

# Chairman's Report

20<sup>TH</sup> ANNUAL GENERAL MEETING OF THE SOUTHERN AFRICAN GRAIN LABORATORY NPC



## Introduction

It is an honour to deliver the 20<sup>th</sup> Chairperson's Report of the SAGL for the financial year 2016/2017.

The SAGL has since its inception 20 years ago assertively continued to provide quality analyses on different grain and oilseed commodities. Its analyses results, obtained from applying internationally recognised procedures and methods, have over the time supported research and development as well as quality assurance mechanisms necessary for effective marketing of local grain products. The National Crop Quality Surveys on wheat, maize, soybeans, sunflower seeds and sorghum funded by respective Trusts are typical examples and testimony to the significant contribution to food safety and quality imperatives. The application of internationally benchmarked procedures and methods ensures alignment with globally acknowledged standards. The quality of imported grains also forms part of the analytical results produced at the SAGL from benchmarking and quality comparison perspectives. The results generated from all analyses conducted are therefore credible and reliable. In addition to the above, SAGL also provides consultancy, training and testing services for countries in the rest of Africa.

One of the fundamental developments at the SAGL was the recent creation of an independent testing capability for the registration of plant protection products in accordance with the proposed changes to the Regulatory requirements under Act 36. Notwithstanding the challenges relating to the funding required for the establishment of such a facility, the **Crop Protection Division** of the SAGL was launched in June 2017. The facility is both ISO 17025 accredited and OECD GLP Compliant and provides independent accredited services to companies in both South Africa as well as the rest of the world. This initiative is aligned with the strategic imperatives to expand the services base of the laboratory to ensure growth and sustainability.

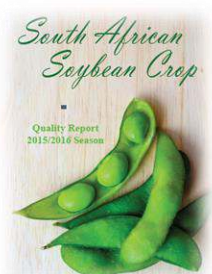
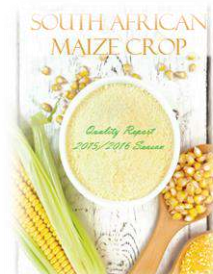
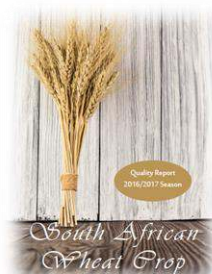
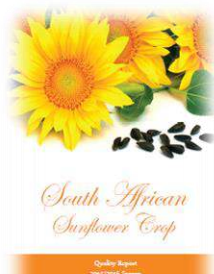


**MR. BOIKANYO MOKGATLE**  
CHAIRPERSON 2016/2017

## List of Contents

- ✓ Introduction
- ✓ Board Members, Staff & Committees
- ✓ Strategic Intent, Aim & Value Statements
- ✓ Core Business
- ✓ Marketing Initiatives
  - ✓ Presentations
  - ✓ Popular Articles
  - ✓ Professional Affiliations
  - ✓ Laboratory Visits
- ✓ Human Capital
  - ✓ New Appointments
  - ✓ Events at SAGL
  - ✓ External Training
- ✓ Training Presented
- ✓ Proficiency Tests Offered
- ✓ Accreditation & Awards
- ✓ Financial Position
- ✓ Conclusion
- ✓ Acknowledgements

## Recent Crop Quality Reports





**Ms. MARIANA PURNELL**  
EXECUTIVE COMMITTEE MEMBER



**Mr. BOIKANYO MOKGATLE**  
CHAIRPERSON



**Mr. DE WET BOSHOFF**  
VICE CHAIRPERSON



**Mr. DEREK MATHEWS**  
EXECUTIVE COMMITTEE MEMBER

MR. DIRK KOK  
TRADING

DR. MARINDA VISSER  
PRODUCTION: MAIZE

MR. BART HARMSE  
PRODUCTION: SOYBEAN

MR. JANNIE DE VILLIERS  
ALTERNATE DIRECTOR FOR  
PRODUCTION

MR. GEOFF PENNY  
PROCESSING: BAKING

MR. KEVIN CLARKE  
PROCESSING: MILLING

DR. FRANCOIS KOEKEMOER  
BREEDING: WHEAT

MR. A.W. SCHRÖDER  
BREEDING: MAIZE

DR. TOI TSILO  
RESEARCH

EXECUTIVE COMMITTEE  
MEMBERS

BOARD OF DIRECTORS  
2016/2017

*Testing is fun!*

*20<sup>th</sup> Birthday Staff Celebration*



SAGL TEAM

*"Life is 10% of what happens to us and 90% how we react to it" ~ Dennis P. Kimbro*



## COMMITTEES

### Employment Equity Committee



MAMSY MOTLANTHE



MARIE MEYER  
MANAGER FINANCE



WIANA LOUW  
GENERAL MANAGER



LEBOGANG MALAHLELA



MAPHELA RAMARE



THABANG NKODIMO

SAGL's transformation goals are clearly defined in the Employment Equity Plan. The members of the Employment Equity Committee received external training to complement the in-house training. The committee regularly discusses issues with regards to the achievement of our set goals. At monthly personnel feedback meetings, relevant employment equity information is shared and discussed.

### Occupational Health & Safety Committee



MAMSY MOTLANTHE  
CO-OPTED MEMBER OF  
HEALTH & SAFETY TEAM



JULIA NTIMANE  
FIRST AID OFFICER



WIANA LOUW  
GENERAL MANAGER



DUDU MOLEKE  
HEALTH & SAFETY  
REPRESENTATIVE



JIANNI KRUGER  
HEALTH & SAFETY  
REPRESENTATIVE



BEN VAN DER LINDE  
MILLING AND PHYSICAL  
ANALYSES / GRADER



HANNALIEN MEYER  
TECHNICAL SPECIALIST



JOLANDA NORTJE  
MANAGER LABORATORY



JOHANNES MKASI  
FIRE MARSHALL



TUMELO MOKASE  
FIRE MARSHALL –  
FIRE FIGHTING OFFICE



CECILIA BREED  
TECHNICAL SPECIALIST  
LABORATORY MANAGER  
CROP PROTECTION



SYLVIA PHOKANE  
FIRST AID – HEALTH & SAFETY  
CROP PROTECTION

The members of the safety team receive external training on a regular basis to ensure awareness and alignment with changes in regulatory requirements. In collaboration with the other laboratory personnel, the safety team conducts monthly Health and Safety Inspections and compiles a report. The findings of the inspections are followed up at Health and Safety team meetings. Internal training sessions form part of the monthly personnel feedback meetings. Surveys conducted during the report period include a risk assessment (June 2017) which specifically focused on the new Crop protection Division as well as an Occupational Hygiene Survey on both Divisions of the SAGL (September 2017). The latter was conducted by an approved service provider of the Department of Labour to confirm compliance.

*The way to get started is to quit talking and begin doing" ~ Walt Disney*

## STRATEGIC INTENT, AIM & VALUE

### STRATEGIC INTENT

To be recognised as market leader in grain and oilseed analysis and related services in Southern Africa.

### AIM

To be the analytical service provider of choice for the grain and oilseed industries to enhance competitiveness and sustainability.

### VALUE

Accurate measurements, agricultural prosperity, social responsibility and good governance.

## CORE BUSINESS

The SAGL's core function remains providing all the sectors of the South African Grain and Oilseed Industry with fit-for-purpose analyses services. This reference laboratory role is achieved by maintaining the measurement standards at an acceptable international level and by disseminating traceability to the industry.

The two main focus areas are **Crop Quality** and **Crop Protection**.

- Crop quality analyses are performed on different grain and oilseed commodities as well as associated food and feed products.
- The Crop Protection Division is able to perform 5-batch analysis according to OECD GLP, a regulatory requirement in the Agro-chemical Industry for the registration of crop protection products under Act 36. The laboratory has the capability to do physical and chemical studies on formulated plant protection products as well as to provide testing services for compliance with the Globally Harmonised System for packaging and labelling.

SAGL's continuous engagement with stakeholders ensures a good understanding of market requirements relating to quality and yield to increase access to high-value markets. Measurements assist with the improvement of the competitiveness of the South African industry and support the national strategic initiatives. The survival of the Agricultural Industry depends on the ability to measure accurately.

To fulfil our mandate, we collaborate with academic institutions and commercial processing companies in applied research studies.

The different testing areas included in the scope of testing expanded during 2016/2017 with the addition of the new Crop Protection Division as illustrated in Figure 1.

