DIRECTORATE GENERAL OF TURKISH GRAIN BOARD

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“ We are obliged to increase the working opportunities of the farming sector to the highest standards by taking modern and economical measures..”

"In our day, agriculture has been becoming a precious and important sector that cannot be only managed with the soil and the processes and means."

"Today social and economical prosperity of developed countries is based on agricultural development. Agriculture is a sector which generates productiveness and plays an important role in industrialization of countries."

M. Mehdi EKER
Minister of Food, Agriculture and Livestock

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AAPEP : Agricultural Area Protection for Environmental Purposes
AHR : Anatolian Hard Red Wheat
Av. : Average
BC : Before Christ
CAP : Common Agriculture Policy
CME : Chicago Mercantile Exchange
CU : Customs Union
Da : Decare
DGPC : Directorate General for Protection and Control
DIP : Direct Income Payment
EU : European Union
FOB : Free on Board
FRS : Farmer Registration System
GAP : Southeast Anatolian Project
Ha : Hectare
HRW : Hard Red Winter Wheat
IGC : International Grains Council
IPAC : Inward Processing Authorization Certificate
IPR : Inward Processing Regime
KCBT : Kansas City Board of Trade
Kg : Kilogram
MGEX : Minneapolis Grain Exchange
MHW : Mechanized Horizontal Warehouse
MOBSU : Modern Open Bulk Storing Units
PPI : Producer Price Index
SRW : Soft Red Winter Wheat
TGB : Turkish Grain Board
TL : Turkish Lira
TUCCE : Turkish Union of Chambers and Commodity Exchanges
TSA : Turkish Statistics Authority
TÜGEM : Directorate General of Agricultural Production and Development
USA : United States of America
USDA : United States Department of Agriculture
WTO : World Trade Organization
$: Dollar
€ : Euro

FOREWORD

Currently, agriculture is still a vital necessity as it was for the first civilizations of history. The world population, which is more or less 7,5 billion, increases by 70 million every year and the sustainability of agriculture becomes much more inevitable and gains vital importance as population grows.

Grains, which are considered as being basic foodstuff among agricultural products, are evaluated as a food security both in the world and our country. However, the climatic events experienced in recent years, increase in the figure of people added in the group of the poor, and social crises that develop in consequence of this bring about food security concerns increasingly. Therefore, Turkish Grain Board (TGB) closely monitors the subjects like global climate movements, erosion, food security that directly interests the agricultural sector and evaluates subjects like the status of natural resources, to what extent the production will be affected from developing natural movements, what reflection such developments will be made on our future and performs studies to prevent the probable problems.

Our country has been undergoing a reform process for recent years. This process has reflections on the agricultural sector as well. As we all know, developments in the world agricultural market made the establishment of safety and stability environment in agricultural markets even more important than ever. In order to establish this environment, TGB evaluates the situation of our country and world, its own position and potential and covers important distances towards widening its vision.

Regulating the Turkish grains market constitutes the main field of activity of TGB. From this viewpoint, TGB compiles statistical data by continuously monitoring the domestic and foreign markets, analyzes the data and factors belonging to previous periods, and takes required actions.

Our organization has been collecting the information obtained as a result of its activities annually in a document under the title of “Grains Report” since the year 2005 and brings it into use of the sector. For the purpose of illuminating those interested in agricultural sector, these reports cover the outlook of a previous purchase period from a global and domestic standpoint and the statistical data on actual developments.

Our basic purpose is that this report, which draws the picture of the current situation in grains sector that constitutes the raw material of basic foodstuff and feed sector, is of a basic resource nature from all aspects for the concerned persons. In this respect, the chapters that commence by summary information regarding the plant characteristics, agriculture, and utilization of each grain are enriched with the global and national developments and end by the data on commercial situation. The final chapter of the report, there are activities carried out by our organization, which is in charge of regulating the grains markets and a general evaluation for 2010/2011 grains season.

I wish on the occasion of this study that we contribute in the "sustainable agriculture" efforts that will enable the provision of sufficient food for mankind and that 2011 harvest period be abundant.

Faithfully yours

Mesut KÖSE
Chairman of Board of Directors
General Manager

1

INTRODUCTION

1. INTRODUCTION

Agriculture maintains its importance for being the locomotive of all other sectors beyond meeting nutrition requirements for the life. In addition, the concerns on food safety emerged due to the global climate changes and drought experienced in recent years, reflection of financial crises on goods markets and trade restrictions have proved strategic importance of the sector once more.

Our country is an advantageous country for agricultural production with climatic and ecological characteristics favoring for a wide production range and the country is in a good condition for self sufficiency in agricultural production. Furthermore, approximately 25 % of the population in the country is employed in agriculture industry. On the other hand, the share of agriculture in GDP is 10 %, and its share in export revenues is approximately 4 % (TSA 2011).

In agricultural production, the grains have the highest share with 50 % share in total 24.3 million decare cultivable area. Among the cereals, wheat is listed in the first rank with 67 % share in overall cereal production. The wheat is followed by barley by 25 % share and maize by 5 % share. Paddy production continuing in 1 % area increases with the development policies applied. The oat and rye production is in sufficient level and maintains its 1 % share in production for a prolonged period (TSA 2011).

Published by the Board as a (annual) periodicals, Grain Report is composed of 6 sections. The title "Assessment of Grains" introduces vegetal characteristics of the grains such as wheat, barley, rye, oat, corn, paddy as well as production, consumption, import, export, stock and price trends of respective grains in Turkey and rest of the world. Third section of the Report analyses procurement and support policies applied by major grain producer countries in the world, common agricultural policies and types of practices in EU member countries. Forth section introduces Turkish Grain Board and introduces ongoing legislation and EU harmonization activities conducted by the Board. Fifth section provides a status determination for assessing in next years and evaluates option trades according to the trends in Turkish mercantile exchanges and other major mercantile exchanges in the world.

2

ASSESSMENT OF GRAIN PRODUCTS

2. ASSESSMENT OF GRAIN PRODUCTS

2.1. Wheat

2.1.1. Vegetal characteristics

Constituting basic source of carbohydrate, the wheat absolutely takes its place in our daily dieting either in bread and other bakery products form through kneading dough or as various products such as bulgur, pasta, semolina, biscuits. Bran and other by-products generated in grinding process as well as low quality wheat are used as animal feed. In addition, we have also observed use of wheat in bio ethanol production together with renewable energy concept appeared in recent years.

The wheat is classified in 3 categories according to their botanic structures:

1. Triticum aestivum (milling wheat),
2. Triticum durum (durum wheat),
3. Triticum compactum (club wheat).

Likewise, the wheat is also categorized according to the hardness, grain colour and sowing time:

According to grain hardness; hard wheat, semi hard wheat, soft wheat,

According to grain colour; red wheat, white wheat,

According to sowing time; summer time wheat, winter time wheat

The wheat preference of the industrialists changes according to the purpose of use. For example, where high protein rate and quality besides flour yield is desired for milling wheat, low protein content is desired for the wheat to be used in biscuit production.

A wheat grain is composed of three sections called pericarp, embryo and endosperm. Endosperm constitutes 85 % of the grain and this section is used for obtaining flour. The husk of the grain is used to get the bran that is mostly used in feed industry. Embryo generally remains with the barn or separated in particular case. Embryo is also used consumed as food as well as using for wheat oil production.

Though ranging according to the species and its regions the wheat average composition is 12 % water, 70 % carbohydrate, 12 % protein, 2 % fat, 2.2 % cellulose and 1.8 % ash.

2.1.2. Production, Consumption, Import, Export, Stocks and Prices of Wheat in Turkey

Turkey holds 3.8 % of wheat cultivation area in the world. The wheat covers 38 % of total cultivated areas and 67 % of agricultural lands used for cereal planting (TSA 2011)

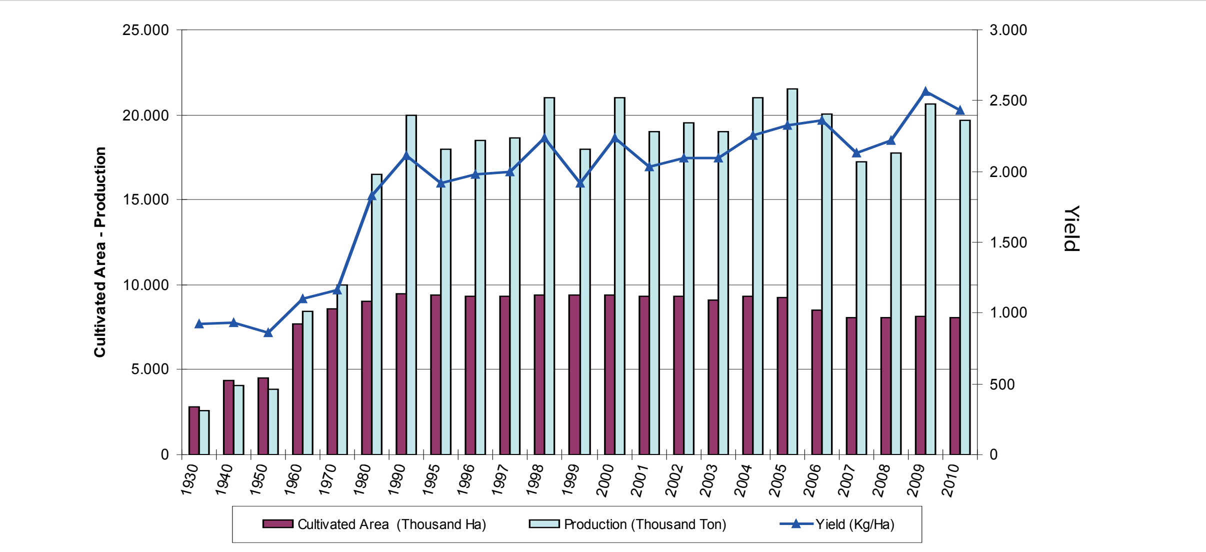
Chart 1. Cultivation Area, Production, Yield of Wheat in Turkey in 1930- 2000 Period			
Years	**Cultivation Area (Ha)**	**Production (Ton)**	**Yield (Kg/Ha)**
1930	2,809,300	2,586,377	921
1940	4,381,420	4,067,950	928
1950	4,477,191	3,871,926	865
1960	7,700,000	8,450,000	1,097
1970	8,600,000	10,000,000	1,163
1980	9,020,000	16,500,000	1,829
1990	9,450,000	20,000,000	2,116
2000	9,400,000	21,000,000	2,234
Source: TSA 2011			

As seen in Chart 1, 2,586,377 tons wheat was produced in 1930 from 2,809,300 ha cultivated area representing yield of 921 Kg/Ha and 21 million tons wheat was produced from 9,400,000 ha cultivated area in 2000 representing 2,234 Kg/Ha yield.

Chart 2. Cultivation Area, Production, Yield of Wheat in Turkey in 2001- 2010 Period			
Years	**Cultivation Area (Ha)**	**Production (Ton)**	**Yield (Kg/Ha)**
2001	9,350,000	19,000,000	2,032
2002	9,300,000	19,500,000	2,097
2003	9,100,000	19,000,000	2,099
2004	9,300,000	21,000,000	2,258
2005	9,250,000	21,500,000	2,324
2006	8,490,000	20,010,000	2,360
2007	8,097,700	17,234,000	2,130
2008	8,090,000	17,782,000	2,219
2009	8,100,000	20,600,000	2,566
2010	8,094,000	19,660,000	2,429
Source: TSA 2010 *			

Analysing recent 10 years, it is conceivable that wheat cultivation area changes in 8.1- 9.5 million hectare range while total quantity produced changes between 18.0- 21.5 million tons. Exceptionally, the wheat yield amount was realized 17.2 million tons in 2007 due to harsh drought experienced in respective year. Estimate wheat production for 2010 is 19.7 million tons according to TSA (Chart 2, Graphic 1).

Graphic 1. Wheat Production, Cultivation Area and Yield in Turkey



Source: TSA 2011

Even though the wheat yield amount has increased in Turkey throughout the years, the yield rate still remains below the world average. One of the most important factors in wheat yield rate is use of high quality seeds. Considering 8.5 million hectare area allocated for wheat cultivation, annual seed demand is calculated as 1.7 million tons based on 200 kg/ha seed use. Considering the fact that the wheat is a cleistogamic plant requiring replacement of the seeds with certified wheat seed in every 3 years, our country needs approximately 560 thousand tons of certified seed each year. While total certified wheat seed production amount was 145,521 tons in public and private sector in 2008, this figure increased to 315,625 tons in CY 2010. Quantity of certified seed distributed in CY 2010 is 192,961 tons (Chart 3).

Chart 3. Supply and Distribution of Certified Wheat Seed in 2008- 2010 (Ton)

			CY 2008			
Foundation	**Production**	**Import**	**Stock**	**Total Supply**	**Distribution**	**Export**
Public	69,885	35	31,642	101,563	83,432	1,900
Private	75,636	576	4,577	80,789	72,084	2,512
Total	**145,521**	**611**	**36,219**	**182,352**	**155,16**	**4,412**
			CY 2009			
Public	125,566	20	16,255	141,840	141,840	-
Private	95,634	1,032	3,359	99,151	63,644	-
Total	**221,200**	**1,052**	**19,614**	**240,991**	**205,484**	**-**
			CY 2010			
Public	167,152	80	39,235	206,467	116,311	0
Private	148,473	427	27,029	175,899	76,650	4,534
Total	**315,625**	**507**	**66,264**	**382,366**	**192,961**	**4,534**

Source: TUGEM 2011

Chart 4. Wheat Production in Turkey According to TSA, USDA and IGC Statistics (Million Ton)			
Years	**TSA**	**IGC**	**USDA**
2000	21.0	17.5	18.0
2001	19.0	15.5	15.5
2002	19.5	17.3	16.8
2003	19.0	18.5	16.8
2004	21.0	18.5	18.5
2005	21.5	18.0	18.5
2006	20.0	17.5	17.5
2007	17.2	15.5	15.5
2008	17.8	17.0	16.8
2009	20.6	18.5	18.5
2010	19.7	17.5	17.0
Source: TSA 2011, USDA 2011 and IGC 2011			

Analysing Chart 4, it is seen that 2010 wheat production of Turkey is 19.7 million tons according to statistics of TSA.

Chart 5. Regional Wheat Production in Turkey in 2010 (Thousand Ton)				
	Milling Wheat		**Durum Wheat**	
Region Name	**Quantity**	**%**	**Quantity**	**%**
Marmara Region	2,730	17	6	0.2
Aegean Region	1,133	7	372	11
Central Anatolia Region	5,458	34	803	23
Mediterranean Region	2,106	13	348	10
East Anatolia Region	1,186	7	140	4
Southeast Anatolia Region	1,821	11	1,590	46
Black Sea Region	1,777	11	191	6
Total	**16,210**	**100**	**3,450**	**100**
Source: Regional production estimates of TGB based on 2011 data of TSA				

Even though wheat can be produced in any region in our country, Central Anatolia is the main grain supplier of Turkey. Thus, Central Anatolia is listed in first rank in wheat production in CY 2010 with its 34 % share in total production. The region is followed by Marmara Region (17%) and editerranean Region (13 %). Least share in production belongs to Aegean and East Anatolia Regions by 7 % share each. Southeast Anatolia Region leads in durum wheat production and is followed by Central Anatolia Region (see Chart 5).

Chart 6. Consumption, Stock Change and Sufficiency Level of Wheat in Turkey								
Market Year*	Domestic Use (Thousand Ton)	Consumption As Food (Thousand Ton)	Consumption As Seed (Thousand Ton)	Consumption As Feed (Thousand Ton)	Losses (Thousand Ton)	Stock Change (Thousand Ton)	Consumption Per Capita (Kg)	Sufficiency Rate (%)
2000/01	19,362	15,078	1,683	2,020	581	49	225.4	106.5
2001/02	19,780	15,629	1,674	1,884	593	-757	230.2	94.3
2002/03	19,857	15,645	1,638	1,979	596	-118	227.3	96.4
2003/04	18,957	14,782	1,674	1,932	569	286	211.9	98.4
2004/05	19,402	15,133	1,665	2,023	582	-595	214.1	106.3
2005/06	16,846	14,283	1,528	425	610	276	...	120.6
2006/07	18,943	16,491	1,458	427	567	-834	...	99.8
2007/08	16,882	14,584	1,458	351	489	97	206.6	96.6
2008/09	17,781	15,459	1,456	362	504	308	216	94.5
2009/10	16,961	14,495	1,458	425	584	965	200	94.5

Source: TSA 2011.
(*) Market Year: Covers July - June period for 2000/01 – 2004/05 and 1 June- 31 May Period for 2005/06 – 2007/08 - 2008/2009 - 2009/2010 (see APPENDIX 1 for explanation)

According to TSA statistics, wheat consumption of Turkey in MY 2009/10 was 14 million 495 thousand ton in form of food, 1 million 458 thousand ton in form of seed and 425 thousand tons in form of feed (see Chart 6).

According to the information obtained from our Provincial Directorates, current situation about flour, feed, pasta, bulgur, biscuits, semolina, feed and paddy factories operating in our country are summarized in Chart 7 below.

Chart 7. Current Situation in Flour, Pasta, Bulgur, Biscuits, Semolina, Feed and Paddy Factories in Turkey (CY 2010)				
Factories	Number of Factories (Operating)	Annual Capacity (Ton)		Capacity Utilization Rate (%)
		Installed Capacity (Ton/Year)	Actual Capacity (Ton/Year)	
Wheat Flour	682	32,430,829	15,168,570	47
Pasta	20	1,716,104	1,095,380	64
Bulgur	99	1,194,212	699,343	59
Biscuits	26	666,331	476,788	72
Semolina	11	511,770	322,166	63
Feed	403	27,121,725	14,864,066	55
Paddy	130	3,159,811	1,154,550	37

Source: TGB 2011

Wheat production in Turkey generally meets wheat consumption; however the shortage amount is imported when the domestic demand cannot be supplied due to drought and quality problems from time to time. Wheat import figures reached to 3 million 708 thousand tons in CY 2008 which was the highest in amount in recent 10 years. Wheat import volume has decreased in 2009 compared to the figures of 2008 and became 3 million 380 thousand tons. Such high import volume resulted from using 2007- 2008 Inward Processing Regime (IPR) certificates in respective year (2008). Furthermore, low wheat yields in Turkey in CY 2008 and changes in import tax applied for wheat import also contributed to respective figures. Indeed, customs tax rate applied for wheat dropped from 130 % to 8 % on November 2007 and to 0 % in 2008 considering production and market stock conditions. In CY 2009, 3 million 708 thousand tons wheat was imported. Low world wheat prices resulting from high yields, import transactions carried out under IPR and partial quality problems experienced in several regions were contributing factors for high import volume in wheat. Wheat import volume in 2010 has become 2 million 554 thousand tons (see Chart 8).

Turkey imports majority of the wheat from Russian Federation due to logistics and competitive price advantages. Also, Turkey imports high volume of wheat from Kazakhstan, EU(27) and Ukraine.

Turkish Grain Board has the option to export surplus volume in order to balance the prices in wheat markets. Making an increase compared to CY 2007 and 2008 due to increase in production, wheat export volume reached to 301 thousand tons in CY 2009. 2010 wheat export has become 1 million 156 thousand tons with an increase compared to volumes in 2009 and 2009 due to increase in production (see Chart 8).

Chart 8. Wheat Import and Export Volume of Turkey (Including Durum Wheat)

	Import			Export		
Years	Quantity (Ton)	Value (Thousand $)	Av. Price ($/Ton)	Quantity (Ton)	Value (Thousand $)	Av. Price ($/Ton)
2000	963,668	126,143	131	1,782,048	193,308	110
2001	346,827	49,621	143	1,117,969	136,225	122
2002	1,116,575	150,472	135	55,329	9,781	177
2003	1,846,284	277,543	150	938	401	428
2004	1,065,389	221,868	208	864	359	416
2005	135,596	25,031	185	327,931	52,155	159
2006	239,874	52,624	219	685,674	100,853	147
2007	2,147,107	570,39	266	18,281	9,132	500
2008	3,708,003	1,483,190	400	8,005	5,569	696
2009	3,379,928	899,004	266	301,485	60,647	201
2010	2,554,189	655,049	256	1,156,696	198,554	172

Source: TSA 2011.

Chart 9. Durum Wheat Import and Export Volume of Turkey						
Years	Import			Export		
	Quantity (Ton)	Value (Thousand $)	Av. Import Price ($/Ton)	Quantity (Ton)	Value (Thousand $)	Av. Export Price ($/Ton)
2000	6,998	1,238	177	817,160	101,014	124
2001	5,337	865	162	411,726	59,316	144
2002	14,429	2,814	195	54,657	9,580	175
2003	9,521	1,720	181	148	55	371
2004	20,429	5,062	248	123	46	373
2005	26	30	1,154	219,565	37,508	171
2006	3,899	869	223	243,458	40,886	168
2007	127,785	36,487	286	13,638	6,387	468
2008	151,554	85,555	565	2	2	848
2009	111,342	48,694	437	10,027	28,506	284
2010	80,632	25,373	315	348,372	63,636	183

Source: TSA 2011.
Note: Import in CY 2005 represents seed import transactions.

Durum import and export data of Turkey for 2000- 2010 period are given in Chart 9 above. Highest durum wheat import was realised in year 2008 with 151,554 tons and it has reduced to 80,632 tons in year 2010 decreasing by 46 % compared to previous year. Highest durum wheat export was realised in year 2000 with 817,160 tons and it has reduced to 348,372 tons in year 2010 decreasing by 57 % compared to that period.

The competition chance of wheat prices in domestic market is considerably low due to high production cost of wheat in our country. Therefore, the wheat is exported in form of final products such as flour, pasta, bulgur, biscuits and others through processing instead of exporting the wheat as raw material. Thus, Turkey ranked in first place in world wheat flour export realizing 1,980 thousand tons of export volume in 2005 and she was ranked in second place by realizing 1,807 thousand tons of export volume following Kazakhstan in 2009. In 2010, Turkey has realized 1,854 thousand tons of wheat flour export (see Chart 10). Most important customers of Turkey in wheat flour export are Iraq, Indonesia, Libya and Sub-Saharan African Countries.

