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

	Season										Total (Tons)
	2007/2008	2008/2009	2009/2010	2010/2011	2011/2012	2012/2013	2013/2014	2014/2015	2015/2016	2016/2017*	
Argentina	684 160	368 739	-	629 600	652 279	98 029	-	59 607	49 516	35 613	**2 577 543**
Australia	-	74 714	55 312	181 637	247 675	189 925	49 780	95 254	38 457	-	**932 754**
Brazil	-	42 449	123 944	58 551	276 420	234 733	-	-	-	-	**736 097**
Canada	194 764	54 831	72 911	79 697	45 252	48 583	111 289	105 457	102 816	27 841	**843 441**
Czech Republic	-	-	-	-	-	-	-	-	-	140 242	**140 242**
Finland	-	-	-	-	-	-	25 430	-	-	-	**25 430**
France	-	-	-	-	-	-	-	-	-	-	**0**
Germany	111 013	518 002	809934	88 581	105 964	95 476	179 436	348 385	283 451	217 338	**2 757 580**
Latvia	-	-	-	-	-	-	22 013	61 005	-	-	**83 018**
Lesotho	-	-	-	-	-	384	-	-	-	-	**384**
Lithuania	-	-	1 611	-	8 880	-	40 532	43 791	151 047	-	**245 861**
Poland	-	13 013	-	-	-	-	-	91 483	185 036	76 834	**366 366**
Romania	-	-	-	-	36 071	-	-	-	-	16 552	**52 623**
Russian Federation	-	-	-	-	154 129	245 228	800 964	719 784	956 705	69 588	**2 946 398**
Swaziland	-	-	-	-	-	288		-	-	-	**288**
UK	-	-	-	-	-	-	-	-	-	-	**0**
Ukraine	-	13 521	41 230	-	39 016	341 976	372 500	279 364	109 350	-	**1 196 957**
Uruguay	-	-	-	25 249	45 250	99 033	-	-	-	-	**169 532**
USA	406 562	113 434	173 030	586 200	112 915	42 572	66 468	28 311	186 387	25 026	**1 740 905**
Total	**1 396 499**	**1 198 703**	**1 277 972**	**1 649 515**	**1 723 851**	**1 396 227**	**1 668 412**	**1 832 441**	**2 062 765**	**609 034**	**14 815 419**

*2016/2017 season figures include imports up to 7 July 2017.

Quality summary of imported wheat (1 October 2015 to 30 September 2016) (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 81 to 98. This imported wheat quality is compared to a summary of the local crop quality of the same (2015/2016) season. To simplify the comparison between the quality of the different countries of import and South African wheat, the average quality per country was summarised in Table 9 on pages 79 to 80. The minimum, maximum and standard deviation per country was also calculated. Please also 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 200 samples of wheat imported from the following countries were received (number of samples received in brackets): Argentina (9), Australia (11), Canada (14), Germany (25), Lithuania (17), Poland (20), Russian Federation (69), Ukraine (5) and USA (30). 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 constant 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, providing an indication of flour extraction potential, did not pose problems with these imported samples, since only 14 of the samples (7%) had hectoliter mass values below 77 kg/hl (minimum requirement for South African grade B1 wheat). All but two of these samples originated from the Russian Federation and the USA.

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. Screenings are removed prior to milling and high percentages can indicate potential financial losses. 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 USA had the highest average levels of screenings.

None of the samples reported falling number results below 220 seconds. The wheat samples imported from Australia had the highest falling number values as in the previous two seasons.

The protein content and rheological characteristics of the wheat imported from the USA varied from low and weak to average and good. 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 season, 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 as a result of 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 a low protein content of the sample. Flours having undesirably low protein starch ratios, require more time to produce continuous protein phases during mixing. Mixing times between 2.8 and 3.5 minutes are considered to be acceptable in South Africa.

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), HT-2 toxin and Zearalenone residues were observed on some of the samples. Only one sample from the USA exceeded the EU maximum limits with regards to DON on unprocessed cereals (1 250 µg/kg). This value was however below the national maximum DON level of 2 000 µg/kg for cereal grains intended for further processing. The same sample also exceeded the EU maximum limits with regards to Zearalenone on unprocessed cereals (100 µg/kg) as did one other sample from the USA.