*"Even if you are on the right track, you'll get run over if you just sit there" ~ Will Rogers*

## CORE BUSINESS



Figure 1: SAGL's core business testing in five categories



Figure 2: Capacity in five different testing areas

## CORE BUSINESS - CROP QUALITY

During the 2016/2017 financial year 55 466 analyses were performed in the four different **Crop Quality** testing categories compared to the 54 866 in the previous (2015/2016) financial year. The 490 customers serviced during 2016/2017, represented both local and international companies from different sectors of the grain and oilseed industry. The number of customers as well as the number of analyses increased year-on-year.

### TOTAL NUMBER OF ANALYSES OVER LAST THREE YEARS

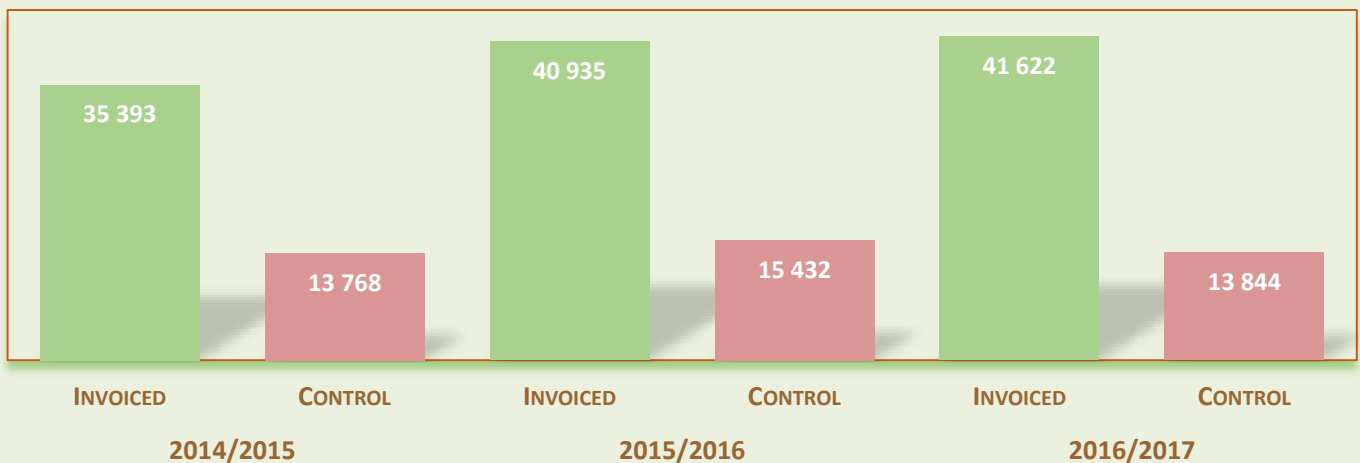
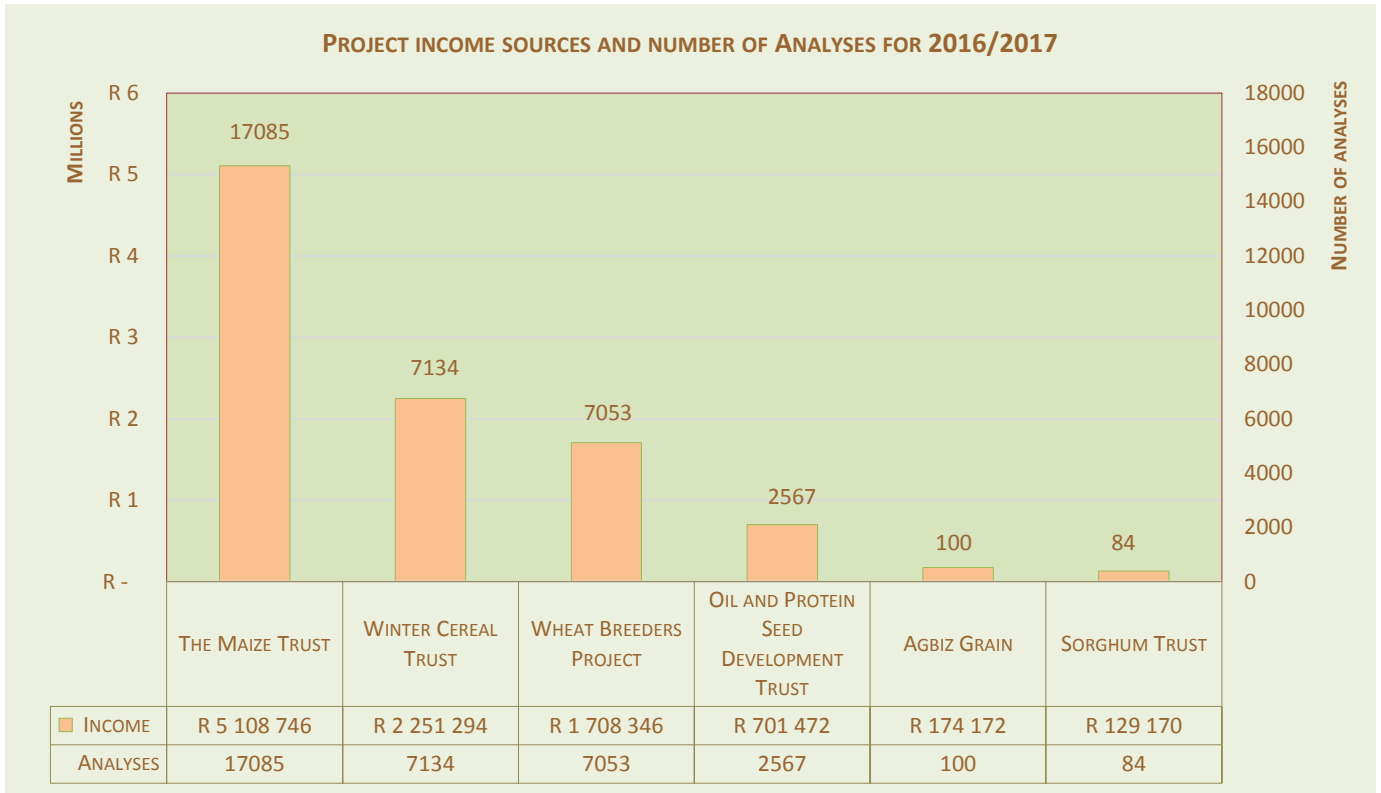


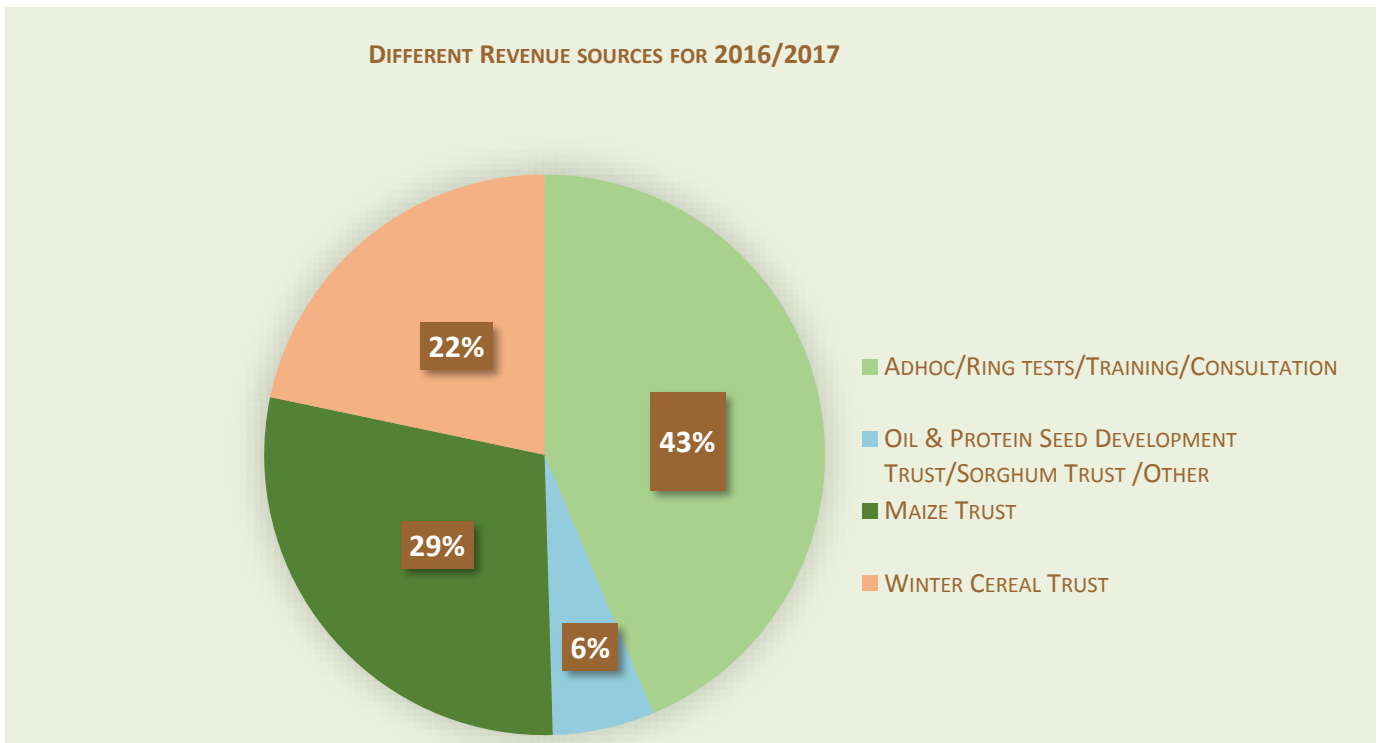
Figure 3: Number of analyses over the last three years versus quality control samples analysed

