardian (14 December 2022):

Are we in a particularly bad rainy season?²⁶

It is not easy to say whether we are having a good or bad rainy season. Compared to previous years, the current rainy season has been characterised by above-normal rainfall totals over some areas (as per the figure below), and according to forecasts from the South African Weather Service, we will probably continue experiencing above-normal rainfall until April 2023.



The article below was written by ARC researchers for Stockfarm Magazine (October 2022) and published online (January 2023):

Renewable energy and energy management, a step in the right direction to minimise farming risks associated with energy insecurity²⁷

Energy has become an integral part of modern-day intensive farming. Almost every step of the food value chain requires energy as an input, from land preparation right up to the point of consumer consumption. On the farm, energy is consumed directly as fuel or electricity, (e.g. for field machinery, irrigation, heating, cooling, and transportation), and indirectly as fertilizers, chemicals, and animal feed produced off the farm. A major share of energy intake is spent on intensive livestock production with direct energy inputs the feed processing powering of delivery machinery, electricity is used for automated milking, milk storage, water heating and pumping, lighting, ventilation, space heating, and electrical fencing. In South Africa, the two major sources of on-farm energy are electricity and diesel, both of which are primarily obtained from fossil fuels. The production and use of fossil fuels is one of the major contributors to climate change, which negatively affects agriculture.



ARC INVOLVEMENT AND PARTICIPATION IN THE AGRICULTURE AND AGRO-PROCESSING MASTER PLAN (AAMP)

The ARC has been involved since 2020 in the development of the AAMP and continues to play an active role in the process, together
with other state-owned entities in the sector..

Pillar 1: Resolving policy ambiguities and creating investment friendly climate

The ARC support Pillar 1 by:

Transfer PLAS farms and newly acquired state land to deserving beneficiaries

Pillar 3: Providing Comprehensive farmer support, developmental finance, R&D and extension services

The ARC support Pillar 3 by:

- · Information dissemination services in the form of training on all aspects of livestock value chain, farmer's days and popular publications
- Animal recording and improvement services through the National Improvement Schemes for commercial farmers and Kaonafatso ya Dikgomo Scheme for smallholder farmers.
- · Diagnostic and Analytical services such as feed and food and animal health tests
- Various Research and Development and support services to enhance competitiveness and resilience of the livestock sector in view of climate change and other emerging agricultural threats such as provision of vaccines and models to help farmers make decisions to help them cope with climate change effects
- · Various animal health research and development and service delivery tools such as vaccines and diagnostic kits
- Improve market access and trade facilitation

Pillar 4: Food security, expanded production, and employment creation

The ARC support Pillar 4 by:

- Providing scientific services to livestock farmers and conducting research and development on new and improved livestock production practices to enhance production to ensure food and nutrition security.
- · Revitalise PLAS for suitable production of various commodities.

Pillar 5: Enabling markets expansion, improve market access and trade facilitation

The ARC Animal Sciences support Pillar 5 by:

- Organising village livestock auctions to facilitate market access to communal farmers in partnership with the PDA, Community Livestock Associations and Commercial Auction Houses.
- · Improve market access and trade facilitation

Pillar 6: Developing localised food, import replacement and expanded agro-processing exports

The ARC support Pillar 6 by:

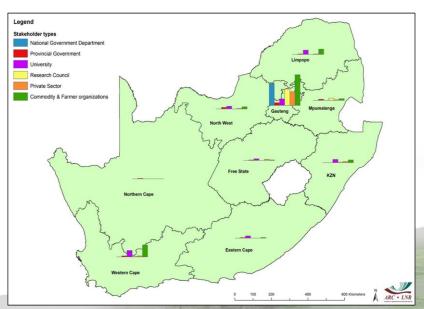
 Conducting research and development on new and improved livestock production practices to enhance production and production to ensure food and nutrition security

INTERNAL ENVIRONMENT ANALYSIS

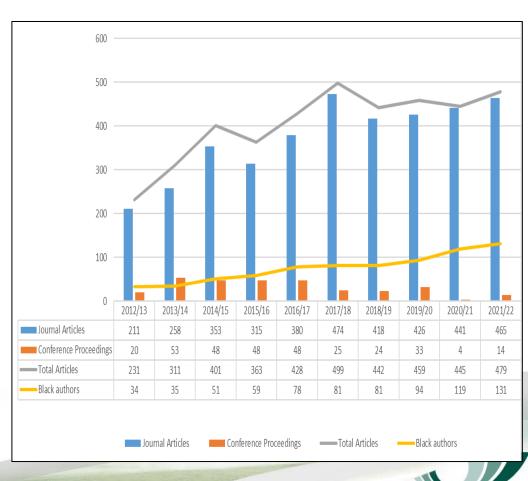
Expand International Footprint – Focus on African Footprint



Strengthening Local Partnerships



10 year Scientific Publications Review



 $ARC \cdot LNR$

INTERNAL ENVIRONMENT ANALYSIS

INSTITUTIONAL REVIEW AND IMPLICATIONS



Clearly articulate a strategy and activity portfolio in line with the ARC mandate

Addressing the challenges of inclusivity and transformation

Leverage the uniqueness, niche and competitive advantage of the ARC

The ARC output and research agenda to be redefined along client-oriented and strategically important megatrends

Embedding gender, intersectionality and Equity Diversity and Inclusivity (EDI)

Pursuing a 'centres of excellence' (CoE) model that highlights relevance and quality needs