Chart 10. Wheat Products Export of Turkey										
Products	2006		2007		2008		2009		2010	
	Quantity (Thousand Ton)	Amount (Thousand $)	Quantity (Thousand Ton)	Amount (Thousand $)	Quantity (Thousand Ton)	Amount (Thousand $)	Quantity (Thousand Ton)	Amount (Thousand $)	Quantity (Thousand Ton)	Amount (Thousand $)
Flour	1,176	257,060	1,216	424,456	1,213	617,985	1,807	581,470	1,854	602,426
Bulgur	63	24,097	76	39,122	74	59,463	115	63,145	163	81,122
Semolina	19	18,823	26	14,500	26	22,440	22	10,754	50	20,456
Pasta	160	67,223	177	104,242	172	170,656	213	149,429	297	185,964
Cake, Pastry, Biscuits, etc	176	261,445	213	344,796	198	399,710	202	406,311	189	365,005

Source: TSA 2011.

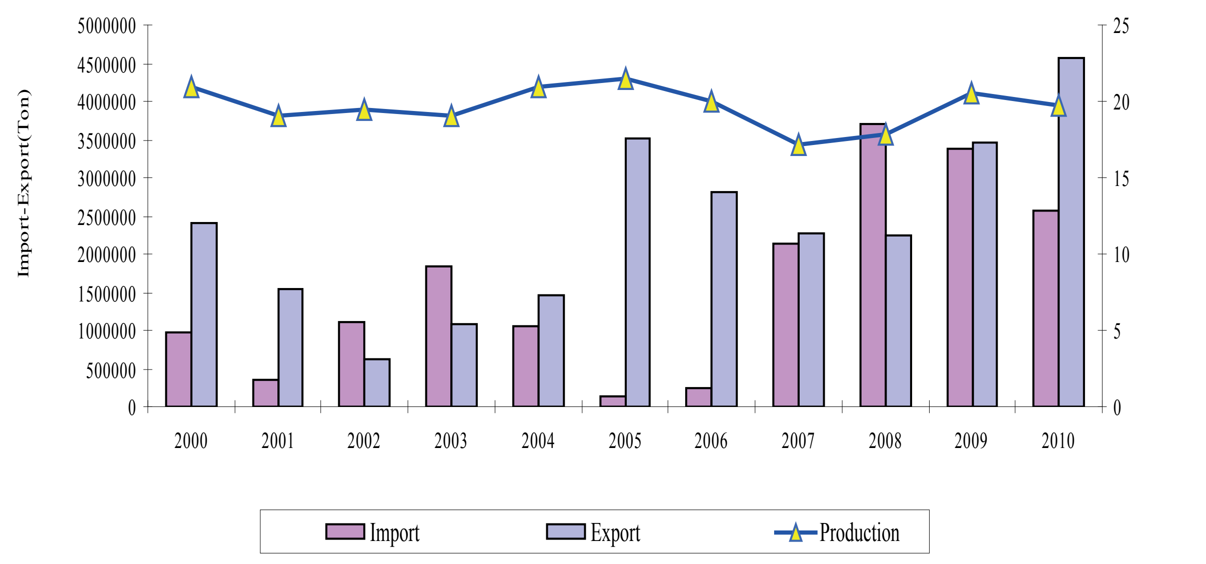
Chart 11. Wheat Equivalence of Wheat and Wheat Product Exports of Turkey (Ton)							
Years	Raw Material Export			Wheat Equivalence of Product Exports			Total Export
	Durum Wheat	Milling Wheat	Total Wheat	Durum Wheat	Milling Wheat + Biscuit Wheat	Total Wheat	
2000	817,160	964,888	1,782,048	31,339	594,240	625,579	2,407,627
2001	411,726	706,242	1,117,969	44,619	368,347	412,965	1,530,934
2002	54,657	672	55,329	66,414	495,443	561,857	617,186
2003	148	790	938	89,262	991,898	1,081,160	1,082,098
2004	123	741	864	166,628	1,279,702	1,446,329	1,447,193
2005	219,565	108,366	327,931	219,372	2,952,874	3,172,246	3,500,177
2006	243,458	442,216	685,674	259,516	1,871,079	2,130,595	2,816,269
2007	13,638	4,643	18,281	270,664	1,992,935	2,263,599	2,281,880
2008	2	8,003	8,005	277,582	1,968,956	2,246,537	2,254,542
2009	100,257	201,225	301,485	344,166	2,806,704	3,150,870	3,452,355
2010	348,372	808,324	1,156,696	479,459	2,935,959	3,415,418	4,572,114

Wheat Conversion Coefficients of Finished Product Exporters	Flour	Pasta	Bulgur	Biscuits	Semolina
	1.358	1.612	1.09	0.87	1.66

Source: TSA 2011.

Approximately 91 % of wheat export carried out in 2009 was performed in equivalent for final wheat product exports. The same figure has been 75 % in 2010.

Graphic 2. Wheat (including Durum Wheat) Production, Import and Export of Turkey (Ton)



Source: TSA, All Exporters Unions
Note: The export figures include wheat equivalents of finished product exports.

Analysing Graphic 2, increase in wheat import especially in recent past years can clearly be observable. Turkey's wheat production in 2010 is expected to be 19.7 million tons representing 4.9 % decrease compared the figure of 2009. This situation runs in parallel with final product export of Turkey (Chart 11). For example, in 2010, 90 % of the wheat imported has been exported as final product.

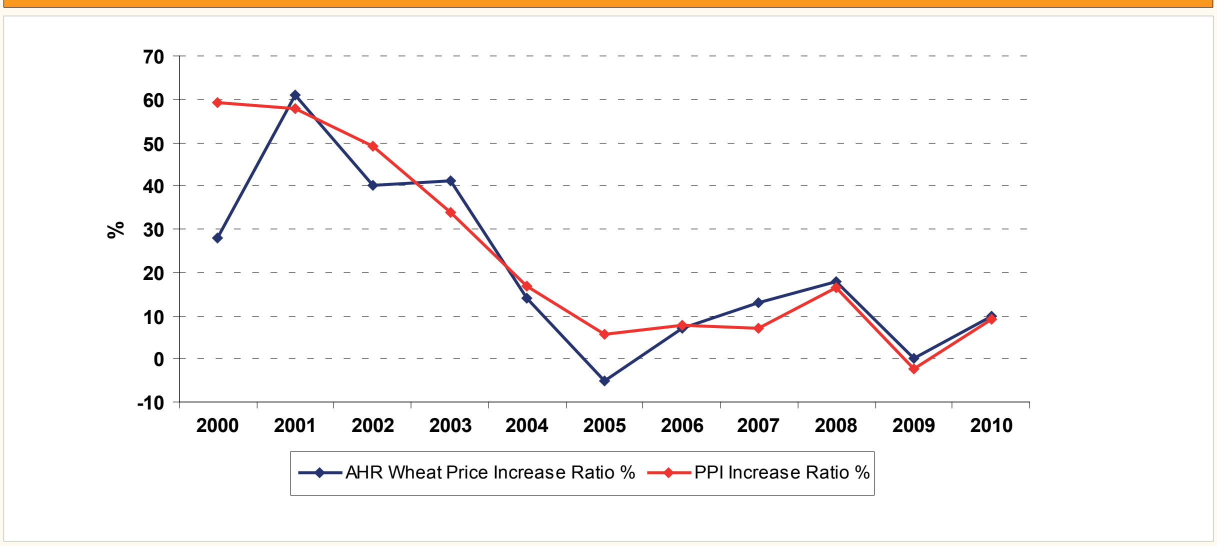
Chart 12. TGB Wheat Procurement Price Rates (TL/Ton)

Years	Durum Wheat Procurement Price	Anatolian Hard Red Milling Wheat Procurement Price	Producer Price Index Increase Rate (%)	Dollar Equivalent of Procurement Price ($/Ton)	World Wheat Procurement Price (USA- HRW2) (FOB $/Ton)
2000	117.3	102	59.16	167	115
2001	188.6	164	57.71	145	135
2002	259.9	230	49.30	167	123
2003	367.0	325	33.69	218	154
2004	392.0	370	16.62	247	167
2005	360.0	350	5.59	255	152
2006	385.0	375	7.66	264	206
2007	440.0	425	7.14	317	202
2008*	500.0	500	16.53	400	362
2009	525.0	500	-2.46	321	267
2010	575.0	550	9.21	357	193

Note: Shows annual change rates (%) based on Producer Price Index (PPI) on May. Average world wheat price and exchange rate of dollar on May was considered for calculations.
(*) Prices for 2008 are consignment procurement price and intervention procurement price was not announced.

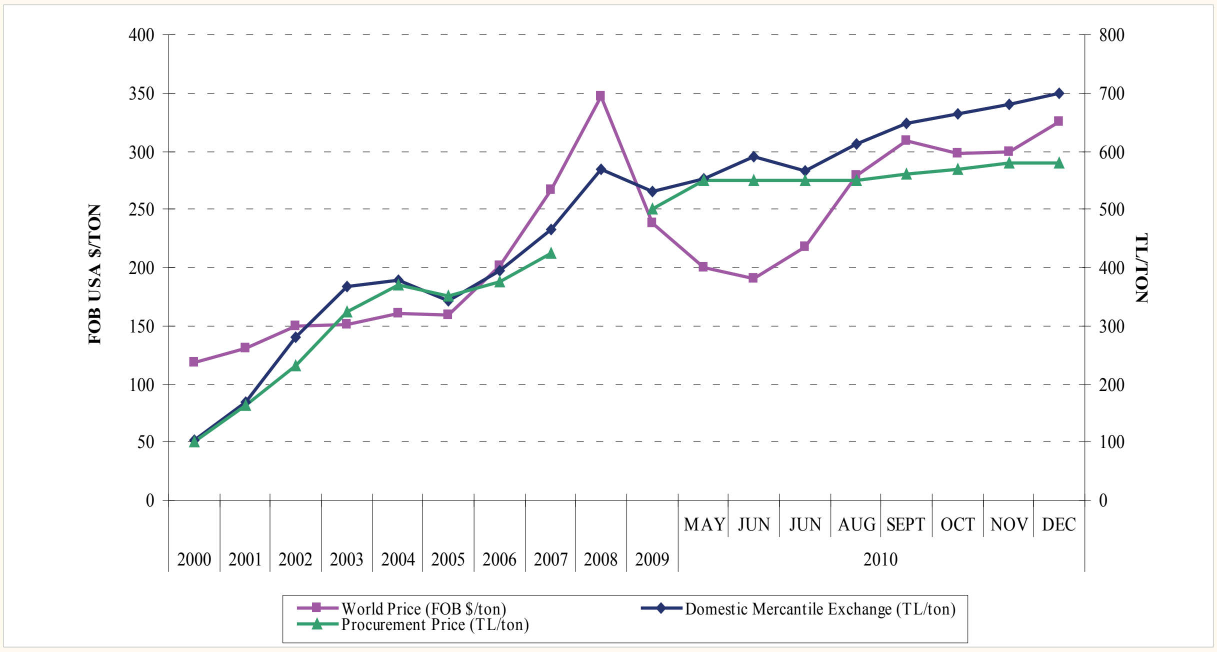
As seen in Chart 12, wheat procurement prices in our country are generally above average world wheat procurement prices.

Graphic 3. Increase Rate of Anatolian Hard Red Milling Wheat Price and PPI Increase Rate (%)



Source: TGB, TSA 2011.

Graphic 4. Comparison of TGB Wheat (AHR) Inception Procurement Price, AHR Wheat Exchange Average Price and World Wheat Price (USA HRW2)



Source: AHR Wheat price was based on daily prices obtained from Konya, Polatlı and Eskişehir Commodity Exchanges. The prices are average prices created in sales section. USA HRW2 wheat price is based on daily prices received from Reuters. AHR Wheat procurement price was not declared in 2008.

Average FOB price for American Hard Red Winter Wheat (USA HRW2), average mercantile exchange price for Anatolian Hard Red Wheat (AHR) and announced procurement price for AHR are comparatively shown in Graphic 4.

Graphic 4 gives comparative prices of American Hard Red Winter (USA HRW2) Wheat, Anatolian Hard Red (AHR) Wheat declared in mercantile exchanges. In 2008, average FOB price of US HRW 2 wheat was 347 $/ton and average price of AHR Wheat in mercantile exchange was 569 TL/ton. No procurement price was declared for the wheat in the same period. In 2009, average FOB price of US HRW 2 wheat was 238 $/ton and average price of AHR Wheat in mercantile exchange was 531 TL/ton. In 2009, procurement price for AHR wheat was declared as 500 TL/ton.

In 2010, average FOB price of US HRW 2 wheat has been 247 $/ton and average price of AHR wheat in mercantile exchange has been 608 TL/ton. Procurement price for AHR wheat has been declared as 550 TL/ton for the same period. Thus, US HRW2 FOB price has decreased by 29 % in 2010 compared to the figure in 2009 and increased by 4 % compared to year 2009. AHR wheat prices has increased by 7 % and 14.5 % in 2010 compared to the figures in 2008 and 2009 respectively.

Domestic wheat prices increased in the country due to the increase in world wheat prices in first quarter of 2008 resulting from the drought experienced in preceding year; however, the prices have started to decrease again especially after start of the harvest.

The quantity of the product traded at mercantile exchanges has increased in 2009/10 harvest period compared to 2008 in parallel with the increase in overall yield. This situation led the wheat prices decreasing. However, the prices started to increase in mid August and this trend continued till the end of the year.

Chart 13. Wheat (AHR) Price Rates on Commodity Exchanges in 2006- 2010 Period (TL/Ton)																			
Years	Wheat	Eskişehir						Konya						Polatlı					
		Jul	Aug	Sep	Oct	Nov	Dec	Jul	Aug	Sep	Oct	Nov	Dec	Jul	Aug	Sep	Oct	Nov	Dec
2006	AHR wheat	357	356	368	394	402	404	370	382	394	412	418	421	370	383	403	430	430	424
2007	AHR wheat	442	431	448	462	473	489	448	437	467	503	506	509	483	470	503	529	540	538
2008	AHR wheat	509	517	512	513	513	488	544	534	516	527	518	517	564	579	586	580	580	579
2009	AHR wheat	454	444	470	496	525	546	453	461	485	496	508	520	525	498	532	555	571	586
2010	AHR wheat	579	592	628	645	646	670	550	602	631	654	673	702	572	614	655	669	685	701

Source: AHR wheat price was based on daily prices obtained from Konya, Polatlı and Eskişehir Commodity Exchanges. The prices are average prices created in sales section.

Chart 13 shows monthly price rates of wheat traded in domestic mercantile exchanges starting from year 2006. In CY 2010, AHR Wheat has been traded in 579- 670TL/ton price range in Eskişehir Mercantile Exchange, in 550-702 TL/ton price range in Konya Mercantile Exchange and in 572-701 TL/ton price range in Polatlı Mercantile Exchange.

Chart 14. Commodity Exchange Average Prices on Monthly Basis in 2008- 2010 Period (TL/Ton)														
Years	Product	Code	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2008	AHR wheat	1221	537	575	631	615	595	565	548	552	553	559	550	546
	Durum wheat	1121	678	694	783	751	731	703	733	698	696	650	570	562
2009	AHR wheat	1221	559	560	549	518	521	528	472	481	519	543	555	564
	Durum wheat	1121	611	605	589	527	531	498	416	435	448	425	410	430
2010	AHR wheat	1221	568	565	562	555	552	590	567	611	648	664	679	700
	Durum wheat	1121	494	515	477	468	474	538	523	576	604	601	611	611

Source: AHR wheat price was based on daily prices obtained from Konya, Polatlı and Eskişehir Commodity Exchanges while Durum Wheat price based on daily prices obtained from Çorum and Konya Commodity Exchanges. The prices are average prices created in sales section.

As seen in Chart 14 above, wheat price fluctuations experienced in international grain markets starting from June 2010 has resulted AHR Wheat price increasing to 590 TL/ton on June and further increasing to 700 TL/ton realising 18.6 % increase compared to previous year.

Chart 15. Commodity Exchange Transaction Quantities on Monthly Basis in 2008- 2010 Period (Ton)														
Years	Product	Jan	Feb	Mar	April	May	June	July	Aug	Sept	Oct	Nov	Dec	Total
2008	AHR wheat	4,131	4,494	6,011	3,019	495	1,429	29,132	17,267	11,880	9,072	6,472	3,945	97,347
	Durum wheat	419	407	1,366	513	100	92	16,183	5,017	2,763	2,263	1,272	538	29,567
2009	AHR wheat	5,556	5,466	7,111	8,810	2,154	1,967	38,280	28,277	15,992	13,785	11,029	9,953	148,380
	Durum wheat	1,397	1,017	1,836	2,061	601	620	23,581	14,975	5,211	3,091	2,452	1,017	57,859
2010	AHR wheat	6,712	7,979	7,111	5,121	1,121	3,674	40,228	27,456	19,893	14,384	7,655	8,750	150,084
	Durum wheat	3,271	5,085	3,253	1,424	75	504	3,396	3,378	2,837	1,675	663	1,705	27,266

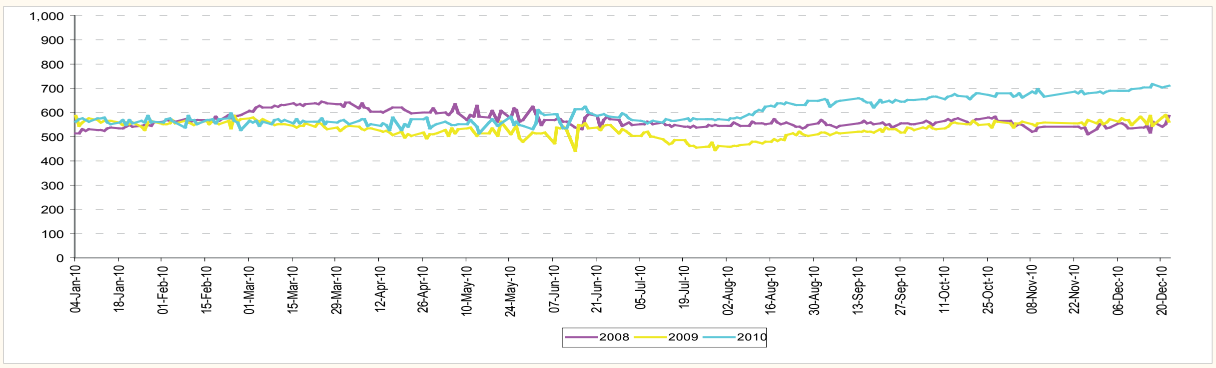
Source: AHR transaction quantities based on daily quantities obtained from Konya, Polatlı and Eskişehir Commodity Exchanges while Durum Wheat transaction quantities based on daily amounts obtained from Çorum and Konya Commodity Exchanges. The amounts represent total transaction quanitites realized in sales halls of the Commodity Exchanges.

As seen in Chart 15, volume of AHR Wheat traded in mercantile exchanges was 148,380 tons in 2010 and it has increased to 150,084 tons with an increase by 1.15 %; however, durum wheat traded in mercantile exchanges was 57,859 in 2009 and it has dropped to 27,266 tons in 2010 representing 53 % decrease compared to previous year.

Drought experienced in 2007 resulted with reduction in amount of wheat transacted in commodity exchanges leading to increase in prices. Price increase continued in first months of 2008 with the impact of price increases in the world scale. However, the prices started to decrease after the harvest. The quantity of the product received at commodity exchanges increased compared to years 2007 and 2008 in parallel with the increase in overall yield in 2009/10 harvest period. This situation led the wheat prices decreasing. However, the prices started to increase starting from mid August and this increase trend continued till the end of the year (Graphic 5).

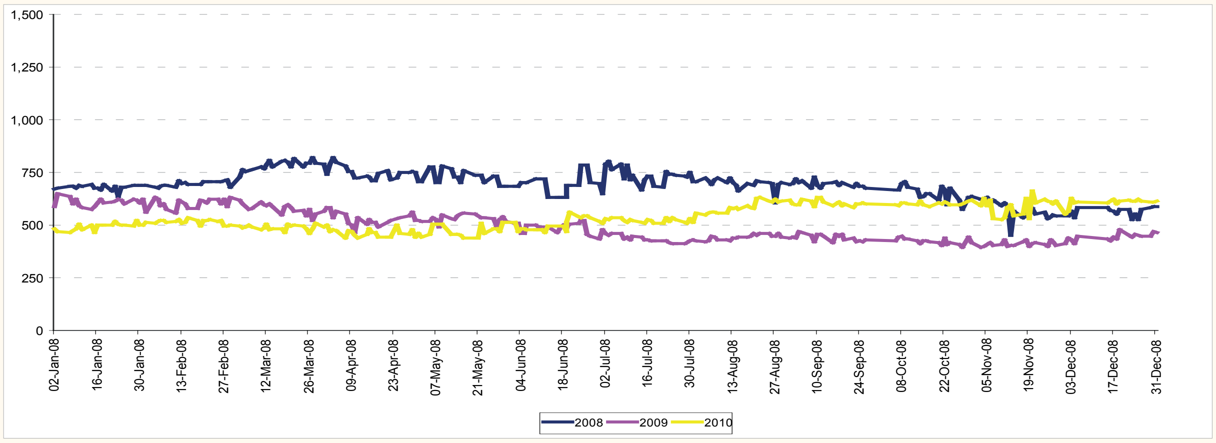
Increasing trend in world wheat prices that started in mid of June in 2010 has also affected domestic markets; however, price increase rate in domestic market has not exceed 30 % with measures taken by Turkish Grain Board (TGB). Average trading price of AHR Wheat in mercantile exchanges was 555 TL/ton on 1st June 2010 and it was recorded 689 TL/ton as of 31 December 2010. Following the developments in world markets from the first day of fluctuation, TGB has carried out market surveys and taken the measures on timely fashion (Graphics 5 and 6).

Graphic 5. Price of Anatolian Hard Red Wheat in Mercantile Exchange in 2008, 2009 and 2010 (TL/Ton)



Source: AHR Wheat price was based on daily prices obtained from Konya, Polatlı and Eskişehir Commodity Exchanges. The prices are average prices created in sales section.