*"Shoot for the moon. Even if you miss you'll land among the stars" ~ Les Brown*

## CORE BUSINESS - CROP QUALITY



**Figure 4:** Project income sources and number of analyses for 2016/2017



**Figure 5:** The different revenue sources

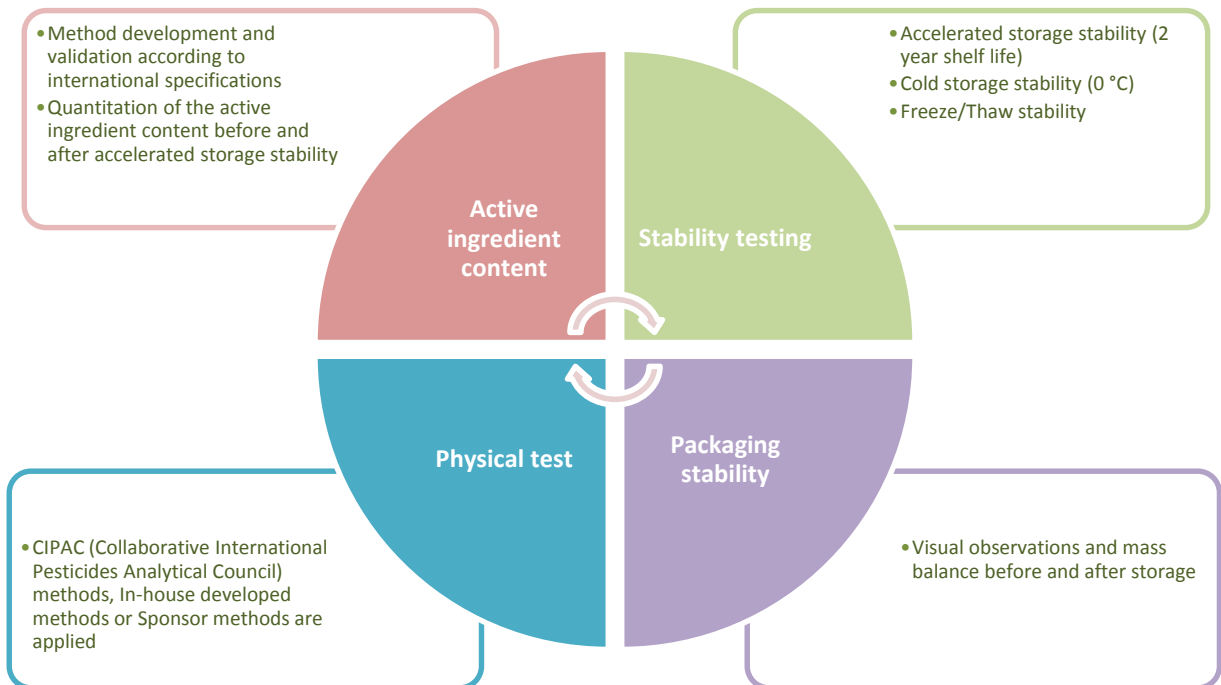
## CORE BUSINESS – CROP PROTECTION

### 5-BATCH TESTING (OECD GLP OR ISO-17025)



- ✓ 5-Batch analysis is a regulatory requirement in the Agro-chemical Industry.
- ✓ Five or more batches of technical material, from a specific manufacturer, are analysed to determine the impurity profile and to assess the purity of the active ingredient.
- ✓ All relevant impurities (of toxicological significance) are quantified to ensure compliance with international specifications.
- ✓ This work is usually conducted according to OECD GLP (OECD Series on Principles of Good Laboratory Practice (GLP) and Compliance Monitoring)

### PHYSICAL AND CHEMICAL STUDIES ON FORMULATED PLANT PROTECTION PRODUCTS



**Figure 6:** Physical and Chemical tests performed on Plant Protection Products



## Marketing Initiatives

The proposed changes to the testing requirements for the registration of agrochemicals under the *Fertilizers, Farm Feeds, Agricultural Remedies and Stock Remedies Act 36 of 1947* was announced in 2014. This created an opportunity for the SAGL to establish a laboratory facility in compliance with the OECD Principles of GLP in addition to the ISO 17025 accreditation. Since this logical extension was already identified during a strategic planning session held in 2012, the Board of Directors investigated different funding models to create this testing capability which culminated in a successful loan application from Standard Bank. The new Crop Protection Division was launched on the 26<sup>th</sup> of June 2017 to coincide with the 20<sup>th</sup> Commemoration of the SAGL. The event was well attended by stakeholders.

A corporate video covering the services of both the **Crop Quality Division** and the **Crop Protection Division** was developed and screened during the event, a web version is also available on the SAGL website.

The communication on the successful achievement of the Crop Protection Division's OECD GLP Compliance and ISO 17025 Accreditation was well received by existing and new customers.

The technical specialist of the **Crop Protection Division** represents CropLife SA at CropLife International meetings and serves on the English Speaking Expert Group (SEG) of CropLife International. This provides a good opportunity to stay abreast of global regulatory requirements and promote collaboration with multi-national companies and international laboratories.

The new **Crop Protection** capabilities were included in the marketing material and updates were made on the website.

Non-disclosure agreements have been concluded with several companies to provide development and validation of testing methods for company specific applications. These methods involve different technologies available in the various testing areas.

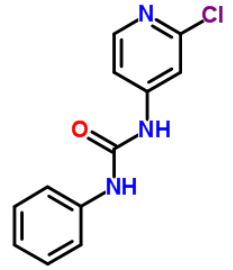
The Milling Index Calibration, developed at the SAGL, was successfully tested on mixed maize samples to confirm its compliance with the performance criteria and was rolled out on selected instruments in the industry.

Presentations at different forums and popular articles published are listed in this report.

An exhibition stand at the ExtrAfrica conference increased SAGL's exposure to the processing industries involved in human food and animal feed.

SAGL remains involved in the Technical Committees of the various industry associations to ensure alignment with changes relating to regulations as well as additional industry-specific requirements.

Certain training programmes were customised based on customer requirements.



Crop Protection Division



*Leadership is to get people to volunteer their resources to business success – Brand Pretorius*

*We measure so that you know*





**PRESENTATIONS**

- *Grain processing and reporting to the maize industry*
  - Roundtable discussions, Mexican Embassy 5 October 2016, Wiana Louw
- *Feedback on SAGL activities with special focus on maize* – Maize Forum Meeting 17 October 2016, Wiana Louw
- *Feedback on SAGL activities with special focus on wheat* – Wheat Forum Meeting 21 October 2016, Wiana Louw
- *Mycotoxin levels in post storage maize – 2014/2015 production season*, AFMA, 25 October 2016, Hannalien Meyer
- *Feedback on SAGL activities with special focus on grain sorghum* – Sorghum Forum Meeting 4 November 2016, Wiana Louw
- *Feedback on SAGL activities with special focus on sunflower & soybeans* – Sunflower & Soybean Forum Meeting 28 November 2016, Wiana Louw
- *Services to the Agricultural Industry in South Africa and beyond*, High level Ethiopian Delegation, 10 February 2017, Wiana Louw
- *Evaluation of commercial screening kits for the determination of Mycotoxins in maize in non-laboratory environment*, CST-SA New Voices Symposium, 11 May 2017, Mamsy Motlanthe
- *Services to the Agricultural Industry in South Africa and beyond*, SAGNET Workshop, 15 May 2017, Wiana Louw
- *Feedback on evaluation of sampling devices for different grain and oilseed commodities*, Agbiz Grain Mini-symposium, 15 August 2017 – Wiana Louw
- *Feedback on evaluation of mycotoxin screening kits for use in non-laboratory environments*, Agbiz Grain Mini-symposium, 15 August 2017 – Mamsy Motlanthe
- *Diagnostics for Food Safety and Crop Protection Product Quality Assurance*, CroplifeSA Congress, 6 September 2017, Cecilia Breedt
- *An overview of the multi-mycotoxin projects at the SAGL*, AFMA, 17 October 2017, Hannalien Meyer
- *Dough rheology as a predictive tool for the baking industry*, Labotec EXPOsed Symposium, 19 October 2017, Theresa de Beer