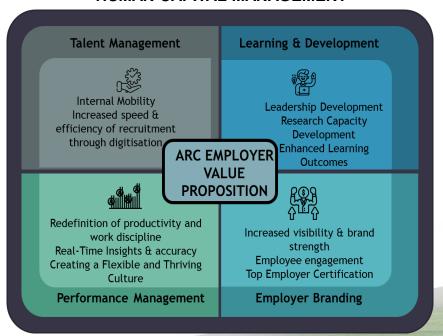
Urgently focus on revitalisation and improvement of systems and processes

Undertaking a detailed assessment on the adequacy of resources

Leveraging partnerships in line with the ARC mandate for purposes of resourcing, knowledge sharing and impact Communication, branding and marketing

Improving the ARC's contribution to human capabilities (specific focus on Professional Development Programme -PDP

HUMAN CAPITAL MANAGEMENT



DRIVERS FOR RESEARCH AND INNOVATION

CROP SCIENCES

Innovations and agricultural technologies in crop sciences aims to improve competitiveness and productivity of crop production through the development of crops/ crop varieties and cropping/production systems that will result in the availability of affordable, safe, and healthy food while ensuring environmental and economic sustainability. Increased focus on sustainable food systems for increased resilience and increased focus on scaling of technologies for impact.

ANIMAL SCIENCES

Research and service delivery efforts are directed at the social and economic development of the entire livestock chain. Advancing productivity, production, competitiveness, and sustainability of the livestock industry through the implementation of new and improved technologies for animal production, veterinary science, and animal products. Vaccine development is a key focus, which is centred around the construction of an FMD vaccine facility that would restore the country's capabilities of both producing and supplying much need FMD vaccines to the sector. Both the design and process development phases of the project has produced remarkable outputs, with doses of vaccine having already being made available to the DALRRD for use in the field.

IMPACT & PARTNERSHIPS

Fostering internal ARC collaborations and external partnerships (national and international) in order to scale up the ARC R&D outputs, for visible, measurable impact across the agricultural sector.

REFLECTION ON 4IR: ARC IN CONTEXT

There has been pilot implementation of the 4IR technologies in projects such as the CSIR-ARC-DSI Precision Farming wherein Al/ML, big data analytics, satellite imagery and Internet of Things are incorporated. One of our mobile applications is deploying the Al's computer vision capabilities which will allow the App users to capture pictures into the App for animal diseases diagnosis through the App with limited human intervention. The ARC has more than 40 applications to enhance the smallholder farmers' productivity through apps such as Maize Information Guide, Rain 4 Africa, and Fall Army Worm. There is an expressed interest to deploy blockchain technology for traceability in conjunction with DALRRD

REFLECTION ON SOLAR: ARC IN CONTEXT

The ARC started implementing a few pilot Solar projects in 2019 at Cape Town and later at Nelspruit campus; however due to the relatively small-scale installations and only being implemented on portions of the infrastructure at the sites it had a negligible impact on the total power usage. Benefits on the projects are cost reduction and stability on the power mini grid. In 2022 approval was granted for Capex investment over the next 7 years to rollout Solar Technology in the ARC. The project started late 2022, prioritising and aligning to higher electrical consumption sites, as per ARC established carbon footprint, commencing with highest and most costly power and carbon sites. The project to be concluded in 2029.

AREAS OF SERVICE DELIVERY

OUTPUT	INDICATOR	SPATIAL TRANS	
			West Coast District, Bergrivier Local Municipality, Overberg District, Cape Agulhas Local Municipality, Cape Winelands District, Drakenstein Local Municipality, West Coast District, Swartland Local Municipality, Overberg District, Theewaterskloof Local Municipality, West Coast District, West Coast District Municipality, West Coast District, Swartland Municipality, West Coast District, Saldanha Bay Municipality, Garden Route District, Garden Route District Municipality Upington, Keimoes, Kakamas, Blouputs, Augrabies, Groblershoop, Francis Baard, Pixley ka Seme
Crop technologies developed and information	Number of field trials	Northern Cape	District, Siyancuma Local Municipality, Frances Baard District, Phokwane Local Municipality, Pixley ka Seme District, Renosterberg Local Municipality, Frances Baard District, Dikgatlong Local Municipality, Pixley ka Seme District, Thembelihle Local Municipality
	Transor or nora unaic	Limpopo	Mookghopong, Modimole Sekhukhune, Waterberg, Elias Motsoaledi Local Municipality, Gert Sibande District, Gert Sibande District Municipality
dissemination		North-West	Brits, JB Marks, Ngaka Modiri Molema District, Ramotshere Moiloa Local Municipality
		Free State	Thabo Mofutsanyana District, Dihlabeng Local Municipality, Lejweleputswa District, Masilonyana Local Municipality, Lejweleputswa District, Matjhabeng Local Municipality, Lejweleputswa District, Tswelopele Local Municipality
		KwaZulu-Natal	uMgungundlovu, Umkhanyakude, uThukela District, Okhahlamba Local Municipality
		Mpumalanga	Nkangala, Ehlanzeni District, Thaba Chweu Local Municipality, Sekhukhune District, Sekhukhune District Municipality
		Gauteng	City of Tshwane
Animal Improvement services	Number of farmers participating in each of the animal improvement schemes	Nationally	All Districts (Depending on the request from the farmer)
		OUTCOME 2:	SUSTAINABLE ECOSYSTEMS AND NATURAL RESOURCES
Natural			Stellenbosch, Porterville, Paarl, Franschhoek, Robertson, Grabouw
Resource	Number of field trials	North West	JB Marks
Management		Gauteng	City of Tshwane
	OUTCOME 3:	IMPROVED NUT	RITIONAL VALUE, QUALITY AND SAFETY OF AGRICULTURAL PRODUCTS
Broadening the food base	Number of field trials	Nationally	Depend on trial requirements