Graphic 6. Price of Anatolian Durum Wheat in Mercantile Exchange in 2008, 2009 and 2010 (TL/Ton)

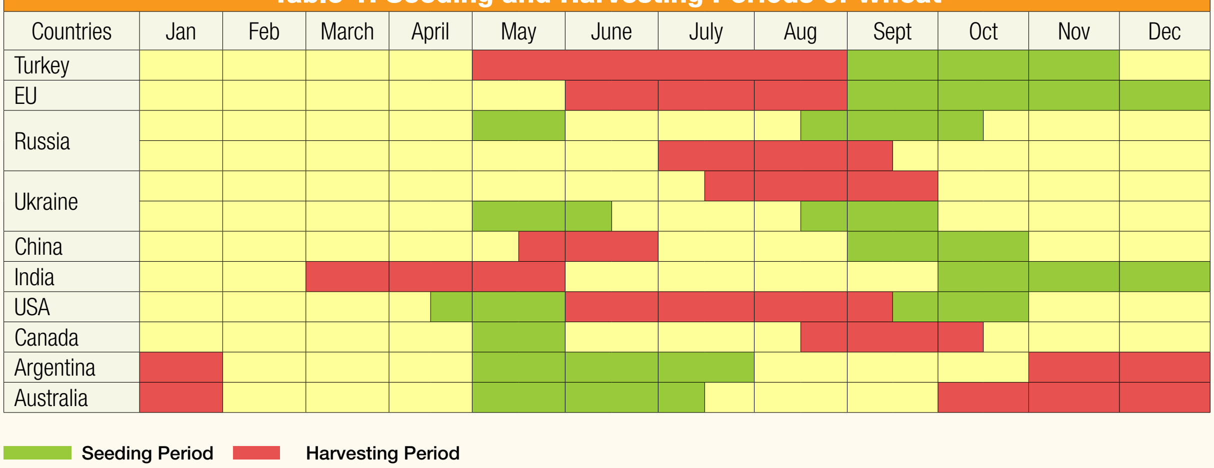


Source: Durum wheat price based on daily prices obtained from Çorum and Konya Commodity Exchanges. The prices are average prices created in sales section.

2.1.3. Production, Consumption, Import, Export, Stocks and Prices in the World

As it has numerous varieties which can be cultivated in any climate and soil condition, the wheat is cultivated in a wide geography in the world. Approximately 90 % of the world's wheat cultivation areas are located in Northern Hemisphere. Among major wheat producing countries Australia and Argentina are located in Southern Hemisphere and other countries are located in Northern Hemisphere. The Table 1 below shows wheat sowing and harvesting periods of major wheat producing countries.

Table 1. Seeding and Harvesting Periods of Wheat



Graphic 7. World Wheat Balance Table (Million Ton)

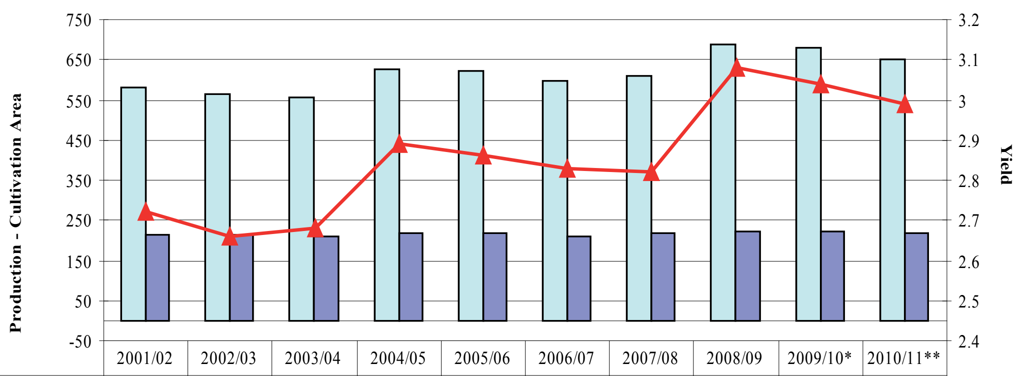
	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10*	2010/11**
Production	581.3	566.1	557.0	627.6	620.7	597.5	609.1	686.1	678.1	649.3
Consumption	584.6	601.1	595.9	613.9	624.1	609.0	612.6	640.9	648.0	661.9
Trade	107.4	106.5	103.1	110.2	110.0	110.8	110.3	136.2	127.8	123.3
Ending stocks	200.6	165.6	126.7	140.4	136.9	125.4	121.8	167.1	197.2	184.6

Source: IGC March/2011 Report. (*) Estimate, (**) Forecast

Wheat production volume in MY 2009/10 has been 678 million tons and this figure is the second highest volume in recent years. Drought experienced in major wheat producing countries in MY 2010/11, shrinkage in stocks in parallel with the global demand and global financial crisis resulted with significant increase in world wheat prices.

It is foreseen that world wheat production will decrease to 649.3 million ton in 2010/11 period representing 4.2 % shrinkage compared to 2009/10 period; on the other hand, world wheat consumption is expected to increase to 662 million tons meaning 2.2 % increase compared to previous year. World wheat trade is foreseen to decrease by 3.6 % and world wheat year ending stocks is expected to decrease by 6.4 % compared to previous year (Graphic 7).

Graphic 8. Wheat Production, Yield and Cultivation Areas in the World



	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10*	2010/11**
Production (million ton)	581	566	557	628	621	597	609	686	678	649
Cultivation Area (million ha)	213	213	208	217	217	211	216	223	223	217
Yield (ton/ha)	2.72	2.66	2.68	2.89	2.86	2.83	2.82	3.08	3.04	2.99

Source: IGC March/2011 Report. (*) Estimate, (**) Forecast

Wheat cultivation area and yield rate is forecast to decrease by 2.7 % and 1.5 % respectively in2010/11 period compared to 2009/10 period (Graphic 8).

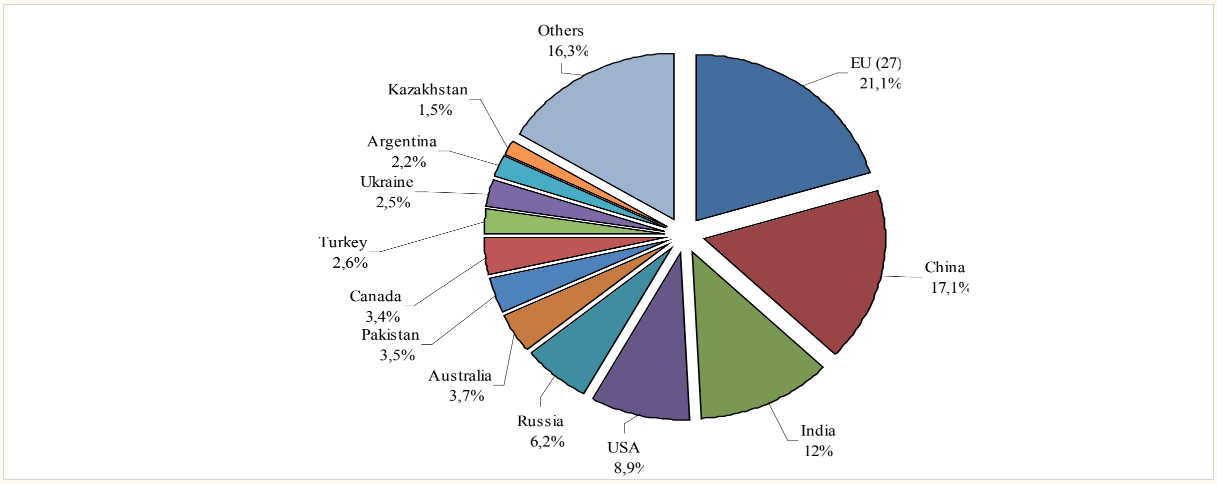
Chart 16. World Wheat Production and Major Producer Countries (Million Ton)

Countries	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10*	2010/11**
EU(27)	122.1	129.5	108.6	147.6	133.8	125.1	119.7	151.2	138.7	135.8
China	93.9	90.3	86.5	92.0	97.5	108.5	109.3	112.5	115.1	115.0
India	69.7	71.8	65.1	72.1	68.6	69.4	75.8	78.6	80.7	80.8
USA	53.3	43.7	63.8	58.7	57.2	49.2	55.8	68.0	60.4	60.1
Russia	46.9	50.6	34.1	45.4	47.7	44.9	49.4	63.8	61.7	41.5
Australia	24.9	10.1	26.1	21.9	25.2	10.8	13.6	21.4	21.9	25.0
Pakistan	19.0	18.2	19.2	19.5	21.7	21.7	23.3	21.5	24.0	23.9
Canada	20.6	16.2	23.6	25.9	26.8	25.3	20.1	28.6	26.8	23.2
Turkey	15.5	17.3	18.5	18.5	18.0	17.5	15.5	17.0	18.5	17.5
Ukraine	21.0	19.8	3.6	16.5	18.7	13.8	13.9	25.9	20.9	16.8
Argentina	15.3	12.3	14.6	16.0	12.6	14.5	16.4	8.4	8.0	15.0
Kazakhstan	12.7	12.8	11.5	9.9	11.0	12.5	16.5	13.0	16.5	10.0
Other	66.5	73.6	81.9	83.6	82.0	84.2	79.9	76.3	84.8	109.6
World	**581.3**	**566.1**	**557.0**	**627.6**	**620.7**	**597.5**	**609.1**	**686.1**	**678.1**	**649.3**

Source: IGC March/2011 Report (*) Estimate, (**) Forecast
Note: EU (27) data includes sum of 27 countries from MY 2001/02

It is estimated that wheat yield will decrease in EU(27), USA, Russia, Kazakhstan, Ukraine Turkey and Canada in MY 2010/11 period but the yield is estimated to increase in Australia during the same period. Highest decrease in production has appeared in Russia, Kazakhstan and Ukraine (Chart 16).

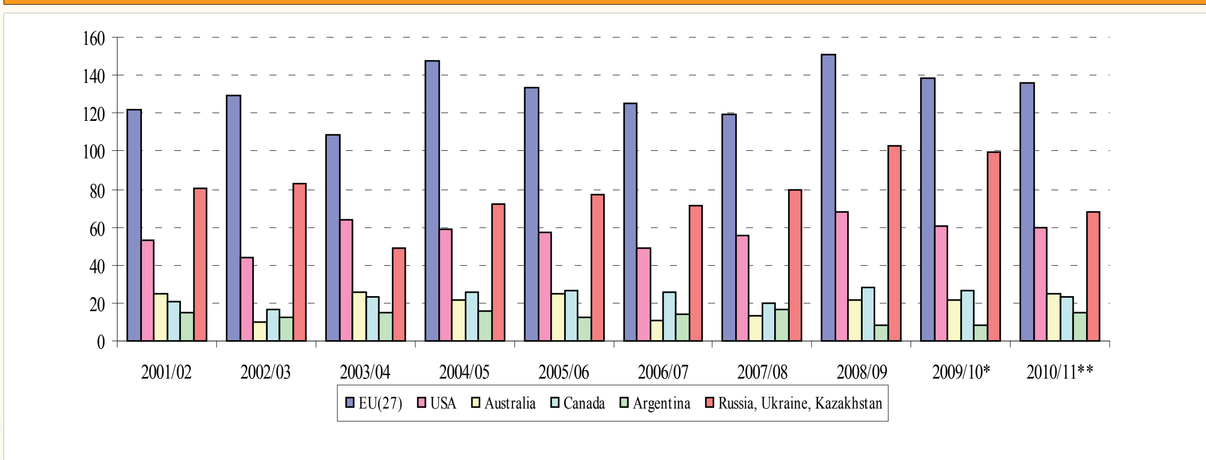
Graphic 9. Shares of Major Producer Countries in 2010/11 World Wheat Production (%)



Source: IGC March/2011 Report. Calculated using figures forecast for MY 2010/11

According to 2010/11 wheat production foresights, EU (27) will be leading in production with 20.1 % share followed by China (17.1 %) and India (12 %). According to the same foresight, Turkey produces 2.6 % of world wheat production (Graphic 9).

Graphic 10. Wheat Production Volumes of Five Major Exporters and Black Sea Region Exporters (Million Ton)



Source: IGC March/2011 Report. (*) Estimate, (**) Forecast

The drought experienced in leading wheat export countries such as Russia, Ukraine and Kazakhstan in summer season of 2010 caused decrease in their total production volume by 31 % compared to MY 2009/10 and by 33 % compared to MY 2008/09 (Graphic 10).

Chart 17. Wheat Yield in the World and Major Producer Countries (Ton/Ha)										
Countries	**2001/02**	**2002/03**	**2003/04**	**2004/05**	**2005/06**	**2006/07**	**2007/08**	**2008/09**	**2009/10***	**2010/11****
EU(27)	5.42	5.76	5.29	5.91	5.48	5.06	4.78	5.65	5.38	5.25
France	6.58	7.46	6.22	7.62	6.97	6.75	5.99	7.19	7.07	7.02
Germany	7.78	6.90	6.51	8.18	7.47	7.18	6.93	8.08	7.80	7.27
Canada	1.94	1.83	2.25	2.63	2.72	2.61	2.32	2.85	2.79	2.80
USA	2.71	2.36	2.99	2.90	2.82	2.60	2.70	3.02	2.99	3.12
Russia	1.97	1.96	1.58	1.98	1.88	1.95	2.10	2.45	2.23	1.84
China	3.81	3.78	3.93	4.25	4.26	4.53	4.73	4.81	4.88	4.73
Australia	2.14	0.91	2.00	1.59	2.01	0.92	1.10	1.58	1.56	1.87
Turkey	1.80	2.02	2.15	2.15	2.09	2.03	1.94	2.05	2.37	2.19
World	**2.72**	**2.66**	**2.68**	**2.89**	**2.86**	**2.83**	**2.82**	**3.08**	**3.04**	**2.99**

Source: IGC March/2011 Report (*) Estimate, (**) Forecast
Note: EU (27) data: EU-15 data was used for 2001-2003 period, EU-25 data for 2004-2005 period and EU-27 data for the period after 2006.

Countries obtaining highest yield in wheat are EU(27) countries led by France in the first rank. Exceeding the average of last 10 years (2.79 ton/ha), the world wheat yield reached to 3.04 ton/ha in MY 2009/10. World yield is foreseen to decrease by 1.7 % compared to former year (Chart 17, Graphic 8).

Chart 18. Wheat Production Areas in the World and in Major Producer Countries (Million Ha)										
Countries	**2001/02**	**2002/03**	**2003/04**	**2004/05**	**2005/06**	**2006/07**	**2007/08**	**2008/09**	**2009/10***	**2010/11****
EU(27)	25.6	26.1	23.7	26.3	25.3	24.7	25.1	26.7	25.7	25.9
China	24.7	23.9	22.0	21.6	22.9	24.0	23.1	23.4	23.6	24.3
India	25.1	25.9	25.9	26.6	26.5	26.7	28.0	28.2	28.4	28.5
USA	19.7	18.5	21.4	20.2	20.3	18.9	20.6	22.5	20.2	19.3
Russia	23.8	25.8	21.5	22.9	25.4	23.0	23.5	26.0	27.5	22.5
Canada	10.6	8.8	10.5	9.8	9.8	9.7	8.6	10.0	9.5	8.3
Pakistan	8.1	8.1	8.0	8.2	8.3	8.4	8.4	8.2	9.0	9.0
Turkey	8.6	8.6	8.6	8.6	8.6	8.6	8.6	8.6	8.6	8.0
Argentina	6.8	5.8	6.0	6.1	5.2	5.5	5.9	4.2	2.8	4.5
Kazakhstan	10.0	10.7	11.3	11.8	11.5	12.0	12.9	13.0	14.0	14.0
Australia	11.6	11.0	13.1	13.8	12.5	11.8	12.3	13.6	13.8	13.4
Ukraine	6.8	7.7	2.6	5.7	6.6	5.2	6.0	7.0	6.7	6.3.
World	**213.4**	**213.0**	**208.0**	**216.8**	**216.7**	**211.2**	**216.3**	**222.8**	**223.5**	**216.9**

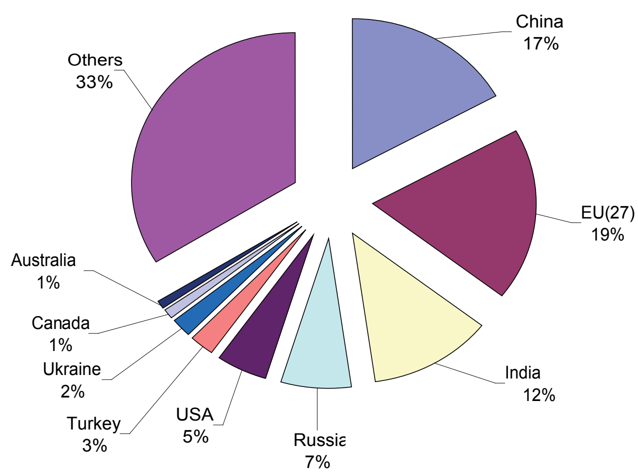
Source: IGC March/2011 Report (*) Estimate, (**) Forecast
Note: EU (27) data includes sum of 27 countries from MY 2001/02

World wheat cultivation areas is expected to be 217 million hectare in MY 2010/11 reducing by 2.8 % due to 5 million hectare shrinkage foreseen especially in Russia in spite of increase expected in Argentina. (See Table 18, Chart 8)

Chart 19. World Wheat Consumption and Major Consumer Countries (Million Ton)										
Countries	**2001/02**	**2002/03**	**2003/04**	**2004/05**	**2005/06**	**2006/07**	**2007/08**	**2008/09**	**2009/10***	**2010/11****
China	109.5	108.0	107.4	104.2	100.5	99.2	102.4	105.6	106.5	112.0
EU(27)	90.1	95.7	91.9	116.7	119.6	123.6	117.1	123.5	126.4	122.9
India	65.1	71.2	71.0	72.4	72.0	74.1	75.5	72.6	76.5	81.4
Russia	37.9	38.6	34.5	38.0	37.6	35.6	36.4	39.5	41.6	46.8
USA	32.7	30.5	32.5	31.9	31.3	30.9	28.6	34.3	30.9	32.0
Turkey	16.2	17.8	17.8	17.7	15.2	16.4	16.9	17.8	17.7	17.5
Ukraine	12.9	13.3	9.5	10.9	12.8	10.6	11.9	13.5	11.8	11.3
Canada	7.4	8.2	7.5	9.2	9.3	8.8	6.7	7.8	7.6	8.0
Australia	5.1	6.3	5.3	5.9	6.7	7.3	6.2	7.3	5.1	6.4
Other	207.6	211.6	218.5	207.1	219.2	202.4	211.0	219.1	223.9	223.7
World	**584.6**	**601.1**	**595.9**	**613.9**	**624.1**	**609.0**	**612.6**	**640.9**	**648.0**	**661.9**

Source: IGC March/2011 Report (*) Estimate, (**) Forecast
Note: EU(27) data includes EU(15) until 2003/04 period, EU(25) data from 2004/05 to 2005/06 period and EU(27) data for 2006/07- 2010/11 period.

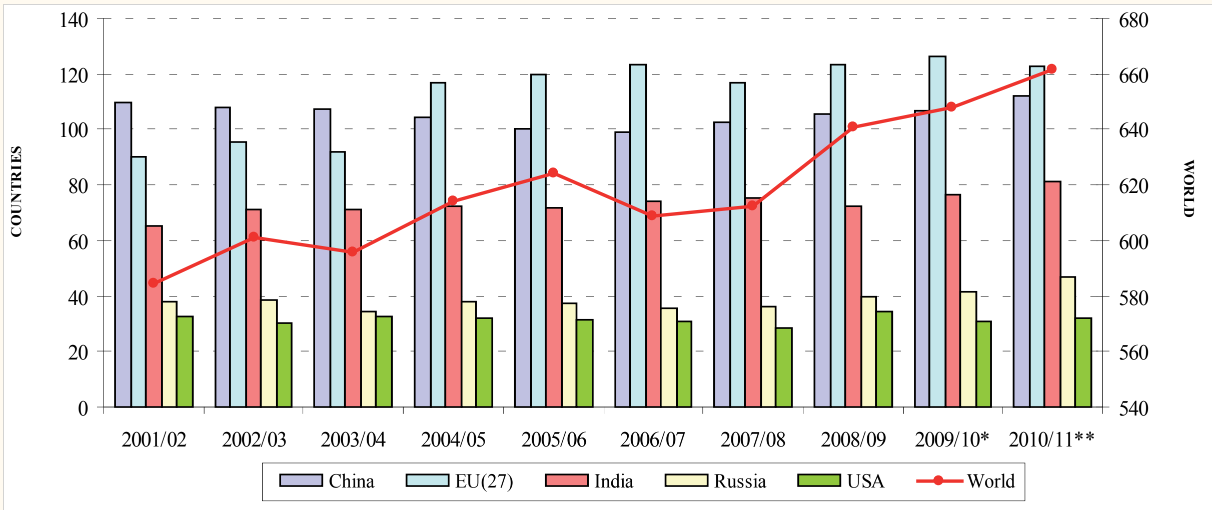
Graphic 11. Shares of Major Consumer Countries in 2010/11 World Wheat Consumption (%)



Source: IGC March/2011 Report. Calculated using figures forecast for MY 2010/11.

Increasing 8 million tons in 2009/10 compared to previous year, world wheat consumption has reached to 648 million tons. It is estimated that global wheat consumption will be 661.9 million tons in 2010/11. EU(27) countries lead in world wheat consumption by 19 % share in total consumption. EU(27) is followed by People's Republic of China and India. These three countries represents 48 % of world wheat consumption (Chart 19, Graphic 11).

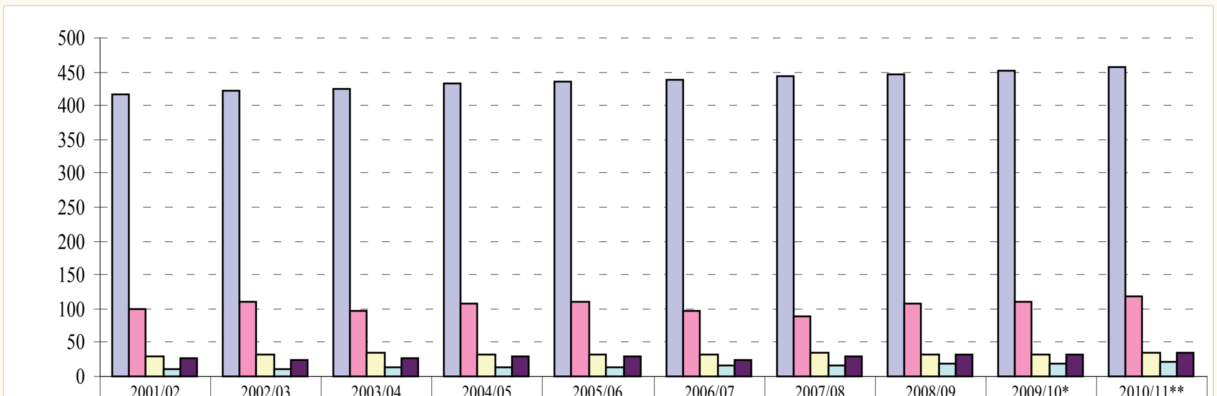
Graphic 12. World Wheat Consumption and Major Consumer Countries (Million Ton)



Source: IGC March/2011 Report. (*) Estimate, (**) Forecast
Note: EU(27) data includes EU(15) data until 2003/04 period, EU(25) data from 2004/05 to 2005/06 period and EU(27) data for 2006/07- 2010/11 period.