**POPULAR ARTICLES****Wheat focus/ Koringfokus**

- *Wheat crop quality of the 2015/2016 production season*, Jolanda Nortjé
- *Wheat crop quality of the 2016/2017 production season*, Jolanda Nortjé
- *Grain Laboratory expanded to include crop protection*, Cecilia Breedt

**SA Grain/SA Graan**

- *Quality of the 2015/2016 season's imported and locally produced wheat*, Jolanda Nortjé
- *Soybean crop quality overview of the 2015-2016 season*, Jolanda Nortjé
- *Quality overview of imported and local maize 2015/2016 production season*, Jolanda Nortjé
- *Quality results of the 2016/2017 wheat production season*, Jolanda Nortjé
- *Sunflower Crop Quality overview of the 2015/2016 production season*, Jolanda Nortjé

**Oilseeds Focus**

- *Soybean crop quality overview: 2015/2016 season*, Jolanda Nortjé
- *Sunflower crop quality overview: 2015/2016 production season*, Jolanda Nortjé

**MEDIA INTERVIEWS****RSG Landbou**

- *SAGL Services to the grain industry – special focus on new crop protection division*, 16 February 2017 & 16 August 2017, Wiana Louw

**GROOTPLAAS (Groot FM)**

- *SAGL Services*, 5 July 2017, Wiana Louw
- *Mycotoxins*, 2 August 2017, Hannalien Meyer
- *SAGL's involvement in development of wheat cultivars*, 16 August 2017, Jolanda Nortjé
- *SAGL Crop Protection Division*, 23 August 2017, Cecilia Breedt

*"Dreams and dedication are a powerful combination" ~ William Longgood*

## PROFESSIONAL AFFILIATIONS

SAGL IS REPRESENTED ON THE FOLLOWING COMMITTEES/ASSOCIATIONS:

- ✓ AACCI: American Association of Cereal Chemists International (United States of America)
- ✓ AFMA: Animal Feed Manufacturers Association
- ✓ AgriLASA: Agri Laboratory Association of South Africa
- ✓ Campden BRI (UK Based)
- ✓ ChromSA: Chromatographic Society of South Africa
- ✓ Co-opted on various Industry Technical Committees
- ✓ Crop Life South Africa
- ✓ CST-SA: Cereal Science and Technology
- ✓ GOSA: Grain Handling Organisation of South Africa
- ✓ IAOM: International Association of Operative Millers in the Middle East & Africa
- ✓ Maize Trust Mycotoxin Research Review Panel
- ✓ NLA: National Laboratory Association of South Africa
- ✓ SAAMS: South African Association for Mass Spectrometry
- ✓ SAAFoST: South African Association for Food Scientists
- ✓ SACI: The South African Chemical Institute
- ✓ Technical Committees of the Winter Cereal Trust
- ✓ Wheat Focus Editorial Committee



## LABORATORY VISITS / DELEGATIONS

- Registrar of Act 36, DAFF, Mr Jonathan Mudzunga – 7 November 2016
- Grain SA – 21 November 2016
- EAC – COMESA – SAPC Tripartite Secretariat – 8 December 2016
- High Level Ethiopian Delegation – 10 February 2017
- SAGNET Board Members - 17 May 2017
- Delegation from the Central Veterinary Laboratory in Tanzania – 25 May 2017
- Maize Trust Trustees – 7 July 2017
- AVCASA Group of Farmers from Limpopo – 4 September 2017

## Human Capital

Through a skills development programme, the SAGL strives to maintain a competent and motivated staff complement as its major asset. This enables the laboratory to successfully compete on an international level. The expanding scope of services contributes to the development of a stimulating testing environment, sophisticated enough to attract and retain scarce technical and scientific skills.

The annual Management Review process is used to evaluate the in-house, on-the-job training to ensure a healthy skills base. The laboratory personnel received both in-house and external training during the period under review.



### NEW APPOINTMENTS



MS THERESA DE BEER



MS SYLVIA PHOKANE



MR JAFTA KOBOLA



MS. BEATRIX LÖTTER-MOOLMAN

Ms. Theresa de Beer took up a permanent position to fill a vacancy in the Rheology laboratory on completion of her 12 month internship at the SAGL.

Ms. Sylvia Phokane took up a permanent position to fill a vacancy in the Crop Protection Division on completion of her 12 month internship at the SAGL.

Under a placement agreement with the Department of Agriculture Forestry and Fisheries (DAFF), Mr. Jafta Kobola joined the SAGL team during June 2016 on an internship to gain experience in the rheology laboratory. His contract has been extended for another year.

Ms. Beatrix Lötter-Moolman was appointed as Customer Liaison Manager and IT Specialist of SAGL.

*"Believe you can and you are halfway there" ~ T. Roosevelt*



## Events at SAGL

### LAUNCH OF THE CPD LABORATORY & 20 YEAR CELEBRATION – 26 JUNE 2017



This year was marked by the opening of the new Crop Protection Division. This memorable occasion was celebrated in conjunction with the 20<sup>th</sup> Birthday of the SAGL.



*"The harder you work the luckier you get" ~ Gary Player*



## Meet the SAGL team

### MANAGEMENT



### RHEOLOGY



### SUPPORT



### MILLING AND GRADING



### CHEMISTRY



### NUTRIENTS & CONTAMINANTS



### CROP PROTECTION



New kids on the block!