Number of Postgraduate students supported by ARC Skills	the request) Inding on the request) uest) Inding on the request) un, University of Western Cape, Stellenbosch University Insity of Technology State Indicate Inca, University of Johannesburg, University of the Witwatersrand, University of Pretoria, Technology, Vaal university of Technology University of Venda Natal, University of Zululand, Mangosuthu University of Technology arkerville (furthermore it depends on requests from Industry) aneen Capricorn District, Mopani District, Sekhukhune District, Vhembe District, Waterberg
Number of people trained Number of people trained Number of postgraduate students supported by ARC Number of Postgraduate students supported by ARC Number of farmers trained Number of farmers sparticipating in KyD Number of farmer field days Number of farmers Number of farmer supported Number of farmer field days Number of farmer supported Number of farmer supported Number of farmer field days Number of farmer supported Namber of farmer supported Namber of farmer field days Number of farmer supported Namber of farmer supported Number of farmer supported Number of farmer field days Number of farmer supported Namber of farmer supported Namber of farmer supported Namber of farmer supported Number of farmer field days Number of farmer supported Number of farmer supported Number of farmer field days Number of farmer supported Number of smallholder supported	uest) vn, University of Western Cape, Stellenbosch University sity of Technology State lica, University of Johannesburg, University of the Witwatersrand, University of Pretoria, Technology, Vaal university of Technology University of Venda Natal, University of Zululand, Mangosuthu University of Technology arkerville (furthermore it depends on requests from Industry) aneen Capricorn District, Mopani District, Sekhukhune District, Vhembe District, Waterberg
Number of people trained National National National All Districts (Depending on the re University of Cape Tc Cape Peninsula Univ Free State University of South A Tshwane University of Limpopo KwaZulu-Natal University of Limpopo KwaZulu-Natal University of Limpopo KwaZulu-Natal University of Limpopo KwaZulu-Natal University of Kwazulu-North West University Western Cape Stellenbosch, Paarl, I Northern Cape Eksteenskuil Limpopo Syani, Polokwane, T: District Mpumalanga Nkomazi, Gert Sibane KwaZulu-Natal Number of technical assessments for commercial readiness Number of smallholder farmers participating in KyD Number of farmer field days Number of farm Number of farmer North-West North-West, Free State, Eastern Cape KwaZulu-Natal Mubatuba, Eblanzen Sedibeng West Rand Western Cape, Limpopo, North-West, Free State, Eastern Cape KwaZulu-Natal Number of farmer field days North West Ngaka Modiri Molema Impopo North-West Ngaka Modiri Molema Impopo North West North West Ngaka Modiri Molema Impopo North West North West Ngaka Modiri Molema Impopo North West Nor	uest) vn, University of Western Cape, Stellenbosch University rsity of Technology State lica, University of Johannesburg, University of the Witwatersrand, University of Pretoria, Technology, Vaal university of Technology University of Venda Natal, University of Zululand, Mangosuthu University of Technology arkerville (furthermore it depends on requests from Industry) aneen Capricorn District, Mopani District, Sekhukhune District, Vhembe District, Waterberg
Number of Postgraduate students supported by ARC Number of Sauteng North-West North-West North-West North-West North-West North-West North-West Sedibeng District, Tsl Gauteng Number of smallholder farmers participating in KyD Number of farmer field days Number of farmer field days Number of farm Number of farmer field days Number of farm	wn, University of Western Cape, Stellenbosch University rsity of Technology State ica, University of Johannesburg, University of the Witwatersrand, University of Pretoria, Technology, Vaal university of Technology University of Venda Natal, University of Zululand, Mangosuthu University of Technology arkerville (furthermore it depends on requests from Industry) aneen Capricorn District, Mopani District, Sekhukhune District, Vhembe District, Waterberg
Number of Postgraduate students supported by ARC Number of Postgraduate students supported by ARC Number of Postgraduate students supported by ARC Number of State University of South A Tshwane University of South A Tshwane University of Limpopo University of Limpopo (Maz Zulu-Natal University of Kwaz Zulu-Natal Western Cape (Maz Zulu-Natal University of Kwaz Zulu-Natal University of Kwaz Zulu-Natal Mtubatuba, Falanzeni District, Tsl Gauteng Sedibeng District, Tsl Western Cape, North-West Sedibeng University of Kwaz Zulu-Natal University of Limpopo (Maz Zulu-Natal University of South A Tshwane University of Limpopo (Maz Zulu-Natal University of South A Tshwane University of K	wn, University of Western Cape, Stellenbosch University rsity of Technology State ica, University of Johannesburg, University of the Witwatersrand, University of Pretoria, Technology, Vaal university of Technology University of Venda Natal, University of Zululand, Mangosuthu University of Technology arkerville (furthermore it depends on requests from Industry) aneen Capricorn District, Mopani District, Sekhukhune District, Vhembe District, Waterberg
Number of Postgraduate students supported by ARC Number of Postgraduate students supported by ARC Limpopo Lim	Istity of Technology State Ica, University of Johannesburg, University of the Witwatersrand, University of Pretoria, Technology, Vaal university of Technology University of Venda Natal, University of Zululand, Mangosuthu University of Technology arkerville (furthermore it depends on requests from Industry) aneen Capricorn District, Mopani District, Sekhukhune District, Vhembe District, Waterberg
Number of Postgraduate students supported by ARC Free State	State ica, University of Johannesburg, University of the Witwatersrand, University of Pretoria, Technology, Vaal university of Technology University of Venda Natal, University of Zululand, Mangosuthu University of Technology arkerville (furthermore it depends on requests from Industry) aneen Capricorn District, Mopani District, Sekhukhune District, Vhembe District, Waterberg