It is expected that wheat consumption in EU(27) countries will decrease by 2.8 % compared to 2009/10 period but wheat consumption rate will increase by 5 % in China (Graphic 12).

Graphic 13. World Wheat Consumption According to Utilization Areas (Million Ton)



	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10*	2010/11**
Food	417.0	421.9	425.7	432.0	435.9	438.5	444.3	447.1	450.6	456.1
Feed	99.9	110.6	98.1	107.5	110.5	97.4	88.1	108.4	111.2	117.0
Seed	30.6	32.4	33.9	32.1	33.3	33.3	34.0	33.4	33.6	34.1
Industrial	11.1	12.0	12.1	12.9	14.5	16.2	17.1	18.3	19.5	20.6
Others	26.0	24.2	26.1	29.5	29.9	23.6	29.1	33.6	33.2	34.1

Source: IGC March/2011 Report. (*) Estimate, (**) Forecast

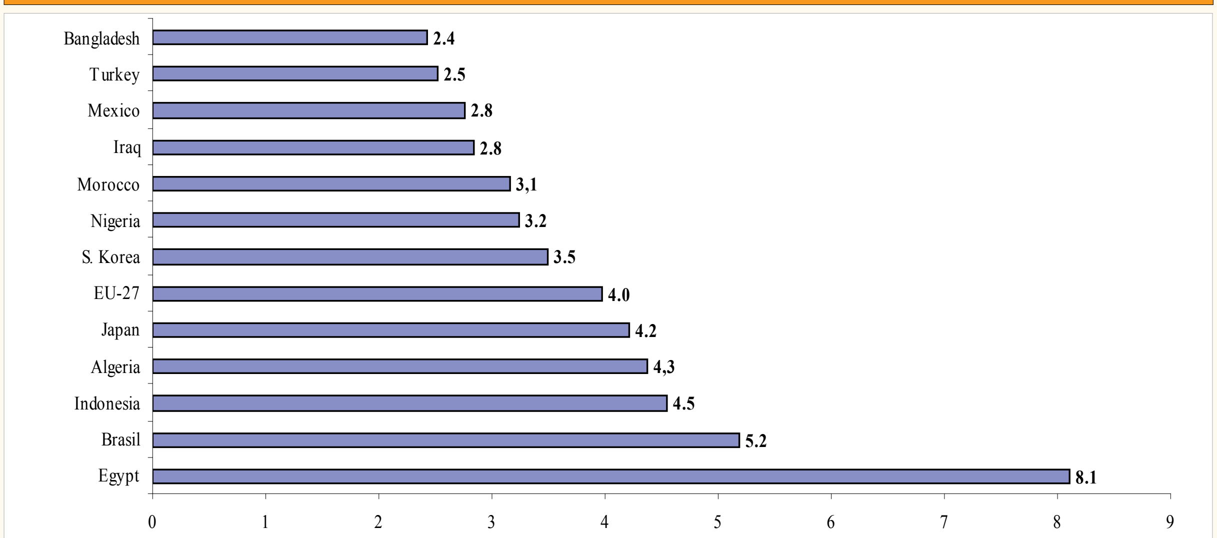
It is estimated that wheat consumption as food will reach to 450.6 million tons in 2009/10 period making 3.5 million ton increase compared to previous year. It is foreseen that it will reach to 456.1 million tons in 2010/11 representing 1.22 % increase compared to previous year. It is estimated that industrial use will increase to 19.5 million tons in MY 2009/10 especially due to impact of ethanol production in EU(27) while wheat consumption as feed will be 111.2 million tons representing 2.6 million ton increase during the same period (Graphic 13).

Chart 20. World Wheat Import and Major Importer Countries (Million Ton)										
Countries	**2001/02**	**2002/03**	**2003/04**	**2004/05**	**2005/06**	**2006/07**	**2007/08**	**2008/09**	**2009/10***	**2010/11****
Egypt	7.1	6.4	7.2	7.9	7.7	7.1	7.6	9.8	10.2	10.0
Brazil	7.1	6.8	5.7	5.5	6.2	7.9	7.1	6.3	6.7	6.4
Indonesia	3.8	4.0	4.4	4.8	5.1	5.8	5.2	5.5	5.4	5.6
Algeria	4.6	5.7	4.0	5.3	5.5	4.9	5.8	6.3	5.1	5.4
Japan	5.7	5.4	5.7	5.4	5.4	5.6	5.7	4.9	5.5	5.2
EU-27	11.5	13.5	9.0	7.4	7.2	5.3	6.4	7.6	5.1	4.9
S. Korea	3.8	3.6	3.6	3.6	3.8	3.2	3.0	3.3	4.4	4.3
Nigeria	2.4	2.3	2.4	3.1	3.7	3.2	2.6	3.5	4.0	4.0
Morocco	3.0	2.8	2.4	2.3	2.4	1.8	4.1	3.7	2.3	3.9
Iraq	2.7	1.6	1.9	3.1	4.9	3.0	3.5	3.9	3.9	3.5
Mexico	3.1	3.1	3.6	3.6	3.4	3.6	3.1	3.3	3.1	3.4
Turkey	1.1	1.3	1.1	0.4	0.1	1.8	2.2	3.6	3.3	3.1
Bangladesh	1.7	1.4	2.0	1.8	2.1	1.7	1.4	2.7	3.5	3.0
Other	49.8	48.7	50.0	56.1	52.4	55.8	52.5	71.8	65.2	60.7
World	**107.4**	**106.5**	**103.1**	**110.2**	**110.0**	**110.8**	**110.3**	**136.2**	**127.8**	**123.3**

Source: IGC March/2011 Report. (*) Estimate, (**) Forecast
Note: The countries are ranked according to 2010/11 forecast. Total wheat import figures of 27 countries have been taken into consideration starting from 2001/02 period to calculate EU (27) data.

World wheat import is foreseen to be 123.3 million tons in MY 2010/11 with a reduction of 4.5 million tons corresponding to 12.7 % compared to previous year due to good yield amounts in major importer countries (Chart 20).

Graphic 14. Shares of Major Importer Countries in 2010/11 World Wheat Import (%)



Source: IGC March/2011 Report. Calculated using figures forecast for MY 2010/11.

In MY 2010/11, Egypt is estimated to lead in world wheat import with its 8.1 % share followed by Brazil and Indonesia (Graphic 14).

Chart 21. World Wheat Import Projection (Million Ton)										
Countries	**2011/12**	**2012/13**	**2013/14**	**2014/15**	**2015/16**	**2016/17**	**2017/18**	**2018/19**	**2019/20**	**2020/21**
Sub Saharan African Countries	14.4	15.0	15.8	16.2	16.7	17.1	17.6	18.1	18.5	19.0
Egypt	10.0	10.1	10.4	10.7	10.9	11.1	11.3	11.6	11.8	12.1
Brazil	6.5	6.6	6.7	6.7	6.7	6.8	6.8	6.9	7.0	7.0
EU(27)	6.2	6.3	6.4	6.5	6.6	6.7	6.8	6.9	6.9	7.0
Indonesia	5.6	5.8	6.0	6.1	6.2	6.3	6.5	6.6	6.7	6.9
Algeria	5.7	5.8	5.9	6.1	6.2	6.3	6.4	6.5	6.6	6.7
Japan	5.2	5.2	5.2	5.2	5.1	5.1	5.0	5.0	5.0	4.9
Iraq	3.2	3.5	3.6	3.7	3.8	3.9	4.1	4.2	4.3	4.4
S. Korea	4.0	3.9	3.9	4.0	4.0	4.0	4.0	4.0	4.0	4.0
World	**132.1**	**132.8**	**135.8**	**138.0**	**140.1**	**142.5**	**144.6**	**147.1**	**149.4**	**151.9**
Source: USDA 2020 Projection, February 2011.										

World wheat (including flour) trade is foreseen to be 151.9 million tons in 2011- 2020 period representing 20 million increase (15 %) compared to MY 2010/11. Increase in wheat import is dominated especially in developing countries where the income and population growths increased the demand for the wheat. Highest increase is estimated to be in Sub Saharan African countries, Egypt, Algeria, Saudi Arabia and Indonesia (Chart 21).

Wheat import volume is foreseen to increase in developing countries due to population growth and limited production increase even though there is no significant change in consumption per capita in respective countries and it is further foreseen that wheat consumption per capita will remain the same in following next 10 years. However, wheat consumption per capita is expected to rise in Indonesia, Vietnam and in some Asian countries. The leading factor is shifting the food preference from rice to wheat together with the increase in income level. Egypt will continue leading in world wheat import and import volume of Africa and Middle East countries will be equal to 60 % of the increase in world wheat trade.

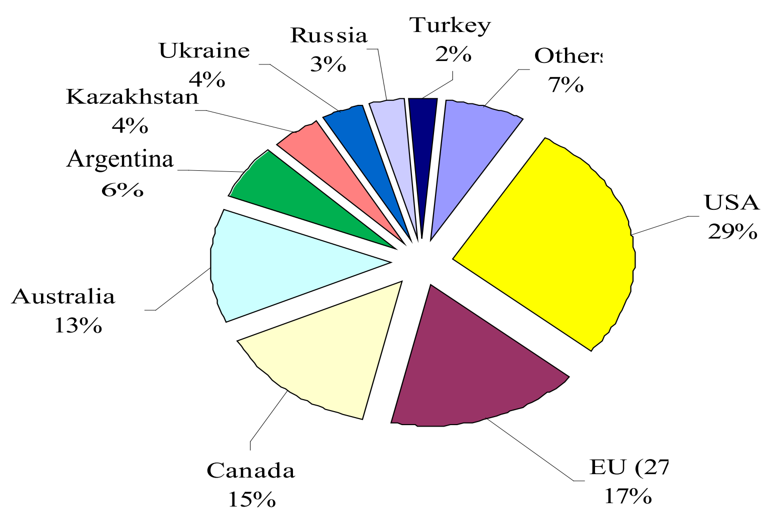
Chart 22. World Wheat Export and Major Exporter Countries (Million Ton)											
Countries		**2001/02**	**2002/03**	**2003/04**	**2004/05**	**2005/06**	**2006/07**	**2007/08**	**2008/09**	**2009/10***	**2010/11****
USA	EXP QTY	26.8	23.2	32.2	28.2	27.2	25.0	34.3	26.8	23.9	34.7
	EXP SHARE (%)	25.0	21.8	31.2	25.6	24.7	22.6	31.1	19.6	18.7	28.1
EU (27)	EXP QTY	10.8	15.5	9.1	13.6	14.0	12.8	11.2	24.5	20.8	21.0
	EXP SHARE (%)	10.0	14.5	8.8	12.3	12.8	11.6	10.1	18.0	16.3	17.0
Canada	EXP QTY	16.7	9.2	15.6	15.4	15.5	19.4	16.4	18.3	18.4	18.0
	EXP SHARE (%)	15.6	8.7	15.1	14.0	14.1	17.5	14.9	13.4	14.4	14.6
Australia	EXP QTY	16.6	10.9	15.1	15.8	15.2	11.4	7.5	13.5	13.8	16.0
	EXP SHARE (%)	15.4	10.2	14.7	14.4	13.8	10.3	6.8	9.9	10.8	13.0
Argentina	EXP QTY	11.4	6.1	7.4	13.2	8.1	11.9	10.0	8.5	5.1	8.0
	EXP SHARE (%)	10.6	5.7	7.2	12.0	7.4	10.8	9.1	6.2	4.0	6.5
Share (%) of 5 Major Exporters		76.6	60.9	76.9	78.3	72.8	72.7	72.0	67.3	64.1	79.2
Russia	EXP QTY	4.6	13.0	4.0	7.9	10.6	10.9	12.1	18.3	18.8	4.0
	EXP SHARE (%)	4.3	12.2	3.9	7.2	9.6	9.8	11.0	13.5	14.7	3.2
Ukraine	EXP QTY	5.5	6.7	0.1	4.3	6.5	3.3	1.2	12.9	9.3	4.5
	EXP SHARE (%)	5.1	6.3	0.1	3.9	5.9	3.0	1.1	9.5	7.3	3.7
Kazakhstan	EXP QTY	3.8	5.6	4.3	3.0	3.8	8.1	8.2	5.8	8.0	5.5
	EXP SHARE (%)	3.5	5.2	4.2	2.8	3.5	7.3	7.5	4.2	6.3	4.5
Export Share (%) of Black Sea Countries		13.0	23.8	8.1	13.9	19.0	20.1	19.6	27.2	28.2	11.4
World Total		**107.4**	**106.5**	**103.1**	**110.2**	**110.0**	**110.8**	**110.3**	**136.2**	**127.8**	**123.3**

Source: IGC March/2011 Report. (*) Estimate, (**) Forecast
Note: EU(27) data includes EU(15) data until 2003/04 period, EU(25) data from 2004/05 to 2005/06 period and EU(27) for 2006/07- 2010/11 period.

The quantity of wheat exported in the world corresponds to 19 % of world wheat production in MY 2010/11. World wheat trade experienced 8.4 million ton decrease in MY 2009/10. Due to high yield expected in major wheat importing countries in MY 2010/11, world wheat export is forecast to be 123.3 million tons making 4.5 million tons decrease compared to MY 2009/10 (Chart 22).

USA, Canada, EU(27), Australia and Argentina are considered as 5 major countries in world wheat export. Russia has had a voice in world wheat export in recent years increasing its wheat production capacity.

Graphic 15. Shares of Major Exporter Countries in 2010/11 World Wheat Export (%)



Source: IGC March/2011 Report. Calculated using figures forecast for MY 2010/11.

In MY 2001/02, 5 major exporter countries represented 76.6 % of world wheat export and it is estimated that same countries will represent 64.1 % of wheat export in 2009/10 period and 79.2 % in MY 2010/11. Russia represented 4.3 % world wheat volume in MY 2001/02 and this figure is forecast to be 14.7 % in 2009/10 and 3.2 % in MY 2010/11 (Chart 22, Graphic 15).

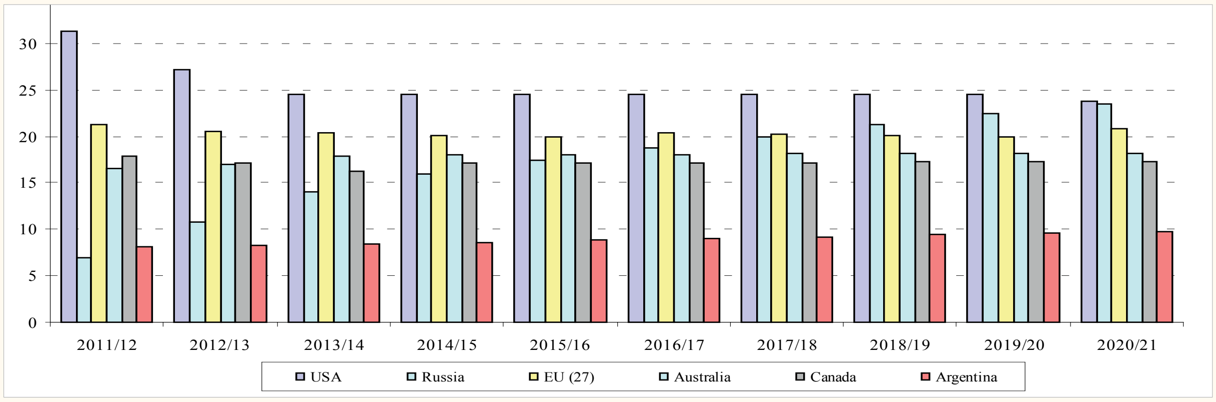
Chart 23. World Wheat Export Projection (Million Ton)

Countries	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21
USA	31.3	27.2	24.5	24.5	24.5	24.5	24.5	24.5	24.5	23.8
Russia	7.0	10.8	14.0	16.0	17.5	18.8	20.0	21.2	22.5	23.5
EU(27)	21.2	20.5	20.4	20.1	20.0	20.4	20.2	20.1	19.9	20.8
Australia	16.5	17.0	17.8	18.0	18.0	18.0	18.1	18.2	18.2	18.2
Canada	17.9	17.2	16.3	17.1	17.2	17.2	17.2	17.3	17.3	17.3
Argentina	8.1	8.2	8.4	8.6	8.8	9.0	9.2	9.4	9.6	9.8
Turkey	3.0	2.9	2.8	2.8	2.8	2.8	2.8	2.8	2.7	2.7
World	**132.1**	**132.8**	**135.8**	**138.0**	**140.1**	**142.5**	**144.6**	**147.1**	**149.4**	**151.9**

Source: USDA 2020 Projection, February 2011.

Five major exporter countries (USA, Australia, EU (27), Argentina, Canada) is forecast to represent 60 % of world wheat trade in 2020 and this rate has been reached by 70 % in recent past 5 years. This decrease in world trade share results mainly from the increase in imports performed from Black Sea Region countries. It is foreseen that the share of Russia, Ukraine, Kazakhstan, Argentina and China will increase in world wheat markets while the shares of Canada, USA and EU will decrease (Chart 23).

Graphic 16. World Wheat Export Projection (Million Ton)



Source: USDA 2020 Projection, February 2011

In spite of expectations of Russia for increase of its wheat consumption for feed, it is foreseen that Community of Independent Countries will increase their share in world wheat export and represent 30 % of world wheat export by 2020.

It is forecasted that wheat export volume of EU(27) will decrease by 2012 due to using more volume of wheat for producing ethanol. It is forecasted that EU wheat export will continue raising afterwards and increase to 20.8 million tons by 2020.

It is forecasted that wheat cultivation areas will diminish due to increased vegetal oil (especially colza- canola oil) and barley demand in Canada and the increase in wheat export will be limited (Graphic 16).

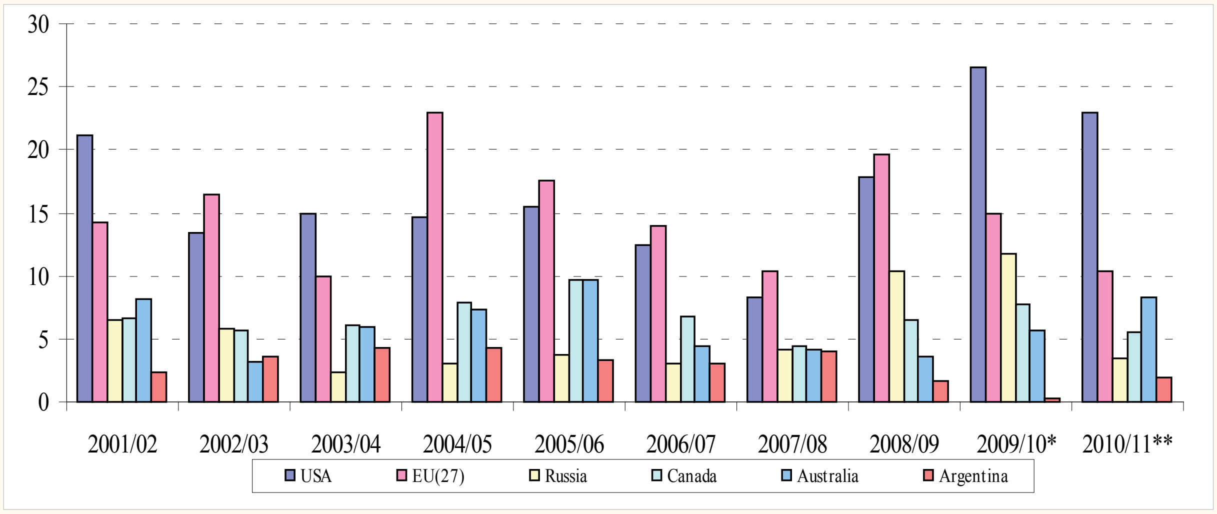
Chart 24. Wheat Year Ending Stocks in the World and in Some Countries (Million Ton)

Countries	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10*	2010/11**
China	71.9	53.2	33.7	27.4	24.4	31.6	36.3	43.5	53.2	56.9
USA	21.1	13.4	14.9	14.7	15.5	12.4	8.3	17.9	26.6	23.0
EU(27)	14.2	16.4	10.0	23.0	17.6	14.0	10.3	19.7	15.0	10.4
India	24.8	20.2	8.9	6.7	3.1	5.0	7.1	13.1	17.6	17.0
Russia	6.5	5.8	2.4	3.0	3.8	3.1	4.2	10.4	11.8	3.5
Canada	6.7	5.7	6.1	7.9	9.7	6.8	4.4	6.5	7.8	5.5
Australia	8.1	3.2	6.0	7.3	9.7	4.4	4.2	3.6	5.7	8.3
Ukraine	3.3	3.5	1.2	2.5	2.0	1.9	3.0	2.5	2.3	3.4
Argentina	2.3	3.6	4.3	4.3	3.3	3.1	4.0	1.6	0.3	2.0
Turkey	0.9	0.9	1.9	1.1	1.0	1.9	1.2	1.8	1.8	1.9
Other	40.8	39.6	37.2	42.4	46.8	41.3	38.8	46.5	55.1	52.7
World	**200.6**	**165.6**	**126.7**	**140.4**	**136.9**	**125.4**	**121.8**	**167.1**	**197.2**	**184.6**

Source: IGC March/2011 Report (*) Estimate, (**) Forecast
Note: EU(27) data includes EU(15) data until 2003/04 period, EU(25) data from 2004/05 to 2005/06 period and EU(27) for 2006/07- 2010/11 period.

World year ending wheat stocks are forecast to be 184.6 million tons in 2010/11 period. China has the highest share in world wheat year ending stock status. It is forecasted that China's year ending stock will be 56.9 million ton in 2010/11 period (see Chart 24).

Graphic 17. Wheat Year Ending Stocks in Major Exporting Countries (Million Ton)



Source: IGC March/2011 Report. (*) Estimate, (**) Forecast

USA wheat year ending stock increased to 23 million tons in MY 2010/11 from 8.3 million tons in MY 2007/08 which was the lowest stock quantity of past 60 years (Chart 24, Graphic 17).