## The people who devoted 20 years of their lives to the SCAGL

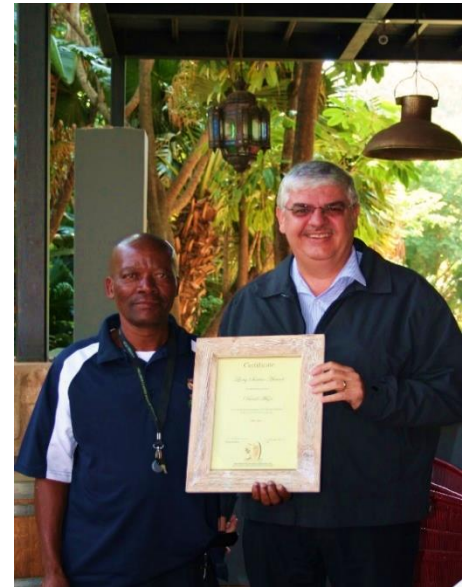
Japhta Modise



Johannes Mkasi



Daniel Msiza



Marlize Hammes



Jolanda Nortjé



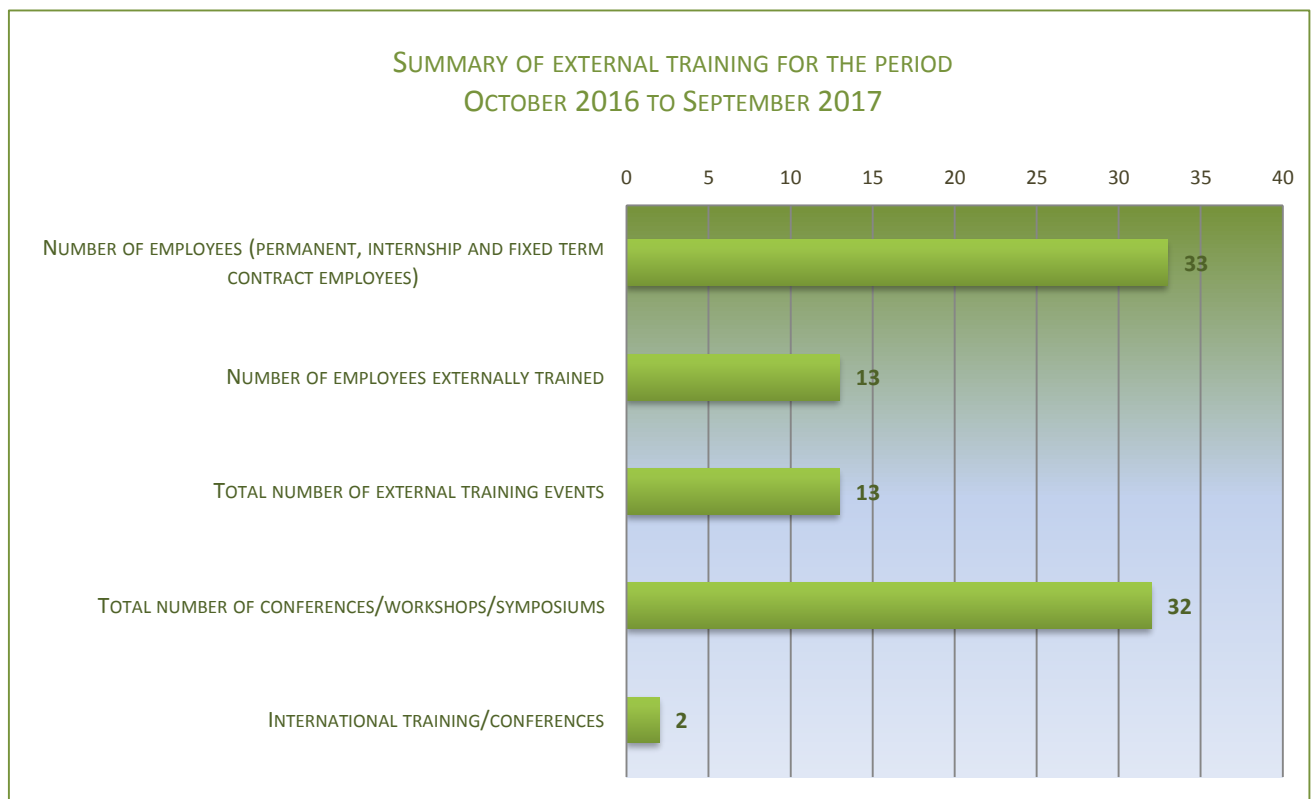
Jannie de Villiers

*Fly with your strengths and let other compliment you on your weaknesses - Ndwakhulu Mukhufhi*

## EXTERNAL TRAINING

SAGL carefully selects external training courses to ensure that both technical and administrative needs are addressed. Figure 7 summarises the training attended during 2016/2017. The list below is an indication of the type of training events attended:

- ✓ Basic Conditions of Employment Act
- ✓ B-BBEE
- ✓ Consumer Protection Act
- ✓ Employment Equity
- ✓ HIV/AIDS in the Workplace
- ✓ Junior Management & Supervisor Training
- ✓ Personal budgeting
- ✓ Labour Law in the Workplace
- ✓ OECD Principles of GLP
- ✓ Leadership & Mentoring
- ✓ Occupational Health & Safety
- ✓ Sensory evaluation workshop
- ✓ Grading of grains and oilseeds
- ✓ Essentials of best practice in calibration of instruments
- ✓ Fundamentals of Atomic Absorption spectrometry
- ✓ Food fraud workshop
- ✓ Grading refresher courses



**Figure 7:** External training during 2016/2017

*"Very little can dim the light that shines from within" ~ Maya Angelou*



## TRAINING PRESENTED

The staff at the SAGL present training courses to participants from South Africa and the rest of Africa. The training courses, developed at the SAGL to address the needs of the industry, cover both theoretical aspects and hands-on practical training in the laboratory. The requirements of the ISO 17025 standard, which forms the basis of accreditation, and general good laboratory practices are covered in the training courses.



1 - day wheat and flour training courses

- Total: 4 trainees

3 - day Wheat and flour training courses

- Total: 4 trainees

2 - day Maize and Maize meal training course

- Total: 2 trainees

5 - day US Wheat - wheat and flour training course

- Total: 12 trainees



## PROFICIENCY TESTS OFFERED

SAGL offers a wide range of proficiency schemes to the grain and oilseed industry in its capacity as reference laboratory. These schemes are designed to provide the local and international participants with a tool to assess their quality control measures, the performance of their instruments and methods, and to identify training needs. For the past five years, SAGL also has acted as the expert laboratory for the East African Proficiency Scheme (EAPT).

Registration and other information on the proficiency programme can be found on the SAGL website - [www.sagl.co.za](http://www.sagl.co.za)



## PROFICIENCY TESTS OFFERED

**Table 1:** Proficiency tests offered by the SAGL

DESCRIPTION	# / YEAR	INTERVAL	PRODUCT	LOCAL PARTICIPANTS	INTER-NATIONAL PARTICIPANTS	COUNTRIES	TOTAL
<b>SAGL ANNUAL PRE-HARVEST MAIZE GRADING RING TEST</b>	1	Per Season	Maize	22	-	-	22
<b>SAGL ANNUAL PRE-HARVEST SOYA BEANS GRADING RING TEST</b>	1	Per Season	Soya beans	13	-	-	13
<b>SAGL ANNUAL PRE-HARVEST SUNFLOWER GRADING RING TEST</b>	1	Per Season	Sunflower	11	-	-	11
<b>SAGL COLOUR RING TEST</b>	6	Bi-monthly	White bread flour & Cake flour	4	2	Lesotho & Namibia	6
<b>SAGL MINOLTA DRY COLOUR RING TEST</b>	6	Bi-monthly	White bread flour & Cake flour	7	-	-	7
<b>SAGL MAIZE GRADING RING TEST</b>	4	Quarterly	2 x White Maize 2 x Yellow Maize	6	2	Lesotho & Namibia	8
<b>SAGL MAIZE MEAL QUALITY RING TEST</b>	4	Quarterly	2 x Super Maize Meal 2 x "Special" Maize Meal	2	3	Swaziland, Lesotho & Namibia	5
<b>SAGL WHEAT GRADING RING TEST</b>	4	Quarterly	Wheat	15	2	Lesotho & Namibia	17
<b>SAGL WHEAT AND FLOUR RING TEST</b>	4	Quarterly	Wheat, Wheat flour & Brown bread flour	20	8	Ghana, Nigeria, Lesotho, Swaziland, Senegal, Namibia, Cameroon & Mauritius	28
<b>SAGL VITAMIN INTER-LABORATORY TESTING</b>	4	Quarterly	1 x Wheat Flour & Premix 2 x Maize Meal & Wheat Flour 1 x Premix & Maize Meal	-	-	-	2

## Accreditation


Accreditation under the International Organisation for Standardisation (ISO/IEC) 17025 is maintained. SANAS (South African National Accreditation System) conducts surveillance audits in an 18-month cycle to confirm that SAGL is compliant with the requirements of this international standard applicable to testing laboratories. Accurate measurement is paramount for a competitive grain and oilseed industry. The SAGL maintains benchmarking to the international measurement system through participation in international proficiency schemes to demonstrate competence. Accurate and reliable results are assured through the maintenance of SAGL's accreditation status.

**Table 2:** The comprehensive range of test methods on different matrices covered to confirm traceability to international standards across the entire range of analyses offered to the industry by SAGL. (\* Not accredited)

PROFICIENCY SERVICE PROVIDER	FREQUENCY OF PARTICIPATION SAMPLES PER YEAR	MATRIX	ANALYSIS	ACCREDITED
American Association of Cereal Chemists International (AACCI) United States of America	6	Wheat Flour	Moisture & Alveograph	✓
		Hard Wheat Flour	Moisture, Protein, Ash, Falling number and Diastatic activity*	✓
		Feed Samples	Moisture, Protein, Ash, Crude fat (EE) and Crude fibre*	✓
		Different Grain Based Matrices	Moisture & Total dietary fibre	✓
		Hard Wheat Flour	Moisture & Farinograph	✓
		Wheat Flour	Moisture & Mixograph	✓
Bureau Interprofessionnel der Etudes Analytiques (BIPEA) France	10	Wheat Flour (Different types)	Moisture, Protein, Falling Number, Ash, Damaged starch*, Gluten (Wet & Dry) *, Gluten index*, Alveograph	✓
		Different Matrices	Mycotoxins	✓
The Food and Environmental Research Agency (FAPAS) United Kingdom	5	Amino Acids (Animal feed)	Protein, Free and Protein bound amino acids*	✓
	10	Various Mycotoxin Matrices	Mycotoxins	✓
	1	Milk Powder	Melamine*	✓
	5	Bread Crumbs / Biscuits / Cereal / Soy bean meal / Poultry ration	Moisture, Ash, Nitrogen, Starch*, Total dietary fibre, Crude fat, Crude fibre* and Sodium	✓
AgriLASA South Africa	12	Various Feed Samples	Sugar* (Fructose, Glucose, Sucrose, Maltose and Lactose)	✓
			Moisture*, Protein, Ash, Crude fat, Crude fibre*, Dietary fibre, Starch* and Minerals	✓
CODA-CERVA (NRL Belgium)	1	Cereal flour	Mycotoxins	✓
Romer Labs Check-Sample-Survey	2	Maize Products	Deoxynivalenol	✓
Aflatoxin Proficiency Testing and Control in Africa, Asia and Americas (APTECA)	1	Maize meal	Aflatoxins B1, B2, G1, G2	✓
World-wide Inter-Laboratory: World Grain Network	10	Barley (Milled)	Moisture & Protein	✓
		Wheat (Milled)	Moisture, Protein, Falling number and Wet gluten*	✓
		Canola/Rapeseed (milled)	Moisture & Crude fat	✓
Association of American Pesticide Control Officials (AAPCO)	1	4 different pesticides	Different active ingredient content	✓
National Laboratory Association – South Africa (NLA)	3	Pesticide formulations	Tests: Active ingredients content Physical tests: Suspensibility*, Emulsion stability*, Foaming*, pH range*, Density	✓

\* Not accredited method.

