

# South African

Commercial sorghum quality for the  
2018/2019 Season



## Acknowledgements

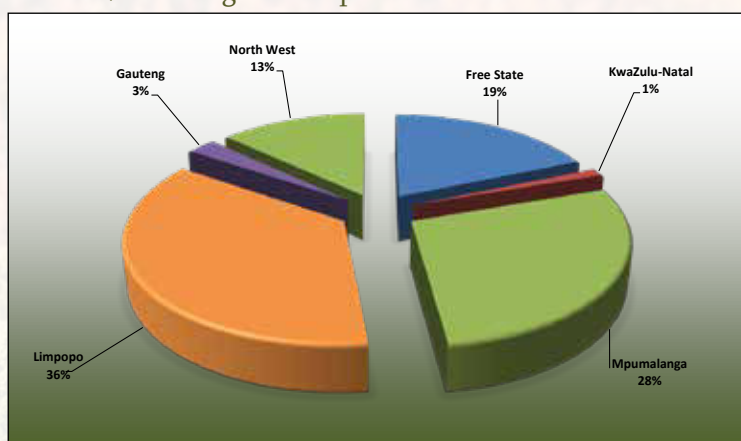
*With gratitude to:*

- **The Sorghum Trust for its financial support in conducting this survey.**
- *Agbiz Grain and its members for their cooperation in providing the samples to make this survey possible.*
- *The Crop Estimates Committee (CEC) of the Department of Agriculture, Forestry and Fisheries for providing production related figures.*
- *South African Grain Information Service (SAGIS) for providing supply and demand figures relating to sorghum.*
- *The Bureau for Food and Agricultural Policy (BFAP) for providing research based market analysis.*

## Introduction

The final commercial sorghum crop figure of the 2018/19 production season as overseen by the National Crop Estimates Liaison Committee (CELC) is 127 0000 tons. The crop increased by just more than 10% (12 000 tons) year on year. Limpopo, the major sorghum producing province this season, contributed 36% of the total crop. Yield figures showed a 37% decrease year on year, from 3.99 t/ha to 2.51 t/ha.

Graph 1: Contribution of the provinces to the production of the 2018/2019 sorghum crop



*Figures provided by the CEC.*

During the harvesting season, a representative sample of each delivery of sorghum at the various grain intake points, was taken according to the prescribed grading regulations. The sampling procedure for the samples used in this survey is described on page 32. Thirty-one (31) composite sorghum samples, representing the different production regions, were analysed for quality.

The samples were graded and test weight and thousand kernel mass determined. Sub-samples were milled and analysed for moisture, crude protein and starch. After sieving and dehulling by means of a Barley pearler, the fraction of the sample above the 1.8 mm slotted sieve were milled and Hunter Lab colour analyses conducted. Multi-mycotoxin analyses as well as Image analyses (kernel size distribution, length, width, relative roundness and volume to surface ratio on the whole kernels) were also performed on the samples.

This is the second annual sorghum crop quality survey performed by The Southern African Grain Laboratory NPC (SAGL). SAGL was established in 1997 on request of the Grain Industry. SAGL is an ISO 17025 accredited testing laboratory and participates in a number of proficiency testing schemes, both nationally and internationally, as part of our ongoing quality assurance procedures to demonstrate technical competency and international comparability.

The goal of this crop quality survey is the compilation of a detailed database, accumulating quality data collected over several seasons on the national commercial sorghum crop. The data reveal general tendencies and highlight quality differences in the commercial sorghum produced in different local production regions. A detailed database containing reliable analytical data collected over several seasons, is essential in enabling industry to comment on proposed legislative levels and to supply reliable data for targeted research projects.

In addition to the quality information, production figures (obtained from the Crop Estimates Committee (CEC)) relating to hectares planted, tons produced and yields obtained on a national as well as provincial basis, over an eleven season period, are provided in this report. SAGIS (South African Grain Information Service) supply and demand information is provided in table and graph format. Import and export figures over several seasons are also included.

Data on sorghum imported for domestic use during the period March 2019 to February 2020 is included in the report and compared to the quality of the local crop during the 2018/19 production season. To assist with quality comparisons between local and imported sorghum, the same scope of analysis is used for both sets of samples.

The national sorghum grading regulations as published in the Government Gazette of 8 January 2016 are provided as the last section of the report.

## Production

Sorghum is a tropical grass grown primarily in semi-arid regions of the world. Sorghum can grow in areas too dry for maize and is deemed to be the fifth most important grain crop grown in the world (after maize, wheat, rice and barley).

World sorghum production for the 2019/20 season to date, stands at 58.5 million tons with the United States being the largest contributor (8.7 million tons). Please see Table 1a for the world sorghum trade (import and export figures) as well as production and consumption figures in Table 1b.

The local area utilised for sorghum production increased by 75%, compared to the 28 800 hectares of the 2017/18 season. The 50 500 hectares planted this season, is the largest area planted since the 2014/15 season when 70 500 hectares were planted.

<b>Table 1a: World Sorghum Trade</b>						
<b>October/September Trade Year, Thousand Metric Tons</b>						
	2015/16	2016/17	2017/18	2018/19	2019/20 Feb	2019/20 Mar
<b>Exports</b>						
Argentina	772	457	329	196	200	200
Australia	717	542	449	91	50	40
China	23	34	43	49	40	40
Ethiopia	75	75	75	75	75	75
India	74	24	123	53	50	50
Nigeria	50	100	100	100	100	100
Ukraine	119	164	123	93	100	100
Others	133	311	306	196	102	99
<b>Subtotal</b>	<b>1 963</b>	<b>1 707</b>	<b>1 548</b>	<b>853</b>	<b>717</b>	<b>704</b>
<b>United States</b>	<b>7 918</b>	<b>6 031</b>	<b>4 839</b>	<b>2 479</b>	<b>3 000</b>	<b>3 400</b>
<b>World Total</b>	<b>9 881</b>	<b>7 738</b>	<b>6 387</b>	<b>3 332</b>	<b>3 717</b>	<b>4 104</b>
<b>Imports</b>						
Chile	134	54	73	46	100	100
China	8 284	5 209	4 436	652	900	1 300
Colombia	64	0	56	0	50	50
European Union	119	194	486	666	250	200
Japan	649	561	594	452	500	500
Kenya	54	146	141	109	150	150
Mexico	661	548	98	596	700	700
South Africa	83	82	27	59	50	50
South Sudan	19	36	148	26	150	150
Sudan	200	120	150	160	200	200
Others	596	364	513	509	439	439
<b>Subtotal</b>	<b>10 863</b>	<b>7 314</b>	<b>6 722</b>	<b>3 275</b>	<b>3 489</b>	<b>3 839</b>
<b>Unaccounted</b>	<b>- 1 080</b>	<b>380</b>	<b>- 386</b>	<b>56</b>	<b>227</b>	<b>264</b>
<b>United States</b>	<b>98</b>	<b>44</b>	<b>51</b>	<b>1</b>	<b>1</b>	<b>1</b>
<b>World Total</b>	<b>9 881</b>	<b>7 738</b>	<b>6 387</b>	<b>3 332</b>	<b>3 717</b>	<b>4 104</b>