Skills development Smallholder farmers supported Number of technical assessments for commercial readiness Number of smallholder farmers participating in KyD Number of farmer field days Number of farmer field Limpopo Gauteng Western Cape Western Cape Stellenbosch, Paarl, I Rorth West North West North West North West North-West Sauteng Gauteng Sedibeng West Rand Western Cape, Northern Cape, Limpopo, North-West, Free State, Eastern Cape KwaZulu-Natal Western Cape, Northern Cape, Limpopo, North-West, Free State, Eastern Cape KwaZulu-Natal North West North	ica, University of Johannesburg, University of the Witwatersrand, University of Pretoria, Technology, Vaal university of Technology University of Venda Natal, University of Zululand, Mangosuthu University of Technology arkerville (furthermore it depends on requests from Industry) aneen Capricorn District, Mopani District, Sekhukhune District, Vhembe District, Waterberg
students supported by ARC Gauteng Tshwane University of South A Tshwane University of Limpopo University of Limpopo University of Limpopo University of Limpopo KwaZulu-Natal University of Kwazulu North West North West University of Kwazulu North West North West University of Kwazulu North West North West University of Kwazulu North West University of Kwazulu North West University of South A Western Cape Stellenbosch, Paarl, I Northern Cape Eksteenskuil Limpopo	Technology, Vaal university of Technology University of Venda Natal, University of Zululand, Mangosuthu University of Technology arkerville (furthermore it depends on requests from Industry) aneen Capricorn District, Mopani District, Sekhukhune District, Vhembe District, Waterberg
ARC Limpopo University of Limpopo KwaZulu-Natal University of KwaZulu-Nath West University of KwaZulu-Nath West University of KwaZulu-Nath Responsible of Farmers of Farmers trained Number of farmers trained Western Cape Eksteenskuil	University of Venda Natal, University of Zululand, Mangosuthu University of Technology arkerville (furthermore it depends on requests from Industry) aneen Capricorn District, Mopani District, Sekhukhune District, Vhembe District, Waterberg
Skills development Smallholder farmer supported Number of technical assessments for commercial readiness Number of smallholder farmers participating in KyD Number of farmer field days Number of farmer field days Number of farmer field days North West Western Cape Stellenbosch, Paarl, I Western Cape Eksteenskuil Gyani, Polokwane, T: District Mpumalanga KwaZulu-Natal Nkomazi, Gert Sibane KwaZulu-Natal Nkomazi, Gert Sibane Mkubatuba, Ehlanzen Bojanala Platinum District Gauteng Sedibeng West Rand KwaZulu-Natal Western Cape, Northern Cape, Limpopo, North-West, Free State, Eastern Cape KwaZulu-Natal Mpumalanga Ehlanzeni District, Tell North West Ngaka Modiri Molema Limpopo Mpumalanga Gert Sibande, Ehlanzen Mpumalanga Gert Sibande, Ehlanzen Mpumalanga Gert Sibande, Ehlanzen	Natal, University of Zululand, Mangosuthu University of Technology arkerville (furthermore it depends on requests from Industry) aneen Capricorn District, Mopani District, Sekhukhune District, Vhembe District, Waterberg
Skills development Smallholder farmer supported Number of farmers trained Number of technical assessments for commercial readiness Number of smallholder farmers participating in KyD Number of farmer field days North West Western Cape Limpopo Limpopo Myumalanga KwaZulu-Natal North-West Gauteng Sedibeng West Rand KwaZulu-Natal Western Cape, Northern Cape, Limpopo, North-West, Free State, Eastern Cape KwaZulu-Natal Mumber of smallholder farmers participating in KyD Number of farmer field days Number of farmer field days Number of farm Number of farmer North West North W	arkerville (furthermore it depends on requests from Industry) aneen Capricorn District, Mopani District, Sekhukhune District, Vhembe District, Waterberg
Skills development Smallholder farmer supported Number of technical assessments for commercial readiness Number of smallholder farmers participating in KyD Western Cape Limpopo Mumber of farmers trained Number of technical assessments for commercial readiness Number of smallholder farmers participating in KyD Western Cape North-West Gauteng Gauteng Sedibeng West Rand KwaZulu-Natal Western Cape, Northern Cape, Limpopo, North-West, Free State, Limpopo Mumber of farmer field days Number of farmer field Mumber of farmer Mumber of farmer field Mumber of farmer Mumber of farme	aneen Capricorn District, Mopani District, Sekhukhune District, Vhembe District, Waterberg
Skills development Smallholder farmer supported Number of farmers trained Number of farmers trained Number of farmers trained Number of farmers trained Number of technical assessments for commercial readiness Number of smallholder farmers participating in KyD Number of farmer field days Number of farmer Number of farmer field days Number of farmer	aneen Capricorn District, Mopani District, Sekhukhune District, Vhembe District, Waterberg
Skills development Smallholder farmer supported Number of farmers trained North-West Gauteng Sedibeng District, Tsl Sedibeng West Rand KwaZulu-Natal Number of smallholder farmers participating in KyD Number of farmer field Number of farmer field Number of farmer field Number of farmer field All District, UThukela District, Tsl Mpumalanga KwaZulu-Natal Western Cape, Northern Cape, Limpopo, North-West, Free State, Bojanala Platinum Dis District Sedibeng West Rand KwaZulu-Natal Western Cape, Northern Cape, Limpopo, North-West, Free State, Bojanala Platinum Dis District, Tsl Sedibeng West Rand KwaZulu-Natal Mumkhanyakude District Eastern Cape KwaZulu-Natal Amajuba District, Har District, uThukela Dis Mpumalanga Ehlanzeni District, Ts Ngaka Modiri Molema Limpopo Mpumalanga Gert Sibande, Ehlanzeni Number of farmer Mpumalanga Gert Sibande, Ehlanzeni Number of farmer	
Skills development Smallholder farmer supported trained	
trained traine	
Smallholder farmer supported North-West Bojanala Platinum District	
farmer supported North-West Gauteng Sedibeng District, Tsl Sedibeng District, Tsl Sedibeng District, Tsl Sedibeng District, Tsl Sedibeng West Rand KwaZulu-Natal Western Cape, Northern Cape, Limpopo, North-West, Free State, Impopo, North-West, Free State, Sedibeng West Rand KwaZulu-Natal Western Cape, Northern Cape, Limpopo, North-West, Free State, Marajuba District, Har District, uThukela District, uThukela District, uThukela District, Gauteng Number of farmer field days Number of farmer field	District, Gert Sibande District Nkangala District