## COMPLIANCE CERTIFICATES & AWARDS



**RECOGNITION OF ANALYTICAL PERFORMANCE**

*Analysis of Feed*

**Southern African Grain Laboratory**  
Pretoria, SOUTH AFRICA

Achieved Outstanding Accuracy and Precision for the year 2016 in check samples including the following analyses:  
**Moisture, Protein, Ash, Fat (EE), Crude Fiber, Calcium**

*Conf. Mape*  
Executive Vice President

*Bob Craddock*  
President



**CERTIFICATE OF PARTICIPATION**

This certificate is awarded to:  
**SOUTHERN AFRICAN GRAIN LABORATORY NPC**  
**THE WILLOWS - PRETORIA - South Africa**

for its participation in BIPEA's interlaboratory comparisons for the 2016-2017 annual series.


Murday, September 11, 2017 - Paris FRANCE

PROFICIENCY TESTING PROGRAMS

BIPEA member

BIPEA Director

Certificate # 15-17 / 1119

AFMA hereby certify that

**SAGL**

complies with the following criteria of the AFMA Code of Conduct for the Manufacturing of Safe Compound Animal Feedstuffs


- All legal requirements in terms of Act 35 of 1984, Act 36 of 1947 and Act 101 of 1956 must be complied with.
- Animal Feed Manufacturers must meet the requirements of Good Manufacturing Practice (GMP) to ensure feed safety.
- Animal Feed Manufacturers must recognize the importance of a Food Safety Management System and adopt the relevant procedures.
- Technical animal feed recommendations and formulation must be carried out by qualified Animal Scientists that are registered with the South African Council for Natural Scientific Professions (Act 27 of 2003).
- Animal Feed Manufacturers must comply with the Basic Conditions of Employment Act.
- Animal Feed Manufacturers must promote the AgriBEE Act as laid down by the National Department of Trade and Industry.
- Animal Feed Manufacturers must comply with the Occupational Health and Safety Act.
- Animal Feed Manufacturers must comply with all relevant legal requirements so as to not bring the Industry, Association or its members into disrepute.
- Animal Feed Manufacturers' mills, must at a confirmed date be available for auditing for the conformance to the AFMA Code of Conduct by an accredited body which will be appointed by AFMA.
- Animal Feed Manufacturers will comply with the MAIN OBJECT of AFMA as stipulated in its Memorandum of Association - "The main object of the Company is to promote the interests of its members and those of the animal feeds industry and the community insofar as they relate to each other".

*AFMA Chairperson*

*AFMA Executive Director*

June 2017 - 2019  
Date

A / 2017 / 239



**RECOGNITION OF ANALYTICAL PERFORMANCE**

*Analysis of Hard Wheat Flour*

**Southern African Grain Laboratory**  
Pretoria, SOUTH AFRICA

Achieved Outstanding Accuracy and Precision for the year 2016 in check samples including the following analyses:  
**Moisture, Protein, Ash, Falling Number**

*Conf. Mape*  
Executive Vice President

*Bob Craddock*  
President



**Certificate of Participation**

*THIS CERTIFIES THAT*

SAGL Crop Protection Division, Pretoria, Republic of South Africa (Lab #111) participated in the 2017 AAPCO Check Sample Program.

The results of this participation are contained in the 2017 AAPCO Pesticide Formulations Check Sample final report.

*Ping Wan*  
Chair, AAPCO Check Sample Program

March 28, 2017

Date

## ISO 17025 ACCREDITATION & OECD GLP COMPLIANCE

The scope of SAGL's accreditation is determined by the needs of the Industry. Over the years, this scope was expanded in line with changing legislation and other local and international requirements.

Technical Signatories create a solid foundation for growth in the organisation and results in an emphasis on technical skills development.



ISO 17025  
Accredited Since  
1999  
Scope: 21 Methods  
Technical  
Signatories: 13

ISO 17025 Accredited  
Since 2017  
Flexible Scope: HPLC  
& GC/GC-MS, Density  
Technical  
Signatories: 2

OECD Principles of  
GLP Compliant  
Since 2017  
Study Directors: 2

SANAS audits/inspections during 2016/2017:

- **Crop Protection Division** – ISO 17025 Accreditation Audit: 29 – 30 May 2017
- **Crop Protection Division** – OECD GLP Inspection: 3 – 4 July 2017
- **Crop Quality Division** – ISO 17025 Surveillance Audit: 28 – 30 November 2017

*"Hard work beats talent when talent doesn't work hard" ~ Tim Notke*



**ACCREDITATION CERTIFICATE CROP QUALITY DIVISION - ISO 17025****CERTIFICATE OF ACCREDITATION**

*In terms of section 22(2) (b) of the Accreditation for Conformity Assessment, Calibration and Good Laboratory Practice Act, 2006 (Act 19 of 2006), read with sections 23(1), (2) and (3) of the said Act, I hereby certify that:-*

**SOUTHERN AFRICAN GRAIN LABORATORY NPC**  
Co. Reg. No.: 1997/018518/08

Facility Accreditation Number: **T0116**

is a South African National Accreditation System accredited Testing laboratory  
provided that all SANAS conditions and requirements are complied with

This certificate is valid as per the scope as stated in the accompanying schedule of accreditation  
Annexure "A", bearing the above accreditation number for

**CHEMICAL AND PHYSICAL ANALYSIS**

The facility is accredited in accordance with the recognised International Standard

**ISO/IEC 17025:2005**

The accreditation demonstrates technical competency for a defined scope and the operation of a  
laboratory quality management system

While this certificate remains valid, the Accredited Facility named above is authorised to use the  
relevant SANAS accreditation symbol to issue facility reports and/or certificates

  
\_\_\_\_\_  
Mr R Josias

Chief Executive Officer

Effective Date: 01 November 2014

Certificate Expires: 31 October 2019

*"Impossible is just an opinion" ~ Paulo Coelho*

## ACCREDITATION CERTIFICATE CROP QUALITY DIVISION - ISO 17025

Facility Number: T0116

### ANNEXURE A SCHEDULE OF ACCREDITATION

Facility Number: **T0116**

**Permanent Address of Laboratory:**

Southern African Grain Laboratory (NPC)  
Agri-Hub Office Park - Grain Building  
477 Witherite Road  
The Willows  
Pretoria  
0040

**Postal Address:**

Postnet Suite # 391  
Private Bag X1  
The Willows  
0041

**Tel:** (012) 807-4019

**Fax:** N/A

**E-mail:** Paulina.Modiba@sagl.co.za

**Technical Signatories:**

Ms J Nortje (All Methods)  
Ms M Bothma (Chemical, Excl. SOP MC23)  
Ms M Hammes (Chemical)  
Ms A de Jager (Nutrients & Contaminants)  
Ms W Louw (In-house Methods 001, 002, 003, 010 & 026)  
Ms D Moleke (Rheological)  
Ms I Terblanche (Rheological)  
Ms H Meyer (Chemical, Nutrients and Contaminants & Grading)  
Ms J Kruger (Chemical, excl. In-house method 012)  
Ms P Modiba (Chemical)  
Ms M Motlanthe (In-house methods 001, 003 & 026)  
Mr B van Der Linde (Grading)  
Ms M Ramare (All moisture methods & In-house methods 024)

