

# South African

Commercial sorghum quality for the  
2019/2020 Season



## Acknowledgements

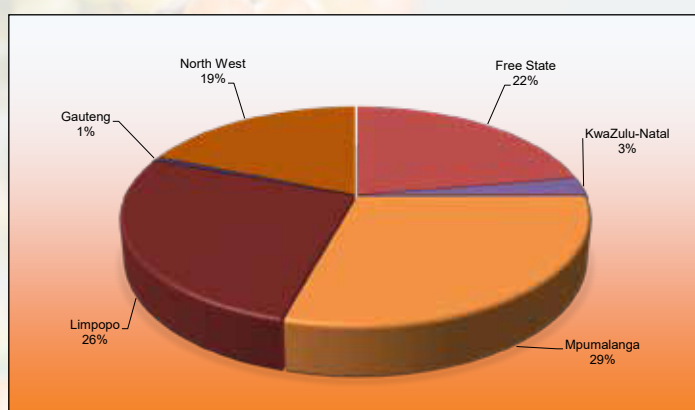
With gratitude to:

- **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, Land Reform and Rural Development (DALRD) 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 2019/20 production season as overseen by the National Crop Estimates Liaison Committee (CELC) is 158 0000 tons. The crop increased by just more than 24% (31 000 tons) year on year. Mpumalanga, the major sorghum producing province this season, contributed 29% of the total crop, followed by Limpopo with a contribution of 27%. The national yield showed a year on year increase of 48%, from 2.51 t/ha to 3.72 t/ha.

Graph 1: Provincial contribution to the production of the 2019/20 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 31. Forty (40) 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 content. 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 these samples.

This is the third 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 various 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 the final consignment of sorghum imported for domestic use during the period March 2019 to February 2020 is included in the report for the sake of completeness 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 2020/21 season to date, stands at 62.1 million tons with the United States being the largest contributor (9.5 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.

<b>Table 1a: World Sorghum Trade</b>						
<b>October/September Trade Year, Thousand Metric Tons</b>						
	<b>2016/17</b>	<b>2017/18</b>	<b>2018/19</b>	<b>2019/20</b>	<b>2020/21 Feb</b>	<b>2020/21 Mar</b>
<b>Exports</b>						
<b>Argentina</b>	457	473	254	426	1 000	1 000
<b>Australia</b>	542	449	91	107	500	500
<b>China</b>	34	43	49	29	50	50
<b>Ethiopia</b>	75	75	75	75	75	75
<b>India</b>	24	123	53	31	50	50
<b>Kenya</b>	73	136	53	31	80	80
<b>Nigeria</b>	100	100	100	50	50	50
<b>Others</b>	402	298	235	224	170	186
<b>Subtotal</b>	<b>1 707</b>	<b>1 697</b>	<b>910</b>	<b>973</b>	<b>1 975</b>	<b>1 991</b>
<b>United States</b>	<b>6 031</b>	<b>4 839</b>	<b>2 437</b>	<b>5 480</b>	<b>7 600</b>	<b>7 600</b>
<b>World Total</b>	<b>7 738</b>	<b>6 536</b>	<b>3 347</b>	<b>6 453</b>	<b>9 575</b>	<b>9 591</b>
<b>Imports</b>						
<b>China</b>	5 209	4 436	652	3 709	7 600	7 600
<b>Ethiopia</b>	16	6	6	61	80	80
<b>European Union</b>	194	486	796	90	50	50
<b>Japan</b>	561	577	449	426	400	400
<b>Kenya</b>	146	141	109	52	150	150
<b>Somalia</b>	60	80	85	80	50	50
<b>South Sudan</b>	36	148	26	81	150	150
<b>Sudan</b>	120	150	160	150	100	100
<b>Taiwan</b>	48	64	70	40	50	50
<b>Uganda</b>	40	35	35	25	50	50
<b>Others</b>	881	558	963	859	371	334
<b>Subtotal</b>	<b>7 311</b>	<b>6 681</b>	<b>3 351</b>	<b>5 573</b>	<b>9 051</b>	<b>9 014</b>
<b>Unaccounted</b>	<b>383</b>	<b>- 196</b>	<b>- 5</b>	<b>879</b>	<b>523</b>	<b>576</b>
<b>United States</b>	<b>44</b>	<b>51</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>
<b>World Total</b>	<b>7 738</b>	<b>6 536</b>	<b>3 347</b>	<b>6 453</b>	<b>9 575</b>	<b>9 591</b>