Number of technical assessments for commercial readiness Number of smallholder farmers participating in KyD Number of farmer field days Number of farmer	rict, Dr Kenneth Kaunda District, Dr Ruth Segomotsi Mompati District, Ngaka Modiri Molema
Number of technical assessments for commercial readiness KwaZulu-Natal Western Cape, Northern Cape, Limpopo, North-West, Free State, Farmers participating in KyD Number of farmer field days Number of farmer field Routing Gauteng Gauteng Gauteng West Rand Western Cape, Northern Cape, Limpopo, North-West, Free State, Eastern Cape KwaZulu-Natal Mpumalanga Gauteng Amajuba District, Har District, uThukela District, uThukela District, Ge Gauteng North West Ngaka Modiri Molema Under State (Sauteng) North West Limpopo Mpumalanga Gert Sibande, Ehlanz	
assessments for commercial readiness KwaZulu-Natal Western Cape, Northern Cape, Limpopo, North-West, Free State, Farmers participating in KyD KwaZulu-Natal Mpumalanga Number of farmer field days Number of farm Ryumber of farmer Gauteng West Rand Western Cape, Northern Cape, Limpopo, North-West, Free State, Participation (Comparison of State of State) Eastern Cape KwaZulu-Natal Mpumalanga Ehlanzeni District, Test Nigaka Modiri Molema Limpopo Mpumalanga Gert Sibande, Ehlanzeni District, Test Nigaka Modiri Molema Capto of State of St	vane Metropolitan, City of Johannesburg, City of Ekurhuleni
All Districts (Depending Limpopo, North-West, Free State, Limpopo, North-West, Free State, Participating in KyD Number of farmer field days Number of farm Number of farmer field	
Number of smallholder farmers participating in KyD Number of farmer field days Western Cape, Northern Cape, Limpopo, North-West, Free State, All Districts (Depending Amajuba District, Har District, uThukela District, uThukela District, General Ekurhuleni District, Tsubanda Mpumalanga Ehlanzeni District, Tsubanda Modiri Molema Unimpopo Whembe, Mopane Mpumalanga Gert Sibande, Ehlanzeni District, Tsubanda Mpumalanga Gert Sibande, Ehlanzeni District, uThukela District, uThuke	
Limpopo, North-West, Free State, Number of smallholder farmers participating in KyD KwaZulu-Natal Mpumalanga Gauteng Number of farmer field days Limpopo, North-West, Free State, Eastern Cape KwaZulu-Natal Mpumalanga Ehlanzeni District, Ge Gauteng North West Ngaka Modiri Molema Limpopo Mpumalanga Gert Sibande, Ehlanzeni Number of farm	t, uMzinyathi District
Number of smallholder farmers participating in KyD KwaZulu-Natal Mpumalanga Gauteng Number of farmer field days Number of farm Number of farmer Eastern Cape KwaZulu-Natal Mpumalanga Ehlanzeni District, Har District, uThukela Dis Ekurhuleni District, To North West Limpopo Mpumalanga Number of farmer Number of farmer Number of farmer	
farmers participating in KyD KwaZulu-Natal Mpumalanga Gauteng Number of farmer field days Number of farm	g on the request from the farmer)
farmers participating in KyD KwaZulu-Natal Mpumalanga Gauteng Number of farmer field days Number of farm KwaZulu-Natal Mpumalanga Ehlanzeni District, Ge Gauteng Ekurhuleni District, Ts Ngaka Modiri Molema Limpopo Vhembe, Mopane Mpumalanga Gert Sibande, Ehlanzeni Ostrict, Harry Mpumalanga Ehlanzeni Ostrict, Harry District, Harry District, Harry District, Harry District, Harry North West Limpopo Mpumalanga Gert Sibande, Ehlanzeni Ostrict, Harry District, Harry North Mean And Harry Amaguna And Harry Amaguna And Harry North Mean A	
Number of farm	Gwala District, iLembe District, King Cetshwayo District, uMkhanyakude District, uMzinyathi
Number of farmer field days Number of farmer field District, Ts North West Limpopo Mpumalanga Number of farm Number of farm Rumber of farm	
Number of farmer field days North West Limpopo Mpumalanga Number of farm Number of farm Number of farm	t Sibande District, Bohlabela District, Nkangala District
Limpopo Vhembe, Mopane days Mpumalanga Gert Sibande, Ehlan:	wane District, City of Johannesburg District, Sedibeng District, West Rand District
days Limpopo Vhembe, Mopane Mpumalanga Gert Sibande, Ehlan.	
Number of farm	
Number of farm Nationwide Depending on require	eni eni
assessments Nationwide Depending on reques	
Number of farmers Northern Cape Eksteenskuil	
Former support supported Gauteng Rand West City Loca	Municipality
Farmer support Free State Thabo Mofutsanyana	
Number of farmer field North-West Bojanala Platinum Di	rict, Dr Kenneth Kaunda
days KwaZulu-Natal uMkhanyakude Distri	- I - I - I - I - I - I - I - I - I - I
Gauteng Sedibeng District, We	t, uMzinyathi District
OUTCOME 5: ENHANCED RESIL	r, uMzinyathi District tt Rand District, Tshwane District, Ekurhuleni District
	t, uMzinyathi District tt Rand District, Tshwane District, Ekurhuleni District ENCE OF AGRICULTURE
Free State Thabo Mofutsanyane	t, uMzinyathi District It Rand District, Tshwane District, Ekurhuleni District ENCE OF AGRICULTURE Ojanala, Ngaka Modiri Molema, Dr Ruth Segomoesi Mompati,
	t, uMzinyathi District tt Rand District, Tshwane District, Ekurhuleni District ENCE OF AGRICULTURE ojanala, Ngaka Modiri Molema, Dr Ruth Segomoesi Mompati, Lejweleputswa, Fezile Dabi, Motheo,
Number of field trials Limpopo Waterberg, Sekhukhu	t, uMzinyathi District It Rand District, Tshwane District, Ekurhuleni District ENCE OF AGRICULTURE Ojanala, Ngaka Modiri Molema, Dr Ruth Segomoesi Mompati, Lejweleputswa, Fezile Dabi, Motheo, nanyakude, uThukela, Okhahlamba, Umvoti uMzinyathi,
inpumalanga inkangala, Gert Sibar	t, uMzinyathi District tt Rand District, Tshwane District, Ekurhuleni District ENCE OF AGRICULTURE ojanala, Ngaka Modiri Molema, Dr Ruth Segomoesi Mompati, Lejweleputswa, Fezile Dabi, Motheo, nanyakude, uThukela, Okhahlamba, Umvoti uMzinyathi, ne, Mopani, Vhembe, Capricorn,
Eastern Cape OR Tambo	t, uMzinyathi District It Rand District, Tshwane District, Ekurhuleni District ENCE OF AGRICULTURE Ojanala, Ngaka Modiri Molema, Dr Ruth Segomoesi Mompati, Lejweleputswa, Fezile Dabi, Motheo, nanyakude, uThukela, Okhahlamba, Umvoti uMzinyathi,
Gauteng Ekurhuleni, City of Ts	t, uMzinyathi District tt Rand District, Tshwane District, Ekurhuleni District ENCE OF AGRICULTURE ojanala, Ngaka Modiri Molema, Dr Ruth Segomoesi Mompati, Lejweleputswa, Fezile Dabi, Motheo, nanyakude, uThukela, Okhahlamba, Umvoti uMzinyathi, ne, Mopani, Vhembe, Capricorn, le, Ehlanzeni, Amatole, Bushbuckridge,