**Nominated Representative:**

Ms PM Modiba

**Issue No.:** 26  
**Date of Issue:** 26 January 2017  
**Expiry Date:** 31 October 2019

Material or Products Tested	Type of Tests / Properties Measured, Range of Measurement	Standard Specifications, Techniques / Equipment Used
<b>CHEMICAL</b>		
Ground Barley	Moisture (Oven Method)	Analytical EBC Method 3.2, latest Edition (2 hour, 130°C)
Cereal and cereal products specifically-wheat, rice, (hulled paddy), barley, millet, rye, and oats as grain, semolina and flour	Moisture (Oven Method)	ICC Std No.110/1, Latest Edition (90 min; 130°C) (2 hour; 130°C)
Flour, semolina, bread, all kind of grains and cereal products and food products (except those that are sugar coated)	Moisture (Oven Method)	AACCI 44-15.02, Latest Edition (1 hour; 130°C) (72 hour, 103°C)

*"Impossible is just an opinion" ~ Paulo Coelho*

## ACCREDITATION CERTIFICATE CROP QUALITY DIVISION - ISO 17025

Facility Number: T0116

All flours, cereal grains, oilseeds and animal feeds	Nitrogen and protein (Combustion method - Dumas)	AACCI 46-30.01, Latest Edition
Cereal based food stuff	Dietary fibres (Total)	In-house method 012
Food stuff and feeds	Carbohydrates (by difference) (calculation) Energy value (calculation) Total digestible nutritional value (calculation)	SOP MC 23
Food Stuff and feeds	Determination of Ash	In-house method 011
Wheat Kernels	Moisture (Oven Method)	Government Gazette Wheat Regulation, Latest Edition (72 hour, 103° C)
Flours of grains e.g. barley, oats, triticale, maize, rye, sorghum and wheat; oilseeds like soybeans and sunflower, feeds and mixed feeds and foodstuffs	Crude fat (Ether extraction by Soxhlet)	In-house method 024
Meal and flour of wheat, rye, barley, other grains, starch containing and malted products	Falling number	ICC Std 107/1, Latest Edition
<b>NUTRIENTS AND CONTAMINANTS</b>		
Vitamin fortified food and feed products and fortification mixes grain based	Vitamin A as all trans Retinol (Saponification) (HPLC)	In-house method 001
	Thiamine Mononitrate (HPLC) Riboflavin (HPLC) Nicotinamide (HPLC) Pyridoxine Hydrochloride (HPLC)	In-house method 002
	Folic Acid (HPLC)	In-house method 003
Grain based food and feed products (fortified and unfortified) and fortification mixes	Total Sodium (Na) Total Iron (Fe) Total Zinc (Zn)	In-house method 010
Food and feed	Multi-Mycotoxin: -Aflatoxin G <sub>1</sub> , B <sub>1</sub> , G <sub>2</sub> , B <sub>2</sub> and total -Deoxynivalenol (DON), 15-ADON -Fumonisin B <sub>1</sub> , B <sub>2</sub> , B <sub>3</sub> -Ochratoxin A -T2, HT-2 -Zearalenone	In-house method 026

Page 2 of 3

*"Impossible is just an opinion" ~ Paulo Coelho*

## ACCREDITATION CERTIFICATE CROP QUALITY DIVISION - ISO 17025

Facility Number: T0116

**GRADING**


Maize	Defective kernels (White maize/ yellow maize)	Government Gazette Maize Regulation, Latest Edition
Cereal as grains (Wheat, barley, rye and oats)	Hectolitre mass (Kern222)	ISO 7971-3, Latest edition
Wheat	Screenings	Government Gazette Wheat Grading Regulation, Latest Edition

**RHEOLOGICAL**

Wheat flour	Alveograph (Rheological properties)	ICC Std.121, Latest Edition
Flours	Farinograph (Rheological properties)	AACCI 54.02, Latest Edition (Rheological behaviour of flour Farinograph: Constant Flour Weight procedure)
Hard, soft and durum wheat (flour and whole wheat flour)	Mixograph (Rheological properties)	Industry accepted method 020 (Based on AACCI 54-40.02, Latest Edition Mixograph Method)

Original Date of Accreditation: 01 November 1999

ISSUED BY THE SOUTH AFRICAN NATIONAL ACCREDITATION SYSTEM

  
 \_\_\_\_\_  
 Accreditation Manager

*"Impossible is just an opinion" ~ Paulo Coelho*



## ACCREDITATION CERTIFICATES CROP PROTECTION DIVISION – ISO17025 & OECD GLP



### CERTIFICATE OF COMPLIANCE

*In terms of section 22(2) (b) of the Accreditation for Conformity Assessment, Calibration and Good Laboratory Practice Act, 2006 (Act 19 of 2006), read with sections 23(1), (2) and (3) of the said Act, I hereby certify that:-*

#### SOUTHERN AFRICAN GRAIN LABORATORY

Co. Reg. No.: 1997/018518/08

Facility Compliance Number: **G0027**

is a South African National Accreditation System compliant facility provided that all conditions and requirements are complied with

This certificate is valid as per the scope as stated in the accompanying schedule of compliance, Annexure "A", bearing the above compliance number for

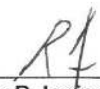
#### PHYSICAL AND CHEMICAL TESTING

Conducted on: **Agricultural Products**

Date of Inspection: **03-04 July 2017**

This facility is in compliance with the OECD Principles of Good Laboratory Practice (1997) in the conduct of non-clinical health and environmental safety studies of test items contained in pharmaceutical products, veterinary drugs and pesticides

While this certificate remains valid, the compliant facility named above is authorised to use the relevant compliance symbol to issue reports and/or certificates



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Mr R Josias

Chief Executive Officer

Effective Date: 27 July 2017

Certificate Expires: 26 July 2022



## ACCREDITATION CERTIFICATES CROP PROTECTION DIVISION – ISO17025 & OECD GLP

Facility Number: G0027

### SCHEDULE OF COMPLIANCE

Facility Number: **G0027**

**Permanent Address of Laboratory:**

Southern African Grain Laboratory  
Grain Building - Agri-Hub Office Park - Grain  
477 Witherite Street  
The Willows  
Pretoria, 0400

**Nominated Representative:**

Ms P Modiba

**Postal Address:**

Postnet Suite # 391  
Private Bag X1  
The Willows, 0041

**Tel:** (012) 807 - 4019

**Issue No.:** 01

**Fax:** (086) 216 - 7672

**Date of Issue:** 27 July 2017

**E-mail:** paulina.modiba@sagl.co.za

**Expiry Date:** 26 July 2022

#### SCOPE

Physical and Chemical Testing

Original Date of Compliance: 27 July 2017

ISSUED BY THE SOUTH AFRICAN NATIONAL ACCREDITATION SYSTEM



Accreditation Manager

## ACCREDITATION CERTIFICATES CROP PROTECTION DIVISION – ISO17025 & OECD GLP



### CERTIFICATE OF ACCREDITATION

*In terms of section 22(2) (b) of the Accreditation for Conformity Assessment, Calibration and Good Laboratory Practice Act, 2006 (Act 19 of 2006), read with sections 23(1), (2) and (3) of the said Act, I hereby certify that:-*

#### SOUTHERN AFRICAN GRAIN LABORATORY NPC

Co. Reg. No.: 1997/018518/08

#### SAGL CROP PROTECTION DIVISION

Facility Accreditation Number: **T0790**

is a South African National Accreditation System accredited facility provided that all conditions and requirements are complied with

This certificate is valid as per the scope as stated in the accompanying schedule of accreditation, Annexure "A", bearing the above accreditation number for


#### CHEMICAL ANALYSIS

The facility is accredited in accordance with the recognised International Standard

#### ISO/IEC 17025:2005

The accreditation demonstrates technical competency for a defined scope and the operation of a quality management system

While this certificate remains valid, the Accredited Facility named above is authorised to use the relevant accreditation symbol to issue facility reports and/or certificates



---

Mr R Josias  
Chief Executive Officer

Effective Date: 23 August 2017  
Certificate Expires: 22 August 2022





## ACCREDITATION CERTIFICATES CROP PROTECTION DIVISION – ISO17025 & OECD GLP

Facility Number: T0790

### ANNEXURE A SCHEDULE OF ACCREDITATION

Facility Number: **T0790**

**Permanent Address of Laboratory:**

SAGL Crop Protection Division  
Grain Building - Agri-Hub Office Park  
477 Witherite Street  
The Willows  
Pretoria  
0040

**Postal Address:**

Postnet suite #391  
Private bag X1  
The Willows  
0041

**Tel:** (012) 807 - 4019

**Fax:** (086) 216 - 7672

**E-mail:** paulina.modiba@sagl.co.za

**Technical Signatories:**

Mrs G Pieterse (All Methods)

Mrs C Breedt (All Methods)

**Nominated Representative:**

Ms P Modiba

**Issue No.:** 01

**Date of Issue:** 23 August 2017

**Expiry Date:** 22 August 2022

Material or Products Tested	Type of Tests / Properties Measured, Range of Measurement	Standard Specifications, Techniques / Equipment Used
<b>CHEMICAL</b>		
<b>TECHNIQUE ACCREDITATION</b>		
Plant Protection products, Veterinary formulations, technical materials, other raw materials and/or co-formulants	Active ingredient or selected organic compounds content in Agricultural products and materials.	GC-FID, GC-MS and HPLC-LUV.
	Density of Agricultural formulations.	Density of liquids measurement with a Density Meter.