Chart 25. World Durum Wheat Production and Major Producer Countries (Million Ton)

Countries	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10*	2010/11**
EU(27)	7.0	9.0	8.2	11.5	8.4	9.1	8.4	10.0	8.8	8.7
Italy	3.0	4.3	3.7	5.6	4.6	4.1	4.0	5.2	3.8	4.0
France	1.3	1.6	1.4	2.1	2.0	2.1	2.0	2.1	2.1	2.5
Spain	1.5	1.8	2.1	2.4	0.7	1.6	1.2	1.1	1.4	0.9
Canada	3.0	3.9	4.3	5.0	5.9	3.3	3.7	5.5	5.4	3.0
Turkey	3.0	3.0	3.2	3.2	3.2	3.0	2.7	3.0	3.1	2.9
Kazakhstan	2.5	2.6	2.6	2.2	2.4	2.6	3.0	2.5	2.6	1.7
USA	2.3	2.2	2.6	2.5	2.8	1.5	2.0	2.3	3.0	2.9
Mexico	1.1	1.1	0.9	1.1	1.3	1.9	1.8	2.0	2.2	2.2
World	**31.9**	**34.6**	**36.8**	**40.6**	**37.5**	**35.7**	**35.0**	**38.9**	**41.0**	**34.5**

Source: IGC March/2011 Report. (*) Estimate, (**) Forecast
Note: EU(27) data includes sum of 27 countries starting from MY 2001/02 period.

Durum wheat cultivation areas cover approximately 17.5 million hectares in the world. Biggest durum wheat producer in the world is EU(27) with approximately 3 million hectare cultivation area. Among EU(27) countries, Italy realizes approximately half of the production. In MY 2010/11, durum wheat yield of EU(27) is estimated to be 8.7 million tons and world total production will be 34.5 million tons in the same period (Chart 25).

Chart 26. World Durum Wheat Import and Major Importer Countries (Thousand Ton)										
Countries	**2001/02**	**2002/03**	**2003/04**	**2004/05**	**2005/06**	**2006/07**	**2007/08**	**2008/09**	**2009/10***	**2010/11****
Algeria	1,841	2,150	1,692	2,029	1,994	1,580	1,979	2,131	1,550	1,000
EU(27)	1,657	848	2,083	1,750	2,111	1,709	1,909	1,585	2,159	2,200
Morocco	536	483	629	619	665	739	724	563	550	750
USA	616	393	234	446	508	697	633	643	540	500
Tunisia	470	830	70	89	235	221	444	728	480	650
Venezuela	345	271	462	453	500	473	315	332	350	400
Japan	189	202	224	228	219	226	266	201	235	230
Libya	281	103	104	129	33	180	28	105	25	50
Other	1,508	1,530	1,579	1,546	1,211	1,996	920	1,265	1,140	1,140
World	**7,443**	**6,810**	**7,077**	**7,289**	**7,476**	**7,821**	**7,218**	**7,411**	**7,600**	**7,200**

Source: IGC March/2011 Report. (*) Estimate, (**) Forecast
Note: EU(27) data includes EU(15) until 2003/04 period, EU(25) from 2004/05 to 2005/06 period and EU(27) for 2006/07-2010/11 period.

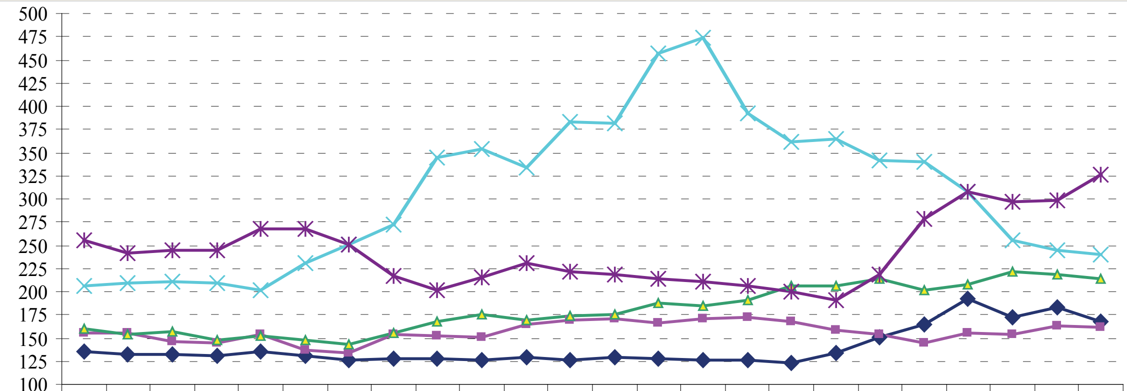
Leading durum wheat importer countries are Algeria and EU(27). Almost 50 % of the import is carried out by these two countries. Algeria's import volume is forecast to be 1 million tons reducing 550 thousand tons in MY 2010/11 due to the high yield rate and EU(27) will increase its import to 2.2 million tons during the same period (Chart 26).

Chart 27. World Durum Wheat Export and Major Exporter Countries (Thousand Ton)										
Countries	**2001/02**	**2002/03**	**2003/04**	**2004/05**	**2005/06**	**2006/07**	**2007/08**	**2008/09**	**2009/10***	**2010/11****
Canada	3,635	2,954	3,376	3,408	3,871	4,377	3,364	3,516	3,675	3,800
EU(27)	591	1,304	930	1,436	1,181	1,209	880	1,726	1,050	1,350
Mexico	495	466	357	595	456	522	1,127	1,130	820	800
USA	1,251	977	1,220	739	1,095	1,036	1,400	510	1,050	1,000
Australia	583	220	261	475	222	115	31	296	256	150
Syria	345	450	600	250	350	300	158	-	-	-
Turkey	204	33	61	167	256	12	19	1	430	50
Other	340	406	271	219	47	250	248	232	319	50
World	**7,443**	**6,810**	**7,077**	**7,289**	**7,476**	**7,821**	**7,218**	**7,411**	**7,600**	**7,200**

Source: IGC March/2011 Report (*) Estimate, (**) Forecast
Note: EU(27) data includes EU(15) until 2003/04 period, EU(25) from 2004/05 to 2005/06 period and EU(27) for 2006/07-2010/11 period.

World durum wheat export is estimate to be 7.2 million tons in 2010/11 representing 0.4 million ton decrease compared to previous year due to yield increase in Northern African countries. Major durum wheat exporter countries are Canada, EU(27) and USA. Canada has more than 50 % share in world export (see Table 27).

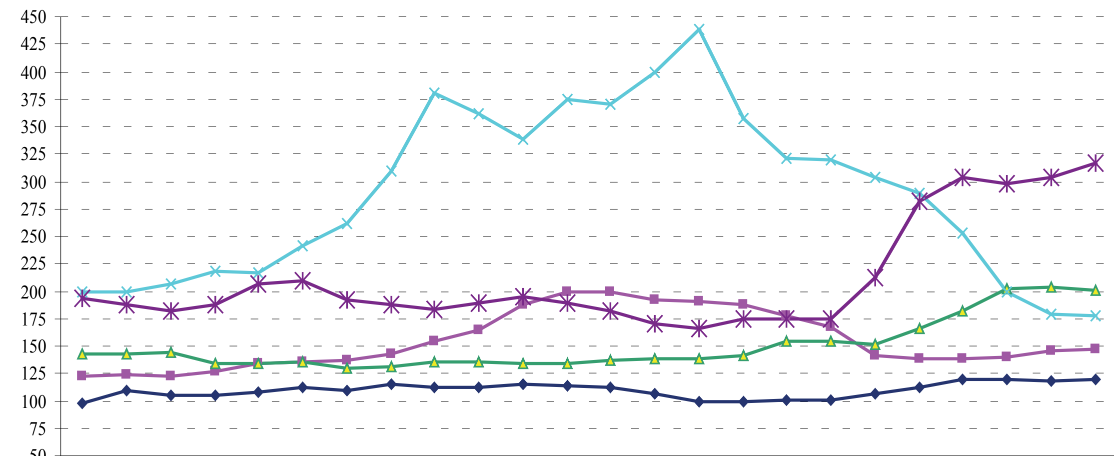
Graphic 18. USA HRW2 Wheat Price Since 2001 (FOB $/Ton)



	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
2001-2002	135	133	132	131	135	131	126	127	127	126	129	126	129	127	126	126	123	134	151	164	192	173	183	168
2003-2004	155	156	146	144	154	137	134	154	152	151	165	170	171	166	171	172	167	158	154	145	155	154	163	161
2005-2006	160	154	157	148	152	148	143	156	167	175	169	174	176	187	185	191	206	206	214	202	208	221	218	214
2007-2008	206	210	211	210	202	231	251	272	344	354	334	383	381	457	474	393	362	364	341	340	308	256	245	240
2009-2010	255	241	244	244	267	268	251	217	202	215	231	221	218	214	211	206	200	191	218	279	308	297	299	326

Source: Calculations are based on daily prices received from Reuters.
Note: In terms of quality, USA HRW2 (Gulf) wheat can be considered equivalent of Anatolian Hard Red Wheat.

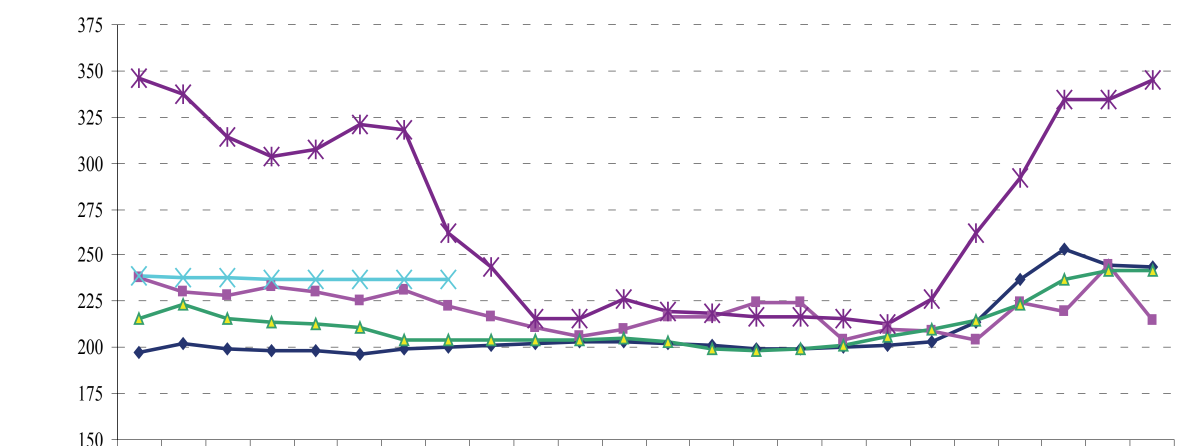
Graphic 19. French Wheat Price Since 2001 (FOB $/Ton)



	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
2001-2002	98	109	105	105	108	112	109	115	112	112	115	114	112	106	99	100	101	101	107	112	119	119	118	119
2003-2004	123	124	123	127	134	135	137	143	155	164	187	200	199	192	190	187	177	168	141	139	139	140	146	147
2005-2006	143	143	144	134	134	136	129	131	135	136	134	134	137	138	138	142	155	155	152	166	182	202	204	201
2007-2008	199	200	207	218	217	242	261	310	381	362	338	374	371	399	439	357	321	319	304	289	253	200	179	178
2009-2010	194	188	182	187	207	209	192	188	183	189	195	189	182	171	166	174	174	174	212	282	304	298	304	317

Source: Calculations are based on daily prices received from Reuters.
Note: In terms of quality, French Wheat can be considered equivalent of Anatolian Semi Hard Red Wheat.

Graphic 20. Canadian Durum Wheat Price Since 2001 (FOB $/Ton)



	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
2001-2002	197	202	199	198	198	196	199	200	201	202	203	203	202	201	199	199	200	201	203	214	237	253	245	244
2003-2004	238	230	228	233	230	225	231	222	217	211	206	210	217	217	224	224	204	210	209	204	224	220	245	215
2005-2006	216	223	216	214	213	211	204	204	204	204	204	205	203	199	198	199	201	206	210	215	223	237	242	242
2007-2008	239	238	238	237	237	237	237	237																
2009-2010	346	337	314	304	307	321	318	262	244	216	216	226	220	219	217	217	216	213	226	262	292	334	334	345

Source: Calculations are based on daily prices received from Reuters.
Note: In terms of quality, Canadian Durum Wheat can be considered equivalent of Anatolian Durum Wheat.

Considering annual average prices of US HRW2, French milling wheat and Canada durum prices since 2001, a considerable increase has been observed in prices especially since May 2007 (Graphics 18,19 and 20).

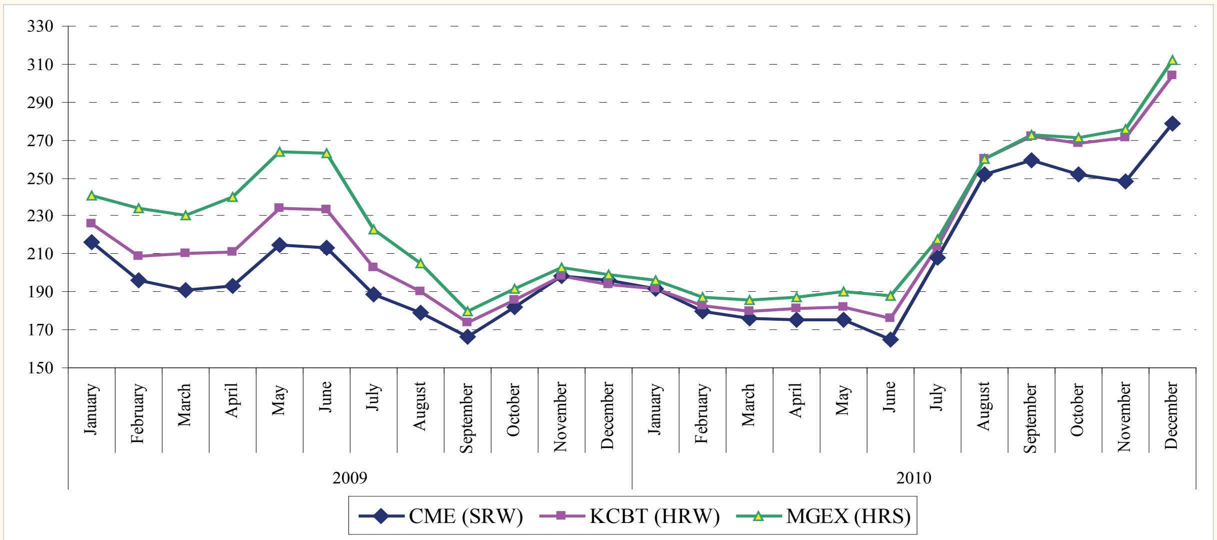
Chart 28. Wheat Price in US Derivatives Markets ($/Ton)

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2009												
CME (SRW)	216	196	191	193	215	213	189	179	166	182	198	196
KCBT (HRW)	226	209	210	211	234	233	203	190	174	186	198	194
MGEX (Spring)	241	234	230	240	264	263	223	205	180	192	203	199
2010												
	Jan	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**
CME (SRW)	192	180	176	175	175	165	208	252	259	252	248	279
KCBT (HRW)	192	183	180	181	182	176	214	260	272	268	271	304
MGEX (Spring)	196	187	186	187	190	188	218	260	273	271	276	312

Source: IGC 2011.

Option prices given for the wheat represent option prices realized for the products transacted in Chicago (CME), Kansas (KCBT), and Minneapolis (MGEX) Derivatives Markets in USA. Tables and charts concerning the prices were created through collecting daily day-end prices of closest term and monthly average of respective prices (Chart 28, Graphic 21).

Graphic 21. Wheat Price in US Derivatives Markets ($/Ton)



Source: IGC 2011.
Note: SRW (Soft Red Winter Wheat), HRW (Hard Red Winter) Wheat, HRS (Hard Red Spring Wheat)

Production volume, stock status, quality, increased demand of developing countries, export policies of major exporters, input prices, biofuel production volume changing based on fuel oil prices and money markets have influence on world wheat prices.

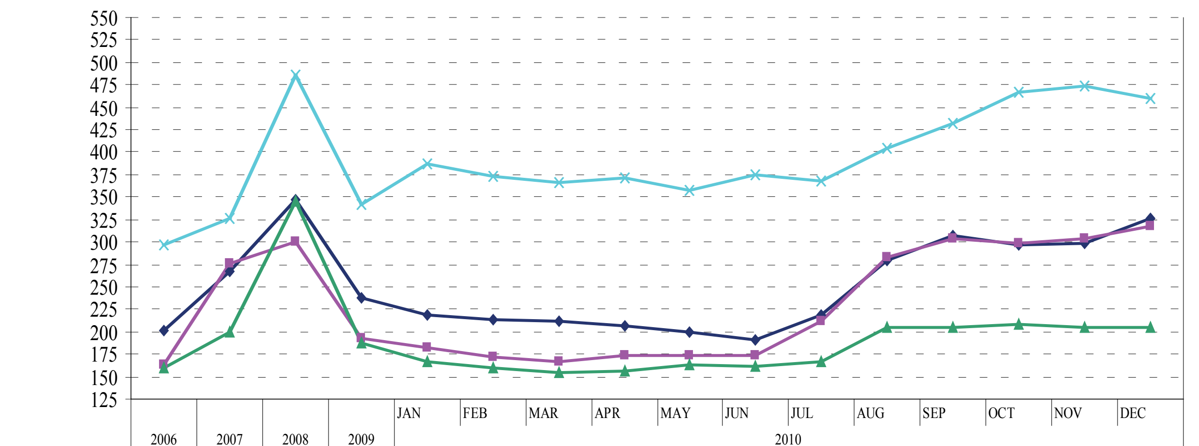
Chart 29. World Wheat Prices (FOB $/Ton) and AHR Wheat and Anatolian Durum Wheat Price ($/Ton)

					Months											
	2006	2007	2008	2009	Jan 2010	Feb 2010	Mar 2010	Apr 2010	May 2010	Jun 2010	Jul 2010	Aug 2010	Sep 2010	Oct 2010	Nov 2010	Dec 2010
USA HRW2	202	267	347	238	218	214	211	206	200	191	218	279	308	297	299	326
French Wheat	164	276	301	192	182	171	166	174	174	174	212	282	304	298	304	317
Russian Wheat	159	200	346	187	167	160	155	157	164	161	167	205	205	209	204	205
AHR Wheat	296	327	486	342	387	373	366	371	358	374	367	405	432	466	473	460
USA Durum	176	342	497	259	-	-	-	235	235	235	235	235	280	340	345	390
Canada Durum	215	238	-	284	220	219	217	217	216	213	226	262	292	334	334	345
Anatolia Durum	275	339	588	318	335	340	311	313	307	341	339	382	403	422	425	402
$ Exchange Rate	1.330	1.420	1.170	1.554	1.473	1.513	1.536	1.495	1.542	1.578	1.544	1.509	1.499	1.426	1.436	1.520

Source: World prices are based on daily prices received from Reuters. AHR Wheat price was based on daily prices obtained from Konya, Polatlı and Eskişehir Commodity Exchanges while Durum Wheat price based on daily prices obtained from Çorum and Konya Commodity Exchanges. The prices are average prices created in sales section.

Global crisis, high import demand, shrinkage in global wheat stocks, imposition of export restrictions, increase in demand for grain used for raw material of biofuel in line with the increase of prices in crude oil prices have resulted with significant increase in world wheat export prices. Indeed, the price of USA HRW2 which was 230 $/ton on June 2007 increased to 530 $/ton on February 2008. Severe drought experienced in 2010 in Russia and some parts of Ukraine and Kazakhstan caused production of all grains especially in wheat and this situation has led increases in grain products. After Russia has started to apply export ban on grains starting from August 2010, average price of US HRW has become 308 $/ton on September (Chart 29).

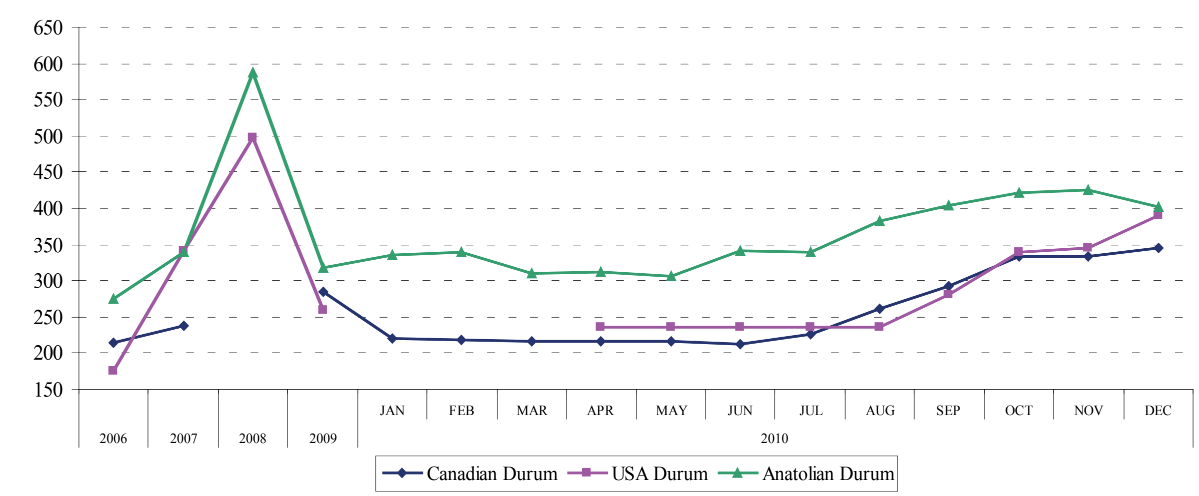
Graphic 22. USA, French, Russian Wheat Price (FOB $/Ton) and AHR Wheat Price ($/Ton)



	2006	2007	2008	2009	2010 JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
USA HRW 2	202	267	347	238	218	214	211	206	200	191	218	279	308	297	299	326
FRENCH	164	276	301	192	182	171	166	174	174	174	212	282	304	298	304	317
RUSSIAN	159	200	346	187	167	160	155	157	164	161	167	205	205	209	204	205
HRW	296	327	486	342	387	373	366	371	358	374	367	405	432	466	473	460

Source: World prices are based on daily prices received from Reuters. AHR Wheat price was based on daily prices obtained from Konya, Polatlı and Eskişehir Commodity Exchanges.

Graphic 23. USA Durum, Canada Durum (FOB $/Ton) and Anatolian Durum Wheat Price ($/Ton)



Source: World prices are based on daily prices received from Reuters. AHR Wheat price was based on daily prices obtained from Çorum and Konya Commodity Exchanges.

