Table 8: Total wheat imports per country per season for use in the RSA

	Season										Total (Tons)
	2009/2010	2010/2011	2011/2012	2012/2013	2013/2014	2014/2015	2015/2016	2016/2017	2017/2018	2018/2019*	
Argentina	-	629 600	652 279	98 029	-	59 607	49 516	35 613	132 433	35 519	**1 692 596**
Australia	55 312	181 637	247 675	189 925	49 780	95 254	38 457	24 816	-	-	**882 856**
Brazil	123 944	58 551	276 420	234 733	-	-	-	-	-	-	**693 648**
Canada	72 911	79 697	45 252	48 583	111 289	105 457	102 816	27 841	90 944	48 236	**733 026**
Czech Republic	-	-	-	-	-	-	-	144 402	47 904	110 602	**302 908**
Finland	-	-	-	-	25 430	-	-	-	-	-	**25 430**
Germany	809 934	88 581	105 964	95 476	179 436	348 385	283 451	237 508	282 312	311 032	**2 742 079**
Latvia	-	-	-	-	22 013	61 005	-	17 098	140 007	39 270	**279 393**
Lesotho	-	-	-	384	-	-	-	-	-	-	**384**
Lithuania	1 611	-	8 880	-	40 532	43 791	151 047	-	182 241	109 980	**538 082**
Poland	-	-	-	-	-	91 483	185 036	76 912	17 514	-	**370 945**
Romania	-	-	36 071	-	-	-	-	112 334	101 449	-	**249 854**
Russian Federation	-	-	154 129	245 228	800 964	719 784	956 705	182 993	955 697	147 186	**4 162 686**
Swaziland	-	-	-	288		-	-	-	-	-	**288**
Ukraine	41 230	-	39 016	341 976	372 500	279 364	109 350	13 568	135 669	21 686	**1 354 359**
Uruguay	-	25 249	45 250	99 033	-	-	-	-	-	-	**169 532**
USA	173 030	586 200	112 915	42 572	66 468	28 311	186 387	61 680	87 064	122 157	**1 466 784**
Total	**1 277 972**	**1 649 515**	**1 723 851**	**1 396 227**	**1 668 412**	**1 832 441**	**2 062 765**	**934 765**	**2 173 234**	**945 668**	**15 664 850**

*2018/2019 season figures include imports up to 26 July 2019.

Quality summary of imported wheat (1 October 2017 to 30 September 2018) (Previous season)

The quality of all wheat imported into South Africa is monitored by the SAGL. A subsample of all samples drawn by inspectors of the South African Agricultural Food, Quarantine and Inspection Services (SAAFQIS) of the Department of Agriculture, Forestry and Fisheries (DAFF) is forwarded to the SAGL for analysis. To assist with quality comparisons between local and imported wheat, the same scope of analysis is used for both sets of samples. The import quality results are published at the end of each production and marketing season.

For grading as well as dough and baking quality results of the imported wheat per country, please refer to pages 88 to 109. This imported wheat quality is compared to a summary of the local crop quality of the corresponding (2017/2018) season. To simplify the comparison between the quality of the different countries of import, the average quality per country was summarised in Table 9 on pages 86 and 87. The minimum, maximum and standard deviation per country was also calculated. Please take note of the number of samples analysed when comparing results, the higher the number of samples, the more reliable the average result will be.

A total number of 231 samples of wheat imported from the following eleven countries were received (number of samples received in brackets): Argentina (28), Canada (9), Czech Republic (6), Germany (27), Latvia (7), Lithuania (10), Poland (5), Romania (12), Russian Federation (99), Ukraine (10) and USA (18). Wheat imported for purposes other than bread baking (e.g. soft types for biscuit making) is included in this data set.

Most of the wheat imported to South Africa is blended with local wheat to obtain a certain milling and baking quality as per individual company specifications. Milling companies will blend higher and lower quality wheat to obtain the most cost-effective grist formulation that conforms to a specific quality. The main objective is to supply the most consistent quality of flour to their customers (bakers) as possible, as in the end, consistency is one of the most important quality parameters.