CRITICAL ISSUES INFORMING THE 2023/24 ANNUAL PERFORMANCE PLAN

The following key critical success factors will significantly contribute to the sustainability of the ARC, both at the level of enhancing the ARC strategic positioning within the sector; locally, regionally and internationally; while also enhancing the ARC operational environment with respect to efficiencies and effectiveness across all service level offerings:

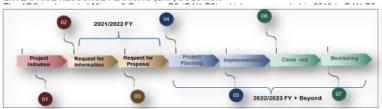
- Undertake and finalise a comprehensive review of the ARC current (dated 2019) Sustainability and Turnaround Plan;
- Outcomes from the above review will set the foundation towards the formal institutionalisation and implementation of enhanced strategies/pillars of focus, against which periodic performance and reporting can be initiated and tracked;
- Having completed an Institutional Review process during the previous financial year, the focus
 for the new financial year would be on the implementation of the review recommendations
 through an aligned and focused management action/response plan;
- Alignment, support and implementation of key initiatives as contained/outlined under the six key pillars of the approved Agriculture and Agro-Processing Master Plan;
- Adopting a more aggressive approach that is geared towards the tangible realisation of the ARC Commercialisation Strategy;
- An enhanced focus on the development, repacking and dissemination of sector solutions that
 are aimed at enhancing the resilience of the sector to plant and animal pests and diseases,
 climate change and energy constraints;
- The adoption of an accelerated approach towards the achievement of committed strategic outcome areas that are aligned to the ARC 2020/2021 -2024/2025 Strategic Plan, which are informed by the Longer-Range Development Priorities (NDP 2030, SDGs, Agenda 2063, etc.) and National Priorities for the next five years (SONAs, MTSF 2019-2024, Sector Department Priorities, etc.); and
- Enhancing the ARC value proposition towards a strategic partner of choice across the broader agriculture sector for the short to longer term (ARC Vision 2050) time horizon.

FOOT-AND-MOUTH DISEASE (FMD) VACCINE PRODUCTION FACILITY

Due to a variety of reasons, South Africa's only Foot-and-Mouth Disease (FMD) vaccine production facility at the ARC Ondersteport Veterinary Research Campus ceased functioning in December 2005. Lack of FMD vaccine production at this strategic national facility has increased the risk for the effective management of potential disease outbreaks. In the interim, South Africa has relied on procurement of vaccine from the Botswana Vaccine Institute (BVI). FMD is listed as a controlled disease in South Africa in terms of the Animal Disease Act 35 of 1984²³. FMD is a highly contagious and acute viral affliction of domestic and wild cloven-hoofed animals. The cost of FMD is based on the stringent control measures needed to contain this highly infectious disease and the impact on production the disease has. The direct losses incurred due to an outbreak of the disease include the capital value of herds should culling processes be implemented as part of the control programme, loss of production and associated income and an increase in production costs because of additional on-farm quarantine restrictions. However, by far the greatest costs associated with FMD are the trade restrictions placed on an area with a confirmed outbreak, where the impact can go far beyond the livestock industry traditionally linked with FMD. Most recent estimates of the total loss in export revenue, including losses incurred by upstream and downstream sectors linked to livestock production, exceed R6.4 billion measured against the 2016 red meat export value.