World durum wheat price has generally shown increasing tendency in 2010/11 period (Graphic 23).

2.2. Barley

2.2.1. Vegetal characteristics

Barley takes 4th position in world grain production following wheat, paddy and corn. However, barley is listed in second position after wheat in Turkey. Barley is a member of cereals family. Being an annual long day crop, barley can adopt itself to different length of daytimes.

Cultivated barley species are follows:

- Two rowed barleys (Hordeum distichum)
- Six rowed barleys (Hordeum hexastichum)

It is accepted that first barley cultivation was performed in South East Asia and highlands of Ethiopia. It is believed that barley has been cultivated in Egypt since years 5 thousand AD.

Barley develops optimum in areas with moderate temperature and high relative humidity. Areas having lowest temperature more than 0 °C and highest temperature not more than 18 – 20 ºC and having relative humidity of 70-80 % are appropriate. Two rowed barleys are preferred in cold regions where six rowed barleys are preferred in moderate climatic regions.

The barley is selective also in terms of its soil requirement. The soil requirement for the barley is neutral and loamy solid having 5 % organic content and with good aeration. The crop is susceptible to acidic soils but resistant against the salty soils. The crop is an important choice in rotation of crops especially in irrigated agriculture areas as it removes high amount of salt from the salt.

Included within the grains constituting basis for the national economy in our country like it is the same in rest of the world, the barley is not generally used directly in human dieting. The grain can be consumed directly by adding to the feed ratios in livestock breeding activities. In addition, it is an important raw material in malt industry. In addition to all, barley is used in small quantity in ethanol production especially in EU countries.

2.2.2. Production, Consumption, Import, Export, Stocks and Prices of Wheat in Turkey

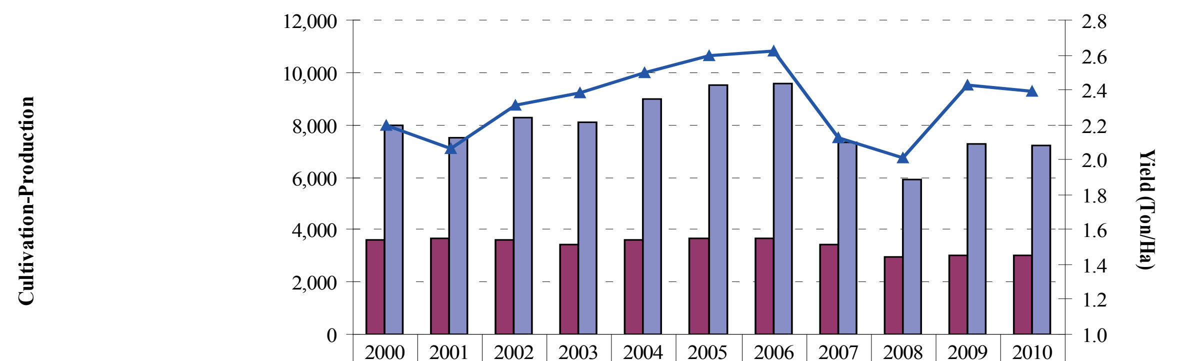
Cultivated in each region in our country, the barley takes second place among the field crops after the wheat in terms of size of cultivation area and yield amount. Even though it is cultivated in all regions of Turkey, Central Anatolia and Southeast Anatolia Regions are the main barley suppliers of the country. Analysing recent 10 years, it is seen that barley cultivation area has changed in 3.2 – 3.7 million hectare range while total quantity produced has changed between 7.3 – 9.6 million tons. Exceptionally, the barley production amount became 5.9 million tons in 2007 due to severe drought.

Chart 30. Barley Production, Cultivation Area and Yield in Turkey			
Years	Cultivation Area (Thousand Ha)	Production (Thousand Ton)	Yield (Ton/Ha)
2000	3,629	8,000	2.20
2001	3,640	7,500	2.06
2002	3,600	8,300	2.31
2003	3,400	8,100	2.38
2004	3,600	9,000	2.50
2005	3,650	9,500	2.60
2006	3,650	9,551	2.62
2007	3,428	7,306	2.13
2008	2,950	5,900	2.01
2009	3,010	7,300	2.43
2010	3,033	7,240	2.39
Source: TSA 2011.			

TSA provides barley information as malt barley and other barley starting from year 2004. Cultivation area, production and yield information concerning this classification are given Chart 31 and Graphic 24.

Chart 31. Production Areas, Production Quantities and Yield of Malting and Other Barley							
Malting Barley				Other Barley			
Years	Cultivation Area (Thousand Ha)	Production (Thousand Ton)	Yield (Ton/Ha)	Years	Cultivation Area (Thousand Ha)	Production (Thousand Ton)	Yield (Ton/Ha)
2004	350	900	2.57	2004	3,250	8,100	2.49
2005	350	900	2.57	2005	3,300	8,600	2.61
2006	362	951	2.63	2006	3,288	8,600	2.62
2007	317	641	2.02	2007	3,111	6,666	2.14
2008	250	523	2.09	2008	2,700	5,400	2.00
2009	260	650	2.50	2009	2,750	6,650	2.42
Source: TSA 2011							

Graphic 24. Production, Cultivation Area and Yield of Barley in Turkey



	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Cultivation Area (Thousand Ha)	3,629	3,640	3,600	3,400	3,600	3,650	3,650	3,428	2,950	3,010	3,033
Production(Thousand Ton)	8,000	7,500	8,300	8,100	9,000	9,500	9,551	7,306	5,900	7,300	7,240
Yield (Ton/Ha)	2.20	2.06	2.31	2.38	2.50	2.60	2.62	2.13	2.01	2.43	2.39

Source: TSA 2011

Although barley is similar to wheat in terms of its sowing- harvest period and cultivation in cool climate, it is harvested approximately two weeks before the wheat according to the regions it is cultivated.

The yield in Turkey is low as barley cultivation is mostly performed in dry conditions. Turkey's barley yield is below the world average. Using quality seed is an important factor in barley yield. As barley is cleistogamic crop, the seed should be replaced in every three years. Furthermore, significant decreases were observed in yield amount in some years resulting from the climatic conditions. Majority of the barley produced in our country is used in feed industry besides using as animal feed alone and using in beer/malt industry.

Chart 32. Barley Production in Turkey According to TSA, IGC and USDA Statistics

Years	Barley Production (Million Ton)		
	TSA	IGC	USDA
2000	8	7.6	7.4
2001	7.5	6.9	6.9
2002	8.3	7.4	7.2
2003	8	6.9	6.9
2004	9	7.4	7.4
2005	9.5	7.6	7.6
2006	9.6	7.5	7.5
2007	7.3	6.0	6
2008	5.9	5.6	5.7
2009	7.3	6.5	6.5
2010	7.2	5.9	5.9

Source: TSA 2011, IGC and USDA 2011

The barley production generally meets the domestic requirement; however, barley is imported from time to time due to drought and quality problems encountered. Annual barley consumption in our country is around 8 million tons. Approximately 4.6 million tons of barley was used as feed in 2009/10 (Chart 33).

Chart 33. Barley Consumption, Stock Change and Sufficiency Level in Turkey per Years

Market Year*	Domestic Use (Ton)	Consumption As Food (Ton)	Consumption as Seeds (Ton)	Consumption As Feed (Ton)	Industrial Use (ton)	Losses (Ton)	Stock Change (Ton)	Consumption Per Capita (Kg)	Sufficiency Rate (%)
2000/01	7,714,559	5,017,444	600,600	1,903,651	...	192,864	83,577	75.01	102.25
2001/02	6,612,468	4,072,716	594,000	1,780,441	...	165,312	282,464	59.98	111.83
2002/03	8,019,409	5,283,396	561,000	1,974,528	...	200,485	-309,522	76.75	102.05
2003/04	8,425,844	5,640,836	594,000	1,980,361	...	210,646	-176,081	80.85	94.79
2004/05	8,947,284	5,970,301	602,250	2,151,051	...	223,682	10,225	84.46	99.18
2005/06	8,198,800	89,300	730,000	6,936,200	220,000	223,300	258,100	-	108.92
2006/07	8,915,000	89,800	685,600	7,695,200	220,000	224,400	-261,100	-	100.71
2007/08	7,057,657	68,684	685,603	5,891,660	240,000	171,710	-56	0.97	97.32
2008/09	5,675,778	55,676	590,000	4,649,423	241,488	139,191	33,377	0.78	98.09
2009/10	5,622,113	68,620	602,000	4,556,902	223,041	171,550	529,534	1.00	122.05

Source: TSA 2011
(*) Market Year: Covers July- June period for 2000/01 – 2004/05 and 1 June - 31 May Period for 2005/06 - 2008/2009-2009/2010 (see APPENDIX 1 for explanation)

The reason for decrease in consumption as food and increase as consumption feed in MY 2005/06 was lack of precise measurement in former periods. Meanwhile, industrial usage also included consumption as food in figures up to said period.

Chart 34. Barley Import and Export Quantities of Turkey Extended to Years

Years	Import			Export		
	Quantity (Ton)	Value (Thousand $)	Av. Import Price ($/Ton)	Quantity (Ton)	Value (Thousand $)	Av. Export Price ($/Ton)
2000	40,217	5,207	130	186,205	20,108	108
2001	38,967	6,327	162	158,216	16,189	102
2002	16,759	2,435	145	595,824	58,910	99
2003	89,428	15,718	176	395,988	41,164	104
2004	240,340	39,814	166	15	11	733
2005	52,182	10,608	203	289,394	39,054	135
2006	65,963	12,850	195	410,498	61,818	151
2007	52,180	13,588	260	215,780	43,399	201
2008	253,014	92,092	364	0	0	0
2009	91,609	27,742	303	301,316	42,155	140
2010	57,076	11,933	209	475,791	71,125	149

Source: TSA 2011

In review of Chart 34, it is observed that our barley imports are made dependent upon drought and within the scope of IPR; whereas in consideration of export values it is seen that our country is in net exporter position.

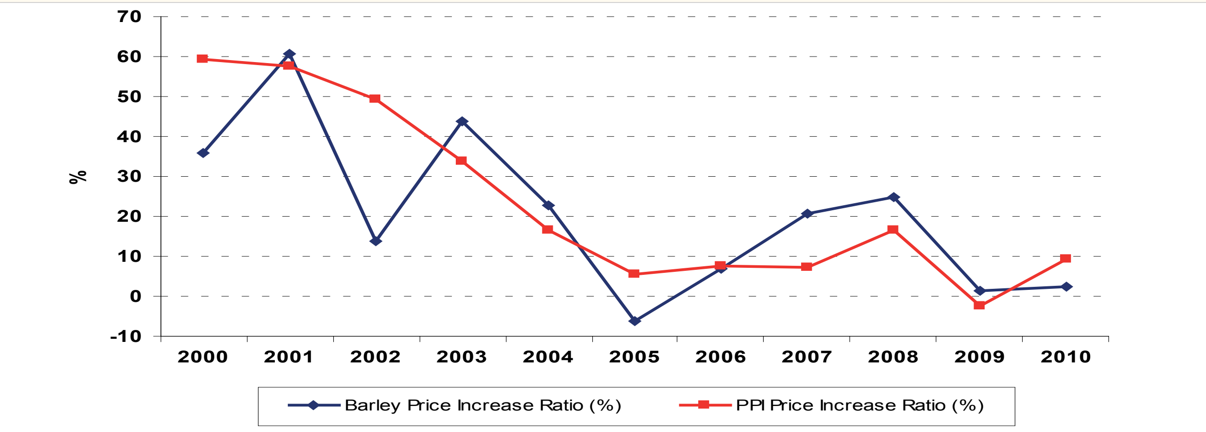
Chart 35. Barley Procurement Price of TGB (TL/Ton)

Years	Barley Procurement Price (TL/Ton)	Producer Price Index Increase Rate (%)*	Dollar Equivalent of Procurement Price ($/Ton)**	World Barley Price (FOB $/Ton)
2000	81.6	59.2	133	111
2001	131.2	57.7	113	110
2002	149.5	49.3	104	108
2003	215.0	33.7	151	128
2004	264.0	16.6	192	136
2005	248.0	5.6	182	128
2006	265.0	7.7	182	152
2007	320.0	7.1	242	261
2008	400.0	16.5	329	262
2009	405.0	-2.5	251	168
2010	415.0	9.2	361	192

Source: TGB, Official Gazette
(*) Shows annual change rates (%) based on Producer Price Index (PPI) on May.
(**) Dollar exchange rate effective on May is taken into consideration while calculating Dollar equivalent of TGB procurement price.

As seen Chart 35 and Graphic 25, barley intervention procurement prices have been above world prices. Increase rate in TGB barley intervention procurement prices have been above increase rate of Producer Price Index (PPI) in 2006- 2010 period.

Graphic 25. Barley Procurement Price Increase Rate Applied by TGB and Producer Price Index (PPI) Increase



Source: TGB, TSA 2011

Chart 36. Barley Prices in Commodity Exchanges in 2006- 2010 Period (TL/Ton)

Years	Eskişehir						Konya						Polatlı					
	Jul	Aug	Sep	Oct	Nov	Dec	Jul	Aug	Sep	Oct	Nov	Dec	Jul	Aug	Sep	Oct	Nov	Dec
2006	254	292	292	305	312	312	251	260	284	297	301	305	254	264	285	304	310	310
2007	427	414	441	481	511	504	412	405	438	484	503	504	422	414	447	485	508	511
2008	484	483	465	475	469	471	489	472	464	484	466	480	487	474	476	479	471	461
2009	334	335	344	374	367	362	339	341	351	359	355	357	336	320	342	367	362	359
2010	385	442	465	480	477	485	404	418	467	475	473	503	392	434	461	479	474	468

Source: The figures above shows average of daily sales prices realized in selling halls of Eskişehir, Konya and Polatlı Commodity Exchanges.

Chart 36 shows monthly prices of the barley traded in domestic mercantile exchanges starting from year 2006. In 2010, barley was transacted in 385–485 TL/ton price range in Eskişehir Commodity Exchange, in 404–503 TL/ton price range in Konya Commodity Exchange and in 392– 479 TL/ton price range in Polatlı Commodity Exchange.

Chart 37. Barley Transaction Volumes in Commodity Exchanges in 2006- 2010 Period (Ton)

Years	Eskişehir						Konya						Polatlı					
	Jul	Aug	Sep	Oct	Nov	Dec	Jul	Aug	Sep	Oct	Nov	Dec	Jul	Aug	Sep	Oct	Nov	Dec
2006	9,313	2,162	1,108	917	1,217	1,171	8,091	2,918	1,357	926	1,033	696	955	549	340	172	287	185
2007	5,243	1,808	749	821	786	582	4,350	2,111	1,094	1,295	1,090	529	388	356	285	239	146	98
2008	8,894	1,808	960	1,005	626	394	7,807	2,744	1,354	1,474	844	1,035	1,137	657	346	854	455	236
2009	15,336	4,955	1,870	1,684	1,329	935	22,084	11,431	2,792	2,364	2,562	1,920	3,489	957	906	1,392	912	807
2010	10,178	1,945	1,387	1,060	841	978	5,710	2,451	1,638	1,120	547	639	2,097	1,647	1,477	564	517	305

Source: The figures above were calculated from daily bulletins of Eskişehir, Konya and Polatlı Commodity Exchanges.

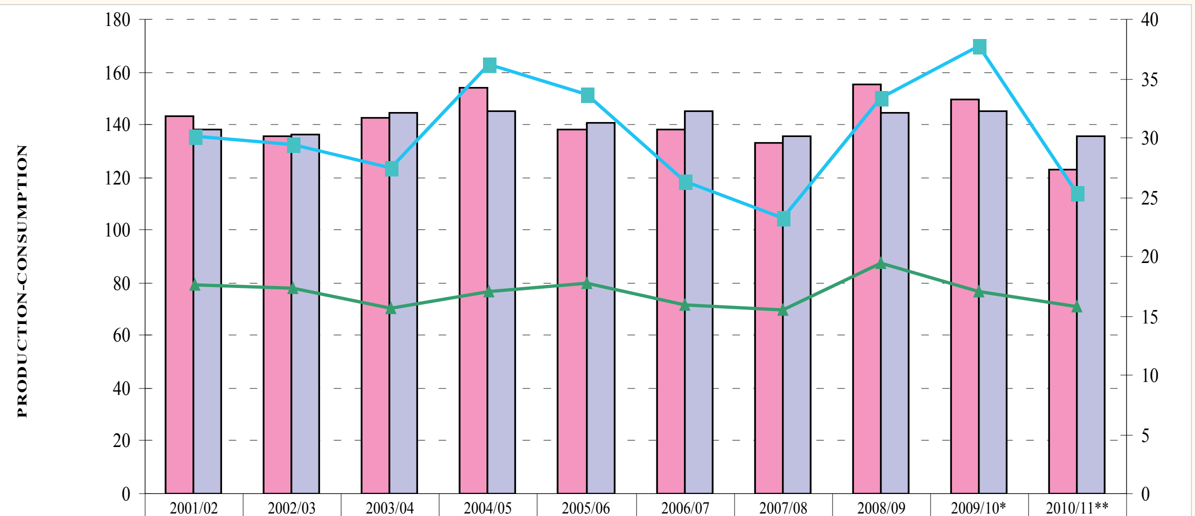
Chart 37 gives volumes of barley traded in Eskişehir, Konya and Polatlı Mercantile Exchanges in 2006- 2010 period.

Barley has been traded mostly in Konya and Eskişehir Mercantile Exchanges and highest trade volume was in 2009 during 2006- 2010 period.

2.2.3. Production, Consumption, Import, Export, Stocks and Prices in the World

Annual average of world barley production has been 143.2 million tons in recent past nine years and world barley production estimate for 2009/10 period is 149.6 million tons. However, it is foreseen that world barley production will reduce to 123.1 million tons representing approximately 18 % decrease compared to previous years. It is foreseen that world barley consumption will decrease by 6.7 %, world barley trade by 7.3 % and world barley ending stocks are forecast to decrease by 32.7 % compared to previous year (Graphic 26).

Graphic 26. World Barley Balance Table (Million Ton)



	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10*	2010/11**
Production	143.1	135.6	142.3	154.1	138.4	137.9	132.8	155.0	149.6	123.1
Consumption	138.2	136.2	144.4	145.4	140.9	145.2	135.9	144.8	145.2	135.5
Trade	17.6	17.3	15.7	17.1	17.7	15.9	15.5	19.5	17.0	15.8
Ending Stocks	30.1	29.5	27.5	36.2	33.6	26.3	23.2	33.4	37.8	25.4

Source: IGC March/2011 Report (*) Estimate, (**) Forecast

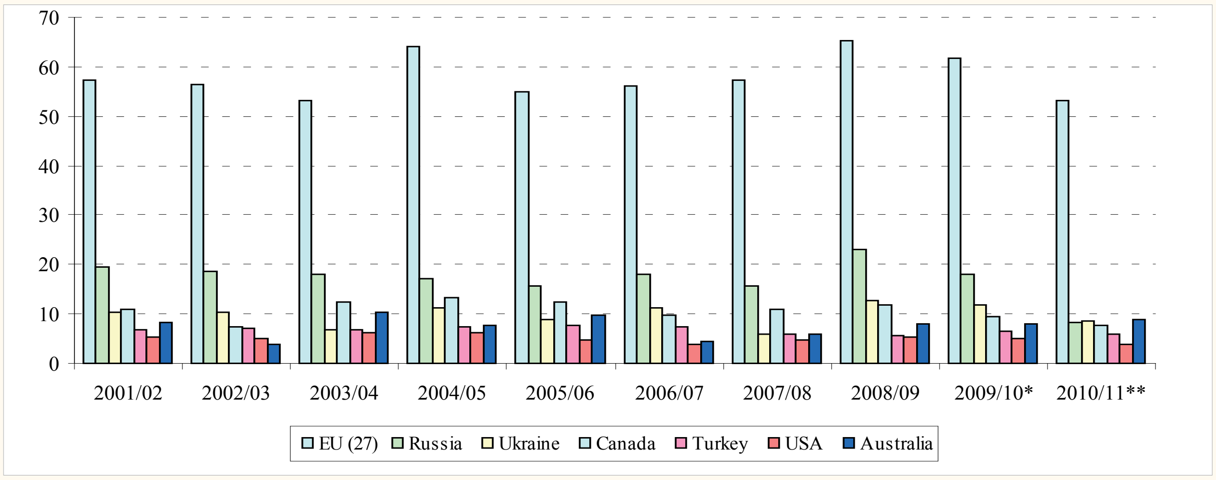
In 2010/11, EU (27), Russia and Ukraine are the three leading producers in world barley production, and they are followed by Canada, Turkey and USA (Chart 38).

Chart 38. World Barley Production and Major Producer Countries (Million Ton)

Countries	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10*	2010/11**
EU(27)	57.2	56.4	53.1	64	54.9	56.1	57.4	65.2	61.8	53.2
Russia	19.5	18.7	18.0	17.2	15.8	18.0	15.6	23.1	17.9	8.3
Ukraine	10.2	10.4	6.8	11.1	9.0	11.3	6.0	12.6	11.9	8.5
Canada	10.9	7.5	12.3	13.2	12.5	9.6	11.0	11.8	9.5	7.6
Turkey	6.9	7.2	6.9	7.4	7.6	7.5	6.0	5.6	6.5	5.9
USA	5.4	4.9	6.1	6.1	4.6	3.9	4.6	5.2	4.9	3.9
Australia	8.4	3.9	10.4	7.7	9.6	4.3	5.9	8.0	7.9	9.0
Other	24.7	26.6	28.8	27.4	24.4	27.2	26.4	23.4	29.0	26.7
World	**143.1**	**135.6**	**142.3**	**154.1**	**138.4**	**137.9**	**132.8**	**155.0**	**149.6**	**123.1**

Source: IGC March/2011 Report (*) Estimate, (**) Forecast

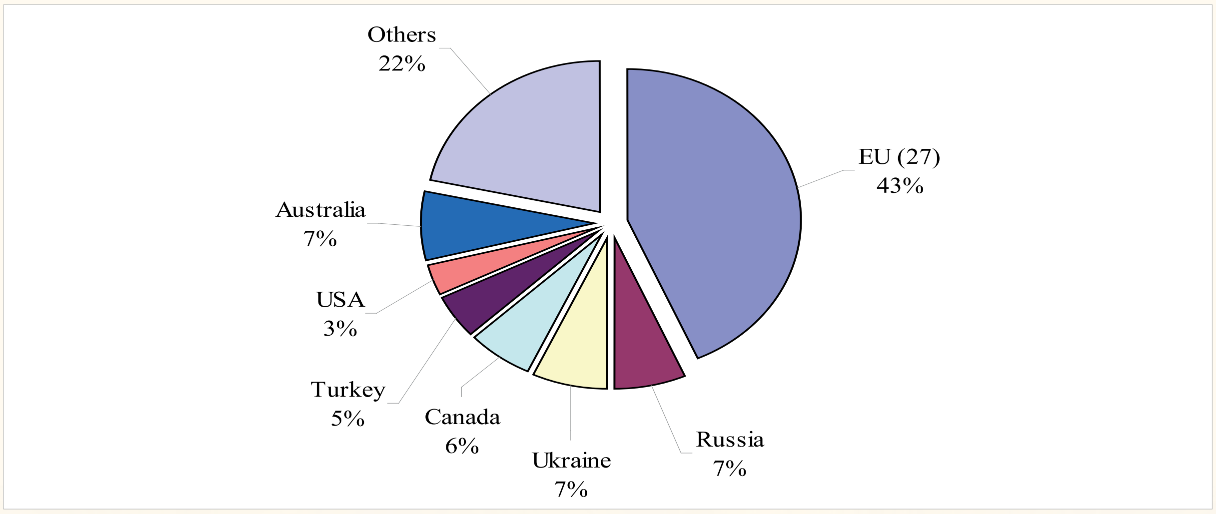
Graphic 27. World Barley Production and Major Producer Countries (Million Ton)



Source: IGC March/2011 Report (*) Estimate, (**) Forecast

Graphic 27 and 28 below show barley production quantities of the major producer countries in last 10 years and their shares in production.