Towards the end of the production season, it may however become necessary for milling companies to mill wheat blends consisting only of imported wheat. Transportation cost is also an important factor for consideration. The grist formulation of mills situated at the coast will as a result consist mainly of imported wheat whereas inland mills will mill a combination of local and imported wheat.

Hectolitre mass is an important grading factor that also provides an indication of flour extraction potential. 7% of the samples had hectoliter mass values below 77 kg/hl (minimum requirement for South African grade B1 wheat), compared to the 18% and 7% of the previous two seasons. These samples originated from Argentina, Germany, Romania, Russian Federation and the USA, which reported the lowest hectoliter mass values overall.

Screenings represent all material that passes through a standard sieve (1.8 mm), with 3% the maximum allowed for grades 1 to 3 according to RSA grading regulations. When comparing screening results originating from different countries, it is important to keep in mind that sieve aperture size and shape as well as sample preparation procedures vary between countries. Samples from the Russian Federation and the USA also reported the highest levels of screenings, which explains the low hectolitre mass values observed on these samples at least in part.

None of the samples reported falling number results below 220 seconds. The wheat imported from Romania had the highest average falling number value, which equaled the RSA national average for the same season.

The protein content and rheological characteristics of the wheat imported from the USA varied from low and weak to average and fair. The average values are therefore not a true reflection of the overall imported USA wheat bread baking quality, since most of the wheat imported were most probably not intended for bread baking purposes.

The ability of wheat flour to produce dough with good gas-holding capability is attributable to gluten as gluten imparts the elasticity and extensibility characteristics to the dough. Good quality gluten is capable of producing a loaf of bread with a high volume and good crumb texture. As in the previous seasons, the imported Canadian wheat had the highest protein content resulting in the highest gluten content. When evaluating gluten results, it is important to take the protein content into account. The ratio of wet gluten to total protein content is normally between 2.5 – 2.8 to 1. The wet gluten content of good quality white bread flour normally ranges between 27 – 33% (14% mb). The difference between wet and dry gluten is an indication of the water-holding capacity of the gluten proteins which is in turn related to protein quality. This water-holding capacity is also one of the factors determining flour water absorption.

Flour with higher water absorption is preferred by bakers as this results in increased dough yields. The acceptable range for white bread flour is normally between 60.0 – 64.0%, averaging 61.0 – 62.0%. In general, longer farinogram development times of 3.5 to 6.0 minutes and stabilities of 8.0 to 12.0 minutes will be an indication of good baking quality, which is associated with good protein quality.

Acceptable ranges for the alveogram parameters generally are as follows: Strength 30 – 45 cm^2, stability (P) 65 – 120 mm, distensibility (L) 80 – 120 mm and P/L 0.70 – 1.50. A good correlation exists between alveogram strength and protein quality. Low/short distensibility values, indicated by high P/L values can result in lower loaf volumes. High/long distensibility values, are indicative of soft doughs with excess stretching properties, which can also result in low loaf volumes due to poor gas retention properties. In general, extensogram strength values ranging between 80 – 150 cm^2, maximum heights of 300 – 550 BU and extensibility values of 170 – 220 mm, indicate good baking quality.

Most of the imported wheat samples, again showed a tendency towards longer mixogram mixing times. Some of these long mixing times can be explained by low protein levels in the samples. Flours having undesirably low protein starch ratios, require more time to produce continuous protein phases during mixing. Mixing time provides an indication of the amount of time needed to mix the dough to optimum development, between 2.8 and 3.5 minutes are considered acceptable in South Africa. The longer the mixing time, the larger the risk that the dough will not be mixed to optimum development, which will negatively influence the bread quality and cause lower loaf volumes. Long mixing times can also result in increased dough temperatures. Warmer doughs will proof faster and generally carry less water.

Composite samples of holds per shipment per country were tested for the presence of mycotoxin residues by means of a multi-mycotoxin analysis. The mycotoxin results in general did not raise any concerns. Deoxynivalenol (DON) residues were observed on some of the samples, but none of the levels exceeded national or international maximum allowable levels. Ochratoxin A residues were observed on one sample from Canada and this value exceeds maximum allowable levels of amongst other the European Union and Codex.