ICT-RELATED PROJECTS

ENTERPRISE RESOURCE PLANNING (ERP) SOLUTION



Current Solar Project Status

For FY22/23, the following solar projects are in progress

SOLAR TYPE	CAPACITY	LOCATION	ESTIMATED COST
Roof-top PV Solar	75kw	Infruitec	R 3 000.000.00
Integrated LED lights & PV Solar	60kw	Infruitec	R 2 000 000.00
3 x PC Solar System	30kw	TSC - Pathology building	R 1 047 118.75
Roof-top PV Solar	75kw	TSC - Pathology building	R 2 600 000.00
Roof-top PV Solar	30kw	TSC - Biotech building (upgrade)	R 800 000.00
Roof-top PV Solar	60kw	TSC - Water purification plant	R 2 062 881.25
Total	•	•	R11 510 000.00



FINANCIAL OVERVIEW

- No significant increase expected on the Parliamentary Grant over the MTEF
- · Aggressive marketing and support from DALRRD will see an increase in the External Income generation
- The entity remains under pressure with regards to the cost of personnel under continued rising inflation and interest rates
- Increasing progress on the FMD project will see an increase in expenditure as well as PPE (items capitalized as components)
- This will result in a decrease in the cash the entity has as a significant portion of the cash and cash equivalents is attributable to the FMD cash

AGRICULTURAL RESEARCH COUNCIL - THREE YEAR REVIEW						
Statemen	t of Financia	al Performa	ince			
	Audited	Fore cast	Budget	Budget	Budget	
	2022	2023	2024	2025	2026	
	R'm	R'm	R'm	R'm	R'm	
Total Income	1 394	1 392	1 672	1 628	1 702	
Parliamentary Grant	1029	1 060	1 150	1 083	1 131	
Baseline - Operational	923	950	1040	968	1011	
Baseline - Capital	106	110	110	115	120	
External Income	317	249	457	478	499	
Other Income	48	83	65	68	71	
Total expenditure	1 225	1 283	1 556	1 513	1 544	
Personnel Costs	755	837	837	837	837	
Operating Expenditure	392	370	647	601	628	
Depreciation	78	76	72	76	79	
Interest Paid	0	0	0	0	0	
Net Surplus/(Deficit)	168	110	116	115	158	
Capital Expenditure	(106)	(110)	(110)	(115)	(120)	
Net Operational Surplus/(Deficit)	62	(0)	6	0	38	

THE GOAL FOR THE AGRICULTURAL RESEARCH COUNCIL IS TO ACHIEVE A BETTER AUDIT OUTCOME

The ARC continues to improve its control environment and governance; strengthen the internal financial controls, to ensure an UNQUALIFIED AUDIT OUTCOME is achieved. AIP is in place and monitored by Internal audit on a monthly basis:

Update on outstanding issue:

☐ Processing final adjustments on PPE, based on the findings of external service provider.



OUTCOME 1: INCREASED AGRICULTURAL PRODUCTION AND PRODUCTIVITY

RESPONSIBLE			MEDIUM-TERM TARGETS			
BUSINESS DIVISION	OUTPUT	OUTPUT INDICATORS	2023/24	2024/25	2025/26	
	Crop technologies	Number of cultivars registered	7	7	7	
	developed and information	Number of field trials	182	179	169	
Crop Sciences		Number of technical reports	163	152	149	
		Number of cultivar evaluations	35	35	36	
Animal Sciences	Animal improvement services	Number of farmers participating in each of the animal improvement schemes	150	160	170	
		Number of technical reports	540	600	610	

OUTCOME 2: SUSTAINABLE ECOSYSTEMS AND NATURAL RESOURCES

RESPONSIBLE	CUTPUT	OUTDUT INDICATORS	MEDIUM-TERM TAR		RGETS
BUSINESS DIVISION	OUTPUT	OUTPUT INDICATORS	2023/24	2024/25	2025/26
	Natural Resource Management	Number of technical reports	88	88	79
		Number of field trials	52	52	48
		Number of services rendered	571	583	591
0		Number of samples analysed for soil	220	215	228
Crop Sciences	Soil and Water Science	health and water quality	220		220
		Number of technical reports	28	29	32
Animal Sciences		Number of services rendered	410	420	430
Animai ociences	Wood Spigner	Number of technical reports	13	13	13
	Weed Science	Number of services rendered*	0	0	0
	Faceyatem convices	Number of technical reports	4	5	6
	Ecosystem services	Number of services rendered*	0	0	0



OUTCOME 3: IMPROVED NUTRITIONAL VALUE, QUALITY AND SAFETY

RESPONSIBLE			MEDI	MEDIUM-TERM TARGETS			
BUSINESS DIVISION	OUTPUT	OUTPUT INDICATORS	2023/24	2024/25	2025/26		
		Number of cultivars registered	0	0	0		
		Number of field trials	7	7	8		
	Broadening the food	Number of technical reports	63	58	55		
	base	Number of cultivar evaluations	32	32	33		
		Number of new products developed	3	3	4		
Crop Sciences		Number of services rendered	24	24	27		
Animal Sciences		Number of cultivars developed with improved shelf life	0	0	0		
	Post-harvest handling and agro-	Number of new post-harvest solutions developed	2	2	2		
	processing	Number of solutions for controlled atmosphere	2	2	2		
		Number of services rendered	28	26	27		



