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

	Season										Total (Tons)
	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/2023	2023/2024	
Argentina	59 607	49 516	35 613	132 433	35 519	-	-	298 543	33 719	3 899	**648 849**
Australia	95 254	38 457	24 816	-	-	-	455 717	382 604	260 151	390 060	**1 647 059**
Brazil	-	-	-	-	-	-	-	242 639	135 833	-	**378 472**
Canada	105 457	102 816	27 841	90 944	85 428	51 001	136 481	-	-	4 300	**604 268**
Czech Republic	-	-	144 402	47 904	110 636	52 365	8 965	-	32 856	-	**397 128**
Estonia	-	-	-	-	-	-	-	-	-	32 441	**32 441**
Finland	-	-	-	-	-	21 860	-	-	-	-	**21 860**
Germany	348 385	283 451	237 508	282 312	358 343	274 283	51 461	2 732	117 449	-	**1 955 924**
Latvia	61 005	-	17 098	140 007	39 290	54 803	115 250	47 391	76 832	137 608	**689 284**
Lithuania	43 791	151 047	-	182 241	124 161	202 656	275 903	312 795	232 867	408 142	**1 933 603**
Poland	91 483	185 036	76 912	17 514	24 998	543 325	220 604	282 262	512 319	374 147	**2 328 600**
Romania	-	-	112 334	101 449	-	-	-	-	-	-	**213 783**
Russian Federation	719 784	956 705	182 993	955 697	401 385	536 757	210 399	-	263 783	544 173	**4 771 676**
Ukraine	279 364	109 350	13 568	135 669	48 210	94 726	7 341	-	-	-	**688 228**
USA	28 311	186 387	61 680	87 064	140 127	58 092	34 874	32 333	18 547	32 729	**680 144**
Total	**1 832 441**	**2 062 765**	**934 765**	**2 173 234**	**1 368 097**	**1 889 868**	**1 516 995**	**1 601 299**	**1 684 356**	**1 927 499**	**16 991 319**

Quality summary of imported wheat

(Wheat imported from 1 October 2022 to 29 September 2023) (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 (DOA) 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. The results of samples of wheat imported during the current season are updated quarterly and available on the SAGL website.

For grading as well as dough and baking quality results of the imported wheat per country, please refer to pages 82 to 101. This imported wheat quality is compared to a summary of the local crop quality of the corresponding (2022/23) 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 80 and 81. 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 163 samples of wheat imported from the following ten countries were received (number of samples received in brackets): Argentina (7), Australia (16), Brazil (14), Canada (1), Germany (12), Latvia (10), Lithuania (27), Poland (46), the Russian Federation (27) and the USA (3). 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.

The imported wheat samples as well as the 2022/23 wheat crop samples, were graded according to the national wheat grading regulations published in the Government Notice NO. R. 1547 of 29 November 2019. Hectolitre mass is an important grading factor that also provides an indication of flour extraction potential. 12% of the imported samples had hectolitre mass values below 76 kg/hl (minimum requirement for South African Super Grade to Grade 2 wheat), compared to the 2% and 0.7% of the previous two season respectively. One of the samples originated in Brazil, four in Poland, five in Germany and ten in Lithuania.

Screenings represent all material that passes through a standard sieve (1.8 mm), with 3% the maximum allowed for Super Grade to Grade 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 Poland and the Russian Federation reported the highest levels of screenings.

One sample from Australia reported a falling number value below 220 seconds. All of the countries' averages, including that of Australia, were well above 300 seconds. The RSA national average for the same season was 361 seconds.

The average whole wheat protein content exceeded 10% (12% mb) for all the countries of import. The average flour protein content of Argentina and Germany were below 10% (12% mb) and that of the USA below 9% (12% mb). The resultant rheological quality of the samples was weak, especially the USA and the wheat therefor most probably intended for biscuit making 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. 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 cm², 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 cm², maximum heights of 300 – 550 BU and extensibility values of 170 – 220 mm, indicate good baking quality.

The imported wheat samples, except for the Australian wheat, 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. Mixing time provides an indication of the amount of time required to mix a dough to optimum development, 2.5 to 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 residue levels detected on the composite samples did not raise any concerns. All samples tested negative for Aflatoxin B_1, B_2, G_1, G2, Fumonisin B_1, B_2, B_3, Ochratoxin A, HT-2 Toxin, T-2 Toxin and Zearalenone. Deoxynivalenol (DON) was the most prevalent mycotoxin present in these samples, with 15-ADON residues also detected on a number of samples. All the positive DON results were well below the national maximum allowable level of 2 000 µg/kg for cereal grains intended for further processing.