Original Date of Accreditation: 23 August 2017

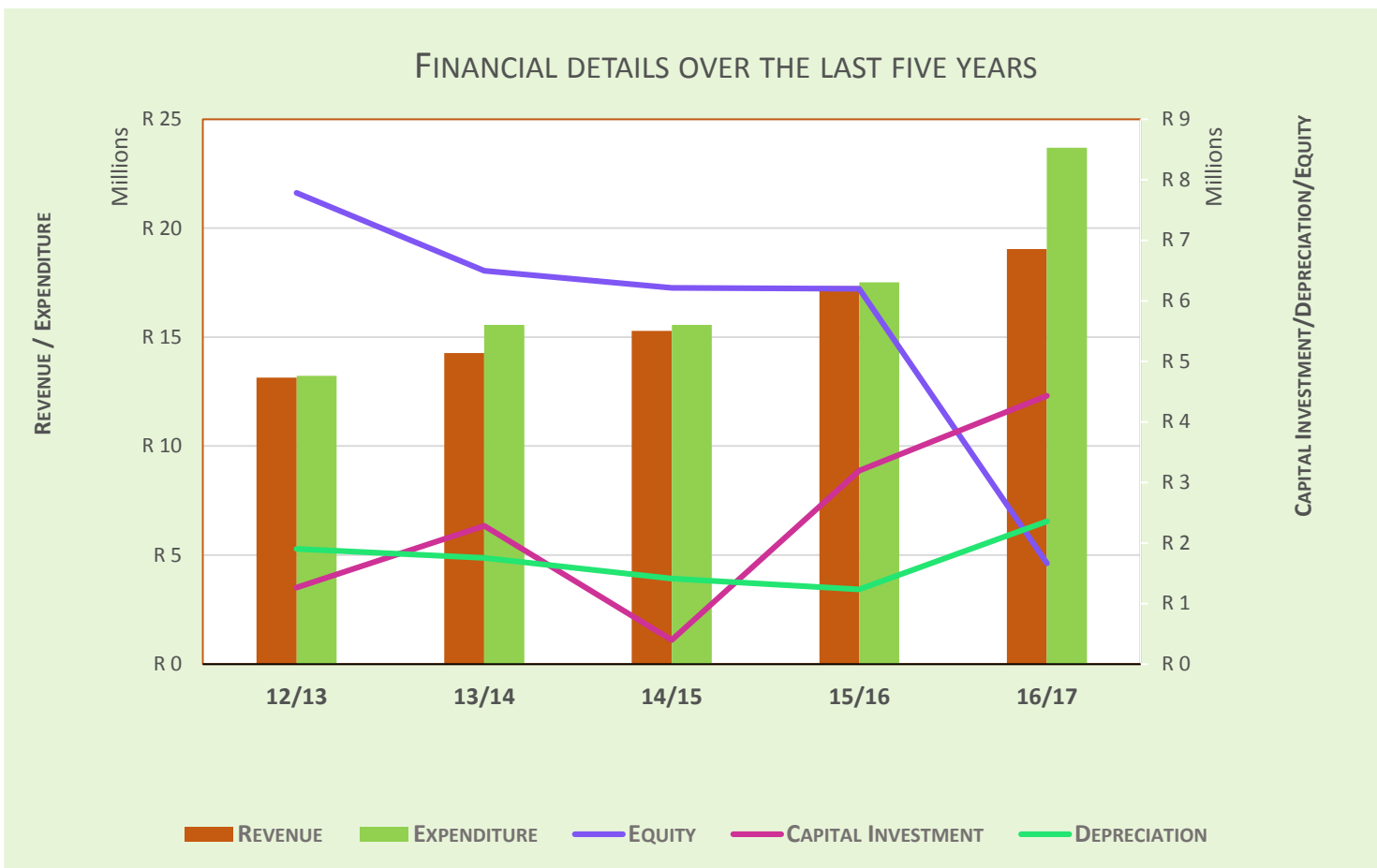
ISSUED BY THE SOUTH AFRICAN NATIONAL ACCREDITATION SYSTEM

  
\_\_\_\_\_  
Accreditation Manager

## Financial Position

The annual financial statements were prepared on the basis of accounting policies applicable to a going concern. This basis presumes that funds will be available to finance future operations and that the realisation of assets and the settlement of liabilities, contingent obligations and commitments will occur in the ordinary course of business. The Directors believe that the company has adequate financial resources to continue operations for the foreseeable future and accordingly the financial statements have been prepared on a going concern basis. The Independent Auditors' Report indicates no material inconsistencies between the Directors' Report and the audited financial statements.

Figure 8 provides a summary of the financial position of SAGL.



**Figure 8:** Financial position of the SAGL over the last five financial years

*"I want to be like a sunflower, so that even on the darkest days I will stand tall and find the sun" ~ M.K.*

## Conclusion

By expanding the operational structure and service profile aligned with the changing needs of the broader agricultural industry in South Africa, SAGL once again confirmed its relevance and position as a reference laboratory of choice. SAGL remains focused on supporting the agricultural industry to ensure international competitiveness.

## Acknowledgements

I would like to thank the Board members for their time and wisdom providing guidance and direction. Their hard work and commitment towards building a strong and effective organisation is admirable.

A special word of thanks to the members of the Executive Committee, De Wet Boshoff, Mariana Purnell and Derek Mathews, complemented by the hard work of the staff under the leadership of the Management team of the SAGL.

The results of everybody's contribution and hard work are reflected in this strong enterprise with real benefits to the Grain and Oilseed Industry in Southern Africa.



**MR. BOIKANYO MOKGATLE**  
**CHAIRPERSON 2016/2017**

*"The only way to do great work is to love what you do" ~ Steve Jobs*

*We measure so that you know*





# THE SOUTHERN AFRICAN GRAIN LABORATORY NPC

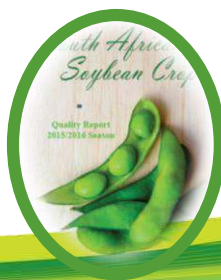
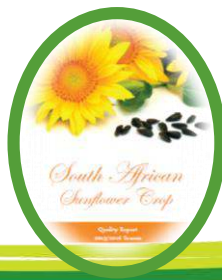
The Southern African Grain Laboratory NPC (SAGL) is an independent non-profit laboratory, established in 1997 by the grain industry to act as a Reference Laboratory for the grain and oilseed industry. The SAGL provides an internationally competitive range of laboratory services for grain, oilseeds and products thereof including food, feed and feedstuffs. These services are driven by the needs of the broader grain industry.

The scope of analysis includes milling, grading, physical, chemical, rheological, baking, mycotoxin as well as macro- and micro nutrient analyses. ISO 17025 accredited test methods are implemented within a comprehensive quality system. Participation in several national and international proficiency schemes demonstrates technical competency, international comparability and traceability to international standards. The stakeholders serviced by the SAGL include grain and oilseed producers, the handling and storage industry, processors including the baking, milling and animal feed producing industries, traders of agricultural commodities, commercial seed breeding companies, agricultural research institutes and since 2016, also companies producing crop protection products.

The SAGL has expanded the scope of analysis by adding a Crop Protection Division to support the broader agricultural community in Southern Africa with accurate and reliable analytical results for registration purposes and after manufacturing quality control analysis of the final product as well as shelf-life extension.

This Division performs 5-batch analysis on technical material as well as the Physical, Chemical and stability testing on formulations as prescribed by the Food and Agricultural Organization of the United Nations (FAO) and the World Health Organization (WHO). This laboratory is equipped to perform most tests required by FAO/WHO according to the latest Collaborative International Pesticides Analytical Council (CIPAC) methods.

As an associate member of CropLife South Africa and through international involvement in the Specification Expert Group (SEG) and the English-Speaking Pesticide Analytical Committee (ESPAC), the SAGL is informed of changes in international requirements as developments take place.



We measure so that you know!

**Celebrating 20 Years of  
Excellence**



**Thank you for being part of  
our journey!**