OUTCOME 4: A SKILLED & CAPABLE AGRICULTURE SECTOR THROUGH INNOVATION, KNOWLEDGE MANAGEMENT & TECHNOLOGIES

RESPONSIBLE			MEDI	UM-TERM TAR	GETS
BUSINESS DIVISION	OUTPUT	OUTPUT INDICATORS	2023/24	2024/25	2025/26
		Number of people trained	542	459	491
	Skills development	Number of Postgraduate students supported by ARC	53	48	46
		Number of technologies/IP registered/developed	8	7	10
	Technology Transfer	Number of enterprises supported	25	30	30
		Number of technologies transferred under license	20	30	30
		Number of farmers trained	1 251	1 076	1 096
Crop Sciences	Smallholder farmer supported	Number of technical assessments for commercial readiness	50	60	60
Animal Sciences		Number of smallholder farmers participating in KyD	5 000	5 500	6 000
Impact and		Number of services rendered	104	104	104
Partnerships		Number of farmer field days	11	11	13
		Number of farm assessments	6	11	13
	Former cuppert	Number of farmers supported	281	286	301
	Farmer support	Number of farmer field days	21	22	23
		Number of services rendered	99	103	109
	Knowledge	Number of scientific publications	288	257	268
	generated and	Number of popular publications	204	209	223
	dissemination	Number of public awareness events	160	162	171



OUTCOME 5: ENHANCED RESILIENCE OF AGRICULTURE

RESPONSIBLE	OUTPUT	OUTPUT INDICATORS	MEDIUN	M-TERM TA	RGETS
BUSINESS DIVISION	0011 01	OUT OF INDICATORS	2023/24	2024/25	2025/26
		Number of climate resilient solutions adopted	0	0	0
		Number of drought tolerant cultivars	0	0	0
	Climate resilient	Number of services rendered	12	14	18
	solutions	Number of technical reports	6	8	10
		Number of field trials	12	13	14
		Number of tools for measuring climate change	320	320	320
Crop Sciences		Number of blood vaccine doses produced	70 000	70 000	65 000
Animal Sciences	Vaccine production	Number of different types of vaccines developed	1	0	0
Animai Sciences		Number of FMD vaccine doses produced	0	50 000	100 000
		Number of vaccine clinical trials	1	1	0
		Number of tests reports issued for animal health	16 565	17 395	17 718
	Laboratory services	Number of tests performed for food and feed	2 410	2 510	2 612
		Number of services rendered	200	220	240
		Number of technical reports	18	10	8



OUTCOME 6: A HIGH-PERFORMING AND SUSTAINABLE ORGANISATION

RESPONSIBLE	OUTPUT		MEDIUM-TERM TARGETS		
BUSINESS DIVISION		OUTPUT INDICATORS	2023/24	2024/25	2025/26
	Infrastructure	Number of business cases implemented for assets management	2	3	3
ICT 9	Management	Increase in Rand value of rental income	2%	5%	5%
ICT & Infrastructure	ICT Strategy Implementation	Number of digital transformation projects implemented	3	3	3
		Number of stabilisation projects implemented	2	1	1
		Number of optimisation projects implemented	3	3	3
Impact and	Commercialisation of ARC solutions	Establishment of an ARC commercialisation entity	Registration of the entity, establishme nt of 2 spin- offs		
Partnerships	Exhibitions and	Number of exhibitions, sponsorships	8	5	5

Number of new international partnerships

sponsorships International

partnerships



2

2

2

OUTCOME 6: A HIGH-PERFORMING AND SUSTAINABLE ORGANISATION

RESPONSIBLE	OUTPUT		MEDIUM-TERM TARGETS		
BUSINESS DIVISION		OUTPUT INDICATORS	2023/24	2024/25	2025/26
		Vacancy rate	5%	5%	5%
		Support employees as percentage of total staff	20%	20%	20%
	Human resources	Percentage increase of employment			
	Management	equity ratio in the designated groups in core business, in respect of:	46%	46%	46%
		-Women at Senior Management level			
		- People with Disabilities employed	1%	1%	1%
		Improve the leadership dimensions of			
		360 degree results of Management,	4	4	4
		Senior and Executive Management			
Human Capital	Performance	Alignment of organisational values	90%	90%	90%
Management	management	Percentage implementation of change			
		management strategies linked to	100%	100%	100%
		culture survey and 360 degree	10070		
		leadership processes			
		Number of employees appointed with	20	20	20
		Masters degrees			
		Number of employees appointed with	10	10	10
		Doctoral degrees			
		Number of employees with Masters	200	200	200
	Human resource	degrees			
	development	Number of employees with Doctoral	240	230	230
		degrees			
		Percentage staff turnover	4%	4%	4%
		Total spend on PDP stipend and registration	R 10 mil	R 20 mil	R 10 mil
		Training spend as a % of salary bill	1%	2%	2%



OUTCOME 6: A HIGH-PERFORMING AND SUSTAINABLE ORGANISATION

RESPONSIBLE BUSINESS DIVISION	OUTPUT	OUTPUT INDICATORS	MEDIUM-TERM TARGETS		
			2023/24	2024/25	2025/26
Finance	Governance	Audit opinion	Unqualified	Unqualified	Unqualified
			audit	audit	audit
	generation	Zero Deficit	Zero deficit	Zero deficit	Zero deficit
		BBBEE rating	Level 1	Level 1	Level 1
		External income as % of total revenue	28%	28%	27%
		Rand value of royalty income	R 40 mil	R 42 mil	R 42 mil
	Cost efficiencies	Reduction in fixed cost	5%	5%	5%
		Personnel costs as % of Operational PG	57%	56%	56%



COMMENTS/ QUESTIONS

Re a Leboha!

Siyabonga!

Ria Livhuwa!

Ha Khensa!

Siyathokoza!

Re a leboga

Siyabulela!

Baie Dankie!

Thank You