Graphic 28. Shares of Major Countries in 2010/11 World Barley Production (%)



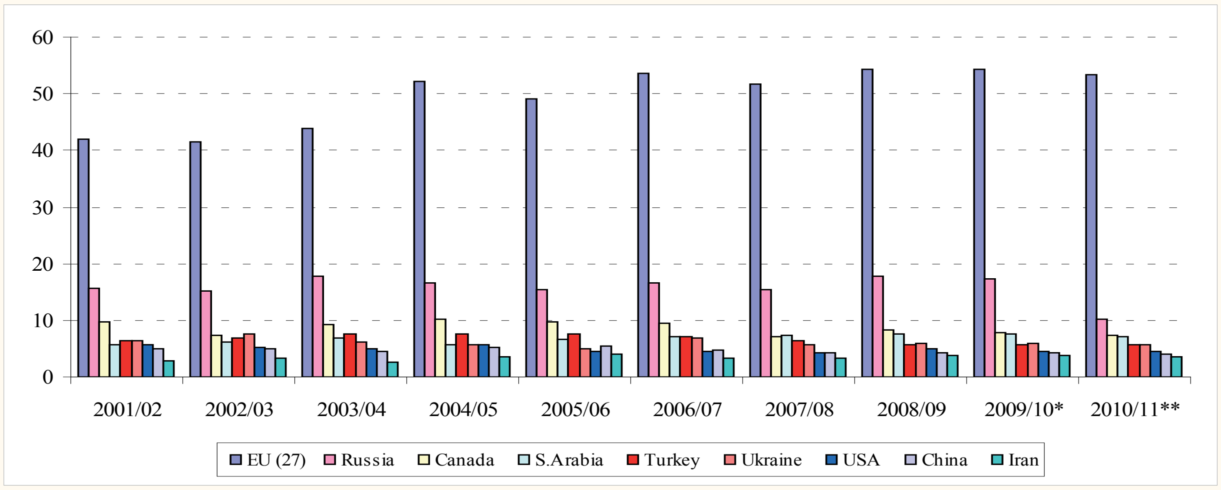
Source: IGC March/2011 Report. The percentages are calculated according to forecast figures for 2010/11 period.

Chart 39. Barley Yield in the World and in Major Producer Countries (Ton/Ha)										
Years	**2001/02**	**2002/03**	**2003/04**	**2004/05**	**2005/06**	**2006/07**	**2007/08**	**2008/09**	**2009/10***	**2010/11****
EU(27)	4.17	4.16	3.97	4.67	3.97	4.09	4.20	4.50	4.45	4.32
USA	3.13	2.96	3.17	3.74	3.49	3.29	3.22	3.42	3.93	3.93
China	3.76	3.64	3.51	4.10	4.00	3.90	3.79	3.71	3.70	3.85
Canada	2.61	2.24	2.77	3.26	3.21	2.91	2.75	3.36	3.26	3.19
Australia	2.26	1.25	2.32	1.67	2.15	1.02	1.34	1.59	1.78	2.21
Turkey	1.90	2.03	2.00	2.11	2.11	2.08	1.76	1.65	1.91	1.74
Russia	1.92	1.82	1.71	1.72	1.73	1.80	1.86	2.46	1.88	1.28
Kazakhstan	1.29	1.26	1.17	0.88	0.94	1.06	1.47	1.12	1.30	0.81
World	**2.54**	**2.43**	**2.38**	**2.64**	**2.51**	**2.38**	**2.37**	**2.80**	**2.70**	**2.51**
Source: IGC March/2011 Report (*) Estimate, (**) Forecast										

World barley yield is estimated to be 2.7 ton/ha in 2009/10 period and it is foreseen to experience 18 % decrease in 2010/11 period (Chart 39).

Chart 40. Barley Consumption in Major Consumer Countries and Rest of the World (Million Ton)										
Countries	**2001/02**	**2002/03**	**2003/04**	**2004/05**	**2005/06**	**2006/07**	**2007/08**	**2008/09**	**2009/10***	**2010/11****
EU(27)	41.9	41.5	43.9	52.1	49.1	53.6	51.8	54.3	54.3	53.3
Russia	15.7	15.2	17.7	16.6	15.5	16.5	15.5	17.8	17.4	10.1
Canada	9.7	7.4	9.3	10.1	9.7	9.5	7.2	8.2	7.8	7.3
Saudi Arabia	5.8	6.1	6.9	5.6	6.7	7.1	7.3	7.6	7.5	7.2
Turkey	6.4	6.9	7.5	7.5	7.5	7.2	6.3	5.8	5.7	5.7
Ukraine	6.4	7.5	6.2	5.6	4.9	6.8	5.6	5.9	6.0	5.7
USA	5.7	5.2	5.0	5.7	4.5	4.5	4.3	5.0	4.5	4.5
China	5.0	4.9	4.5	5.3	5.5	4.7	4.3	4.2	4.2	4.1
Iran	2.8	3.3	2.7	3.5	4.0	3.4	3.3	3.9	3.7	3.6
Other	38.9	38.2	40.7	33.7	33.6	31.8	30.3	32.1	34.3	34.2
World	**138.2**	**136.2**	**144.4**	**145.4**	**140.9**	**145.2**	**135.9**	**144.8**	**145.2**	**135.5**
Source: IGC March/2011 Report (*) Estimate, (**) Forecast Note: European Countries were considered EU(15) until 2003/04, EU(25) until 2005/06 and EU(27) after 2006/07 period.										

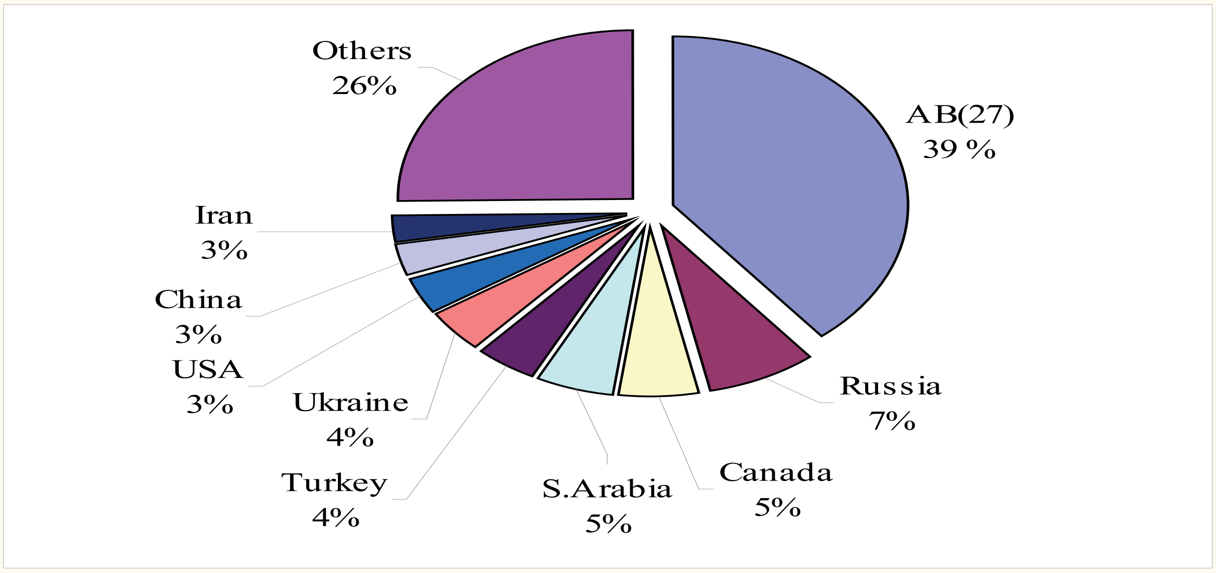
Graphic 29. Barley Consumption in Major Consumer Countries (Million Ton)



Source: IGC March/2011 Report (*) Estimate, (**) Forecast

World average barley consumption has been 142 million tons in nine years and it is expected to be 145.2 million tons in 2009/10 period. In MY 2010/11, it is expected to be 135.5 million tons representing 6.8 % decrease. EU(27) is listed in the top place in 2010/11 period with 53.3 million tons and followed by Russia with 10.1 million tons in second place and Canada with 7.3 million tons in third place.

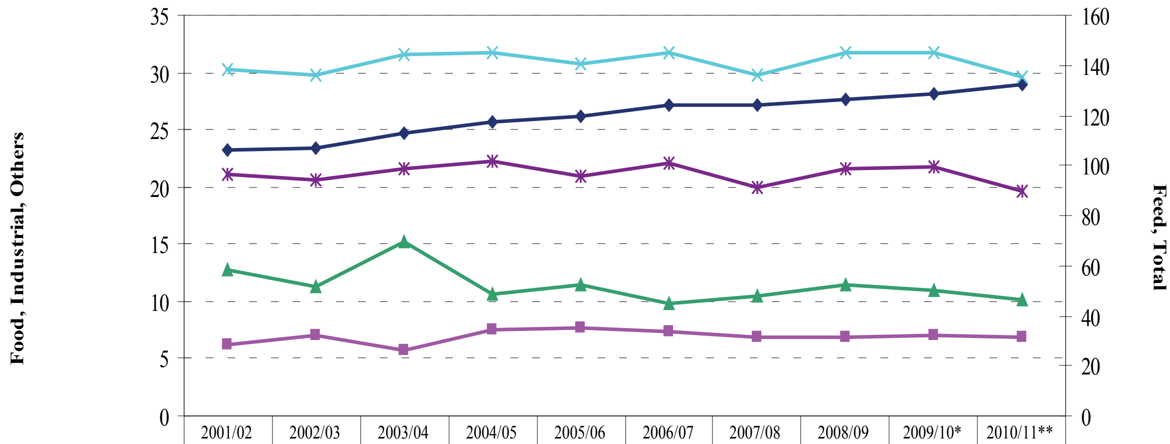
Graphic 30. Shares of Major Countries in 2010/11 World Barley Consumption (%)



Source: IGC March/2011 Report. The percentages are calculated according to forecast figures for 2010/11 period.

Among major barley consuming countries, it is foreseen that EU (27) barley consumption will decrease by 1.9 %, by 42 % in Russia, by 6.6 % in Canada, by 0.2 % in Turkey and by 4 % in Saudi Arabia compared to the figures of last year (Graphic 29, 30).

Graphic 31. World Barley Consumption According to Utilization Areas (Million Ton)



	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10*	2010/11**
Food	6.2	7.1	5.8	7.5	7.7	7.3	6.8	6.8	7.0	6.8
Industrial	23.2	23.4	24.7	25.7	26.1	27.2	27.2	27.6	28.2	28.9
Others	12.8	11.3	15.2	10.7	11.4	9.8	10.4	11.4	10.9	10.2
Feed	96.1	94.4	98.6	101.5	95.7	101.0	91.5	99.0	99.1	89.6
Total Consumption	138.2	136.2	144.4	145.4	140.9	145.2	135.9	144.8	145.2	135.5

Source: IGC March/2011 Report (*) Estimate, (**) Forecast

Global barley consumption as animal feed is foreseen to decrease 9.5 million tons in 2010/11 compared to previous year and it will be 89.6 million tons. Barley consumption as animal feed constitutes 66.1 % of overall barley consumption (Graphic 31).

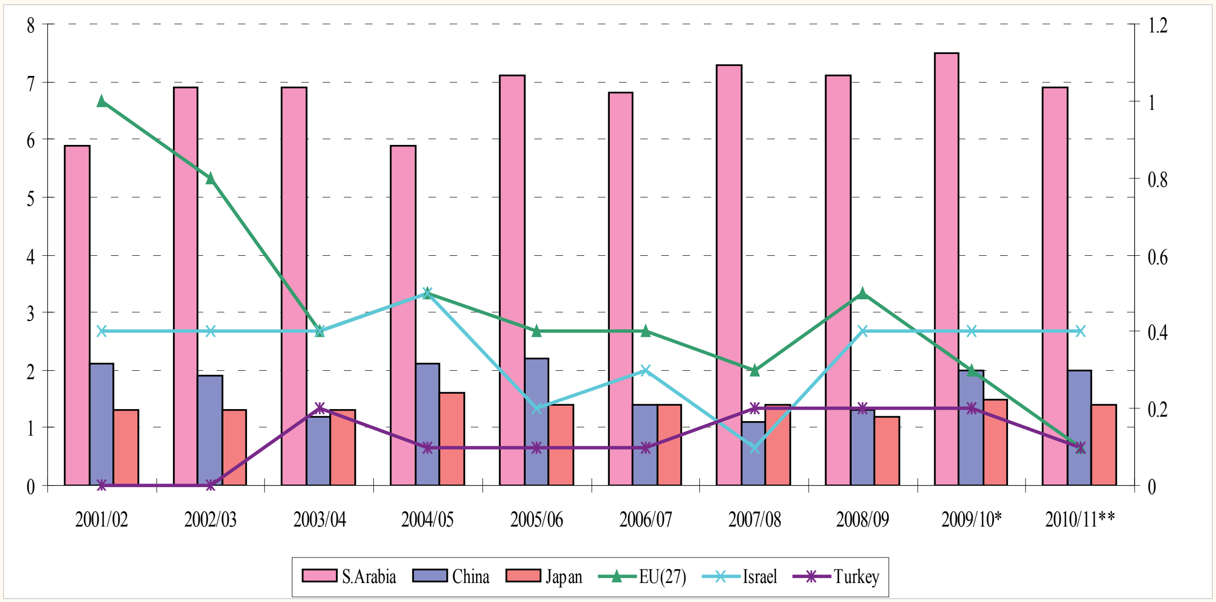
Chart 41. World Barley Import and Major Importer Countries (Million Ton)

Countries	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10*	2010/11**
S. Arabia	5.9	6.9	6.9	5.9	7.1	6.8	7.3	7.1	7.5	6.9
China	2.1	1.9	1.2	2.1	2.2	1.4	1.1	1.3	2.0	2.0
Japan	1.3	1.3	1.3	1.6	1.4	1.4	1.4	1.2	1.5	1.4
EU(27)	1.0	0.8	0.4	0.5	0.4	0.4	0.3	0.5	0.3	0.1
Israel	0.4	0.4	0.4	0.5	0.2	0.3	0.1	0.4	0.4	0.4
Turkey	0.0	0.0	0.2	0.1	0.1	0.1	0.2	0.2	0.2	0.1
Other	6.8	5.9	5.2	6.6	6.3	5.6	5.0	8.8	5.1	5.0
World	**17.6**	**17.3**	**15.7**	**17.1**	**17.7**	**15.9**	**15.5**	**19.5**	**17.0**	**15.8**

Source: IGC March/2011 Report (*) Estimate, (**) Forecast
Note: European Countries were considered EU(15) until 2003/04, EU(25) until 2005/06 and EU(27) after 2006/07 period.

EU(27), Australia, Russia, Canada, Saudi Arabia, China and Japan determine the world barley trade volume. World barley trade is foreseen reducing to 15.8 million tons in MY 2010/11 representing approximately 7 % decrease compared to previous year. World barley import volume was estimated to be 17 million tons in 2009/10 and 43.8 % of this import is estimated to be performed by Saudi Arabia. The quantity of barley exported in the world corresponds to 13 % of the world barley production in recent years (Chart 41).

Graphic 32. Major Barley Importer Countries (Million Ton)



Source: IGC March/2011 Report (*) Estimate, (**) Forecast
Note: Left axis of the chart belongs to Saudi Arabia, China and Japan while right axis belong to EU(27) and Israel.
Note: European Countries were considered EU(15) until 2003/04, EU(25) until 2005/06 and EU(27) after 2006/07 period.

Among leading barley importer countries, Saudi Arabia is foreseen to reduce its import volume in 2010/11 period by 8 %, China by 1.4 %, Japan by 11.8 %, EU(27) by 61.5 %, and Israel by 17.8 % compared to 2009/10 period (Graphic 32).

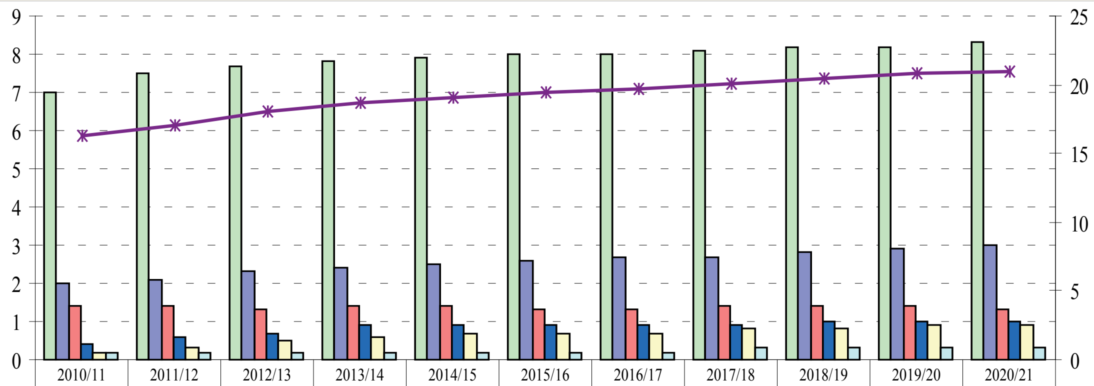
Chart 42. World Malting Barley Import and Major Importing Countries (Thousand Ton)

Countries	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2008/09	2009/10*	2010/11**
Brazil	908	800	863	754	840	858	943	1,107	982	1170	1,200
S. Saharan African Countries	365	423	473	504	565	692	708	657	854	854	809
Japan	831	758	691	671	677	633	655	665	692	685	650
USA	160	179	230	218	229	241	353	444	425	415	400
Mexico	153	141	171	219	210	253	278	396	453	395	350
Thailand	182	208	219	269	286	254	310	337	256	235	235
Russia	734	822	800	764	683	368	201	197	102	62	200
S. Korea	90	131	134	149	204	157	173	191	215	180	195
Philippines	157	170	222	237	190	149	142	162	152	165	165
Other	1,938	1,836	1,817	2,156	1,896	1,995	2,019	2,057	1,718	1,790	1,741
World	**5,518**	**5,469**	**5,620**	**5,940**	**5,781**	**5,600**	**5,782**	**6,214**	**5,849**	**5,950**	**5,945**

Source: IGC March/2011 Report. (*) Estimate, (**) Forecast

World malting barley import is forecast to decrease by 0.8 % compared to 2009/10; however, Russia is foreseen to increase its malting barley import by 225 % in spite of decreases in leading importer countries (Chart 42).

Graphic 33. Barley Import Projection



	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21
S.Arabia	7.0	7.5	7.7	7.8	7.9	8.0	8.0	8.1	8.2	8.2	8.3
China	2.0	2.1	2.3	2.4	2.5	2.6	2.7	2.7	2.8	2.9	3.0
Japan	1.4	1.4	1.3	1.4	1.4	1.3	1.3	1.4	1.4	1.4	1.3
Iran	0.4	0.6	0.7	0.9	0.9	0.9	0.9	0.9	1.0	1.0	1.0
Morocco	0.2	0.3	0.5	0.6	0.7	0.7	0.7	0.8	0.8	0.9	0.9
EU (27)	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3
World	16.3	17.0	18.0	18.7	19.1	19.4	19.7	20.1	20.4	20.8	21.0

Source: USDA 2020 Projection, February 2011.

United States Department of Agriculture (USDA) 2020 Projection published on February 2011 forecasts that the import volume of barley for feed by Northern Africa and Middle East countries will increase in following ten years time and the trade in the region will constitute 65 % of world barley trade (Graphic 33).

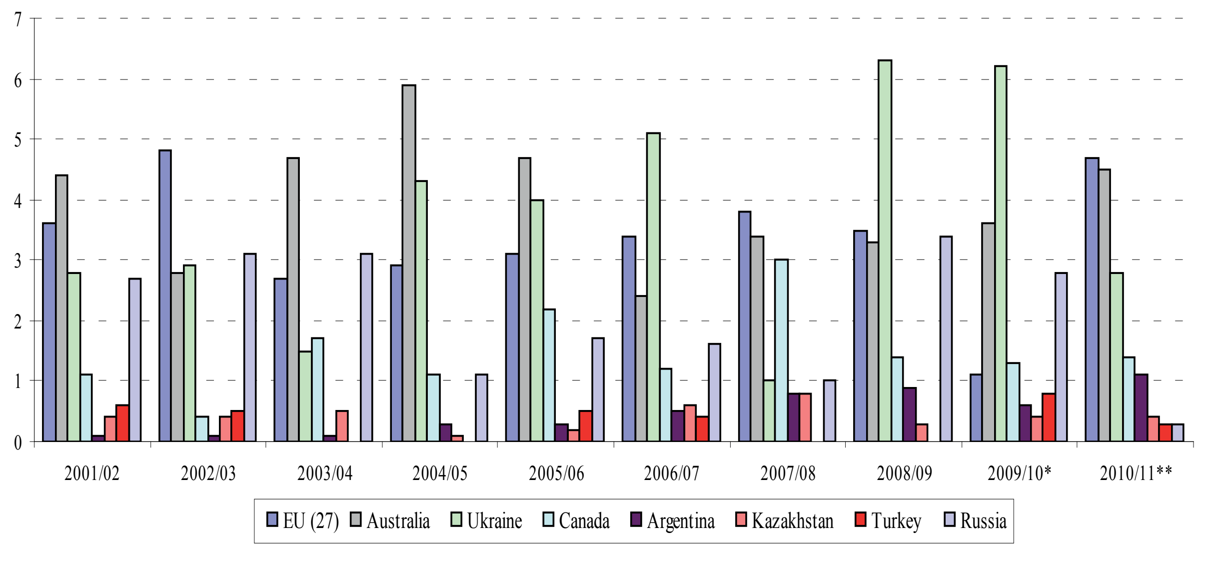
Chart 43. World Barley Export and Major Exporter Countries (Million Ton)

Countries	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10*	2010/11**
EU(27)	3.6	4.8	2.7	2.9	3.1	3.4	3.8	3.5	1.1	4.7
Australia	4.4	2.8	4.7	5.9	4.7	2.4	3.4	3.3	3.6	4.5
Ukraine	2.8	2.9	1.5	4.3	4.0	5.1	1.0	6.3	6.2	2.8
Canada	1.1	0.4	1.7	1.1	2.2	1.2	3.0	1.4	1.3	1.4
Argentina	0.1	0.1	0.1	0.3	0.3	0.5	0.8	0.9	0.6	1.1
Kazakhstan	0.4	0.4	0.5	0.1	0.2	0.6	0.8	0.3	0.4	0.4
Turkey	0.6	0.5	-	-	0.5	0.4	0.0	0.0	0.8	0.3
Russia	2.7	3.1	3.1	1.1	1.7	1.6	1.0	3.4	2.8	0.3
World	**17.6**	**17.3**	**15.7**	**17.1**	**17.7**	**15.9**	**15.5**	**19.5**	**17.0**	**15.8**

Source: IGC March/2011 Report (*) Estimate, (**) Forecast
Note: European Countries were considered EU(15) until 2003/04, EU(25) until 2005/06 and EU(27) after 2006/07 period.

In next 10 years time, Saudi Arabia will be number one barley importer country with its 40 % share in total world barley import volume. An important increase is forecast in international malting barley market due to demand increase for beer in developing countries. The beer demand in China is foreseen to increase continually based on the income and population growth. Australia and Canada is foreseen to be leading malting barley suppliers of China (Chart 43).

Graphic 34. Major Barley Exporter Countries (Million Ton)



Source: IGC March/2011 Report (*) Estimate, (**) Forecast
Note: European Countries were considered EU(15) until 2003/04, EU(25) until 2005/06 and EU(27) after 2006/07 period.

EU (27), Australia, Ukraine and Canada realized 73 % of world barley export in MY 2001/02 and this figures is foreseen to be 85 % in MY 2010/11 (Graphic 34).

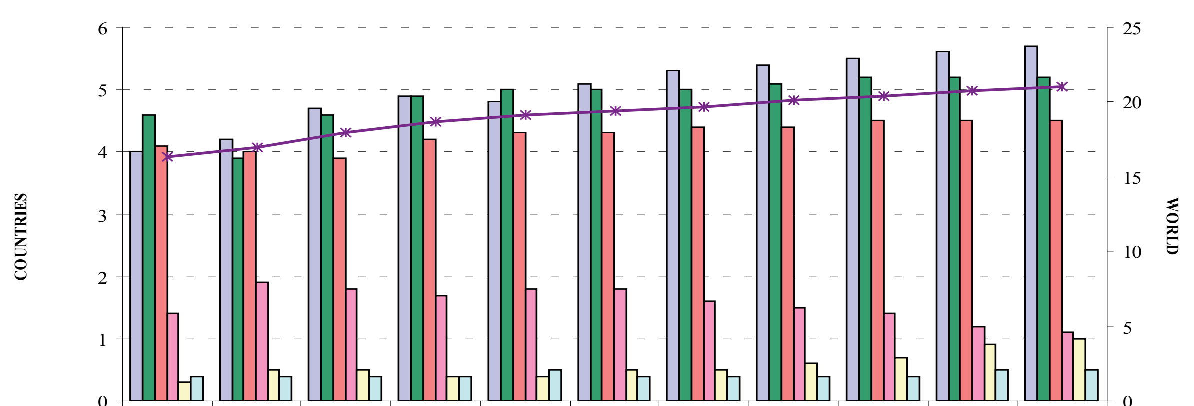
Chart 44. World Malting Barley Export and Major Exporting Countries (Thousand Ton)

Countries	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10*	2010/11**
EU (27)	3,036	2,976	3,227	3,439	3,116	2,735	2,494	2,399	2,550	2,550
Canada	656	617	627	688	715	793	919	868	770	775
Australia	605	638	658	656	627	800	749	681	705	750
Argentina	268	337	275	292	257	341	594	429	520	550
USA	118	94	144	218	332	369	590	607	495	500
Other	785	958	1,009	488	553	744	867	864	910	820
World	**5,469**	**5,620**	**5,940**	**5,781**	**5,600**	**5,782**	**6,214**	**5,849**	**5,950**	**5,450**

Source: IGC March/2011 Report (*) Estimate, (**) Forecast

EU(27) that is leading malting barley exporter is foreseen to maintain its barley export in 2010/11 at 2.5 million tons without any significant change compared to previous year. Australia and Argentina are foreseen to increase their malting barley export by 6.4 % and 5.8 % respectively (Chart 44).

Graphic 35. Barley Export Projection



	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21
Ukraine	4.0	4.2	4.7	4.9	4.8	5.1	5.3	5.4	5.5	5.6	5.7
EU (27)	4.6	3.9	4.6	4.9	5.0	5.0	5.0	5.1	5.2	5.2	5.2
Australia	4.1	4.0	3.9	4.2	4.3	4.3	4.4	4.4	4.5	4.5	4.5
Canada	1.4	1.9	1.8	1.7	1.8	1.8	1.6	1.5	1.4	1.2	1.1
Russia	0.3	0.5	0.5	0.4	0.4	0.5	0.5	0.6	0.7	0.9	1.0
Turkey	0.4	0.4	0.4	0.4	0.5	0.4	0.4	0.4	0.4	0.5	0.5
World	16.3	17.0	18.0	18.7	19.1	19.4	19.7	20.1	20.4	20.8	21.0

Source: USDA 2020 Projection, February 2011.

According to USDA 2020 Projection published on February 2011, EU(27) and Ukraine being two leading barley exporter countries in 2010 are foreseen to maintain their position in next ten years period. EU(27), Australia and Ukraine are expected to dominate 73 % of world barley trade in next coming years. On the other hand, EU(27) is forecasted to maintain its barley exports with slight increase in following ten years time. Australia is foreseen to increase its barley export slightly and to maintain its third place in world barley export league in next ten years period.

Chart 45 above shows the barley prices extended to the years. An increase was observed in barley prices in 2007 and 2008 due to the drought experienced in respective years. The prices returned back to normal level in year 2009. All prices have shown increasing tendency in 2010.

Chart 45. World Barley Prices (FOB $/Ton)

Barley	Years									
	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
France Feed Barley	107	101	127	142	132	151	263	256	154	194
US PNW	112	119	132	122	117	155	257	268	194	230
Germany Feed Barley	110	102	127	144	134	151	264	261	156	199

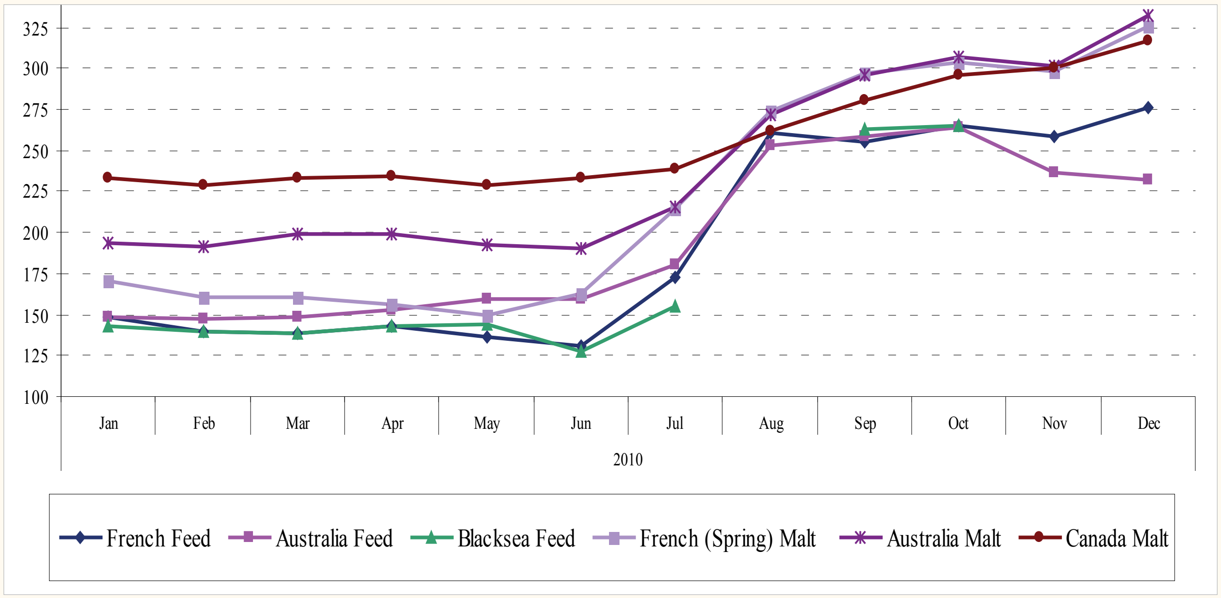
Source: IGC 2011

Chart 46. Barley Prices on Monthly Basis in 2010 (FOB $/Ton)													
BARLEY	MONTHS (2010)												
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Av.
France Feed Barley	149	140	138	143	136	131	173	261	255	265	259	276	194
Australia Feed Barley	149	147	148	153	159	159	180	253	259	264	237	232	195
Black Sea Feed Barley	143	140	138	143	144	128	155	-	263	265	-	-	169
France Malting (Spring) Barley	171	161	161	156	150	163	214	274	297	304	298	326	223
Australia Malting Barley	194	191	199	199	192	190	216	272	296	307	302	332	241
Canada Malting Barley	233	229	233	234	229	233	239	262	281	296	300	317	257

Source: IGC 2011

Analysing monthly average price of barley in 2010, it is seen that all prices has remarkably started from June. In August- December 2010 period, average price of French Feed Barley was 263.2 USD/ton, average price of French (spring) malting barley was 299.8 USD/ton (Chart 46, Graphic 36).

Graphic 36. World Barley Prices on Monthly Basis in 2010 (FOB $/Ton)



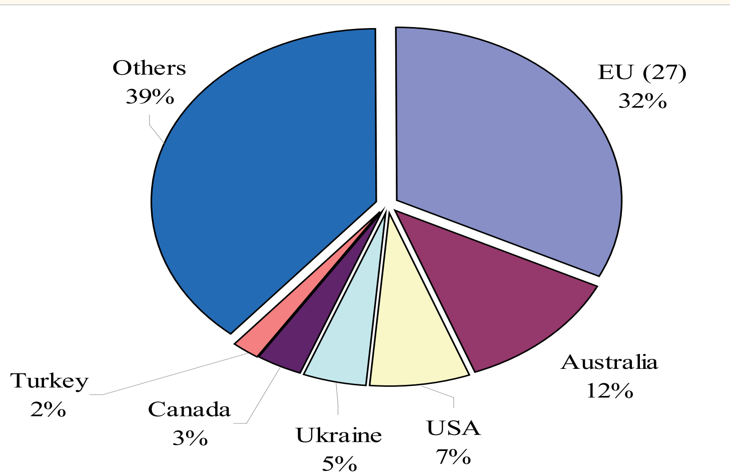
Source: IGC 2011

Chart 47. Barley Year Ending Stocks in Some Countries (Million Ton)										
Countries	**2001/02**	**2002/03**	**2003/04**	**2004/05**	**2005/06**	**2006/07**	**2007/08**	**2008/09**	**2009/10***	**2010/11****
EU(27)	9.88	9.34	6.28	10.81	8.91	6.12	5.81	11.27	15.38	8.18
Australia	1.82	1.03	1.85	1.98	2.85	1.37	0.78	1.85	2.38	3.03
USA	2.01	1.45	2.62	2.76	2.35	1.54	1.50	1.90	2.49	1.85
Ukraine	1.28	1.29	0.55	1.86	2.10	1.57	1.03	1.40	1.08	1.15
Canada	2.02	1.45	2.13	3.44	3.33	1.50	1.57	2.83	2.58	0.85
Turkey	1.29	1.11	0.69	0.67	0.35	0.30	0.25	0.21	0.44	0.50
Other	11.82	13.84	13.37	14.64	13.72	13.87	12.30	13.98	13.42	9.85
World	**30.13**	**29.50**	**27.49**	**36.15**	**33.60**	**26.27**	**23.24**	**33.44**	**37.77**	**25.41**

Source: IGC March/2011 Report (*) Estimate, (**) Forecast

Chart 47 above gives barley stock amounts in leading countries and total stock situation in the world. Thus, world ending barley stock is forecast to be 25.4 million tons in 2010/11 representing 12.4 % decrease compared to 2009/10 period. In 2010/11, highest share in world barley ending stock belongs to EU(27) countries (32 %). EU(27) is foreseen to have 8.18 million tons ending barley stock in 2010/11 period (Graphic 37).

Graphic 37. Shares of Countries in 2010/11 World Barley Ending Stock (%)



Source: IGC March/2011 Report. The percentages are calculated according to forecast figures for 2010/11 period.

2.3. Rye

2.3.1. Vegetal characteristics

Rye is a plant that was included in the culture later than wheat. Rye kernel is thinner, longer than wheat and huskless. Rye is alike with the barley and wheat in terms of its vegetal characteristics. Central Asia and Anatolia are thought to be its homeland. Rye is generally sowed on March and harvested on June - August in country (Elci et al, 1994). Rye is generally used in feed industry in our country. However, its use as food has been increasing in recent years as a result of changing dieting habits.

2.3.2. Production, Consumption, Import, Export, Stocks and Prices of Rye in Turkey

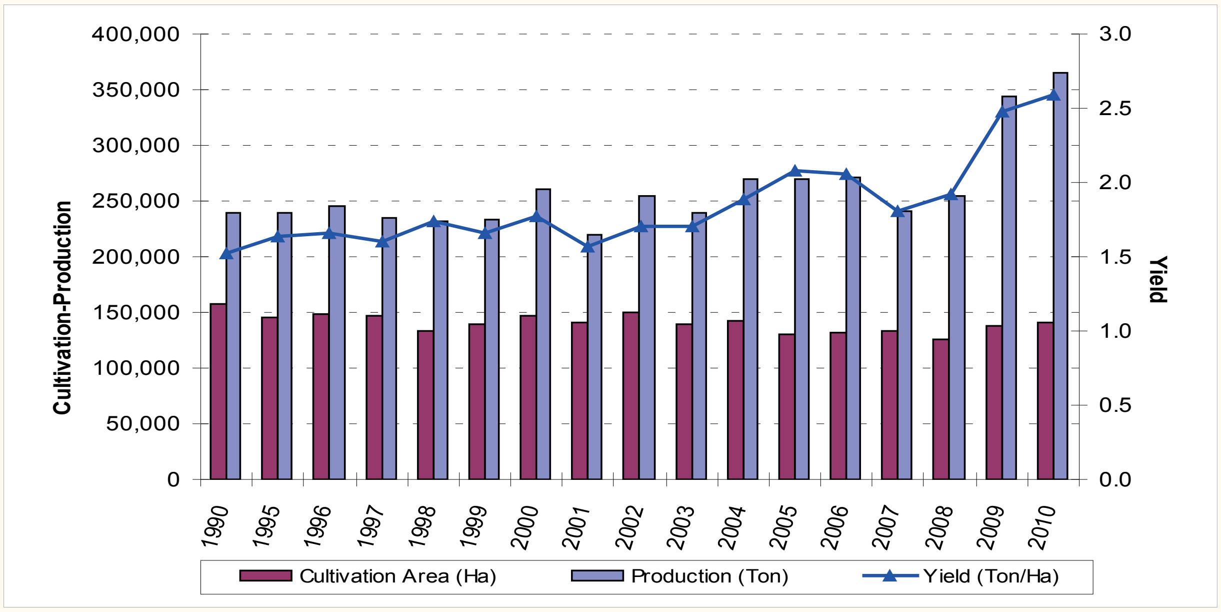
Even though rye cultivation areas have been reduced in Turkey, the quantity produced has increased due to increased yield. As a matter of fact, the cultivation area which was 147 thousand hectare area in 2000 reduced to 141 thousand hectare area in 2010. Overall production was 260 thousand tons in 2000 and it has been recorded as 366 thousand ton in CY 2010. Yield has been increasing regularly except the drought suffered in 2007 and 2008 (Chart 48, Graphic 38)

Chart 48. Rye Production, Cultivation Area and Yield in Turkey

Years	Cultivation Area (Ha)	Production (Ton)	Yield (Ton/Ha)
2000	147,000	260,000	1.77
2001	140,500	220,000	1.57
2002	150,000	255,000	1.70
2003	140,000	240,000	1.71
2004	143,000	270,000	1.89
2005	130,000	270,000	2.08
2006	131,245	271,000	2.06
2007	132,777	240,500	1.81
2008	125,962	254,000	1.92
2009	138,778	343,330	2.47
2010	141,000	365,560	2.59

Source: TSA 2011

Graphic 38. Production, Cultivation Area and Yield of Rye in Turkey



Source: TSA 2011

Although rye is similar to wheat in terms of its sowing- harvest period and cultivation in cool climate, it is harvested after the wheat in our country.

Chart 49. Rye Production in Turkey according to TSA, IGC and USDA Statistics (Ton)

Years	TSA	IGC	USDA
2000	260,000	260,000	260,000
2001	220,000	220,000	220,000
2002	255,000	255,000	255,000
2003	240,000	240,000	240,000
2004	270,000	270,000	270,000
2005	270,000	250,000	270,000
2006	271,000	271,000	271,000
2007	240,500	265,000	265,000
2008	254,000	250,000	250,000
2009	343,330	270,000	270,000
2010	365,560	270,000	270,000

Source: TSA 2011, USDA 2011 and IGC 2011

Chart 49 above represents data obtained from IGC, USDA and TSA in regard to rye production in Turkey. As it can be derived from the Chart, rye production has been 270 thousand tons in 2010 according to IGC and USDA, 365,560 tons according to TSA.

Chart 50 below gives the data concerning rye production in our country. However, respective table does not include information about industrial use of rye as such segment is excluded from the statistics works. The amount of domestic use equals to the consumption as food, consumption as seed, consumption as feed and losses. Domestic consumption of rye made a peak in 2004/05 period and the consumption volume increased to 328 thousand tons for the respective year (Chart 50).

Chart 50. Consumption, Stock Change and Sufficiency Level of Rye in Turkey								
Market Year*	Domestic Use (Ton)	Consump-tion As Food (Ton)	Usage as Seed (Ton)	Usage as Feed (Ton)	Losses (Ton)	Stock Change (Ton)	Consump-tion Per Capita (Kg)	Sufficiency Rate (%)
2000/01	256,653	223,663	25,290	...	7,700	1,975	0.61	99.99
2001/02	230,158	196,253	27,000	...	6,905	4,760	...	94.34
2002/03	252,326	219,556	25,200	...	7,570	15,247	...	99.75
2003/04	302,303	267,494	25,740	...	9,069	-22,413	4.17	78.36
2004/05	327,710	294,479	23,400	...	9,831	1,599	3.83	81.32
2005/06	...	...	...	...	...	...	3.19	...
2006/07	...	...	...	...	...	...	2.89	...
2007/08	252,415	43,213	23,900	178,180	7,122	-	3.34	94.06
2008/09	245,545	43,577	22,673	171,996	7,299	-	0.61	99.09
2009/10	290,554	18,201	24,980	237,207	10,166	48,177	-	116.63

Source: TSA 2011
(*) Market Year: Covers July- June period for 2000/01 – 2004/05 and 1 June- 31 May Period for 2005/06 – 2007/08 ¬- 2008/2009- 2009/2010 (see APPENDIX 1 for explanation)

The deficiency resulting from shortage of rye stocks in some years in our country is compensated via the imports from other countries. As a matter of fact, Turkey imported 42 thousands ton rye in 2003 where rye stocks reached lowest and/or deficiency appeared and 67 thousand ton in 2005.

Chart 51 below shows quantity and value of rye imports of our country extended to years. Even though there are changes among the years, it is clearly observed from the table that Turkey does not have large of rye imports from abroad. As a matter of fact, rye import volume was 2 thousand tons in 2009 and there was no import in 2010.

Chart 51. Turkey's Rye Import Extended to Years			
Years	Quantity (Ton)	Value (Thousand $)	Average Import Price ($/Ton)
2000	42,867	3,262	76
2001	0	0	0
2002	18,279	1,727	94
2003	42,475	4,044	95
2004	15,960	3,070	192
2005	67,123	7,944	118
2006	0	0	0
2007	18,009	3,859	214
2008	15,561	5,061	325
2009	2,393	270	113
2010	0	0	0

Source: TSA 2011

Graphic 39. Production Amount and Import Amount of Rye in Turkey

Source: TSA 2011

According to TSA's statistics on Turkey's rye export, Turkey exported only 8 ton rye in 2004 during 2000-2010 period and the export value was 2 thousand $ export value with export unit price of 188 $/ton. As seen in Graphic 39, there was no export of rye in 2010. Our Coutry rye production is adequete for domestic use.

PPI (Producer Price Index) increase rate was 9.2 % and rye procurement price of TGB was 430 TL/tones in 2010.

Chart 52. Rye Procurement Prices of TGB (TL/Ton)

Years	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Rye	71	123	168	225	250	234	250	300	400	405	430
Producer Price Index Increase Rate (%)	59.16	57.71	49.30	33.69	16.62	5.59	7.66	7.14	16.53	-2.46	9.20

Source: © TGB and Official Journals
Note: Shows annual change rates (%) based on Producer Price Index (PPI) on May. Prices for 2008 are consignment procurement price and intervention procurement price was not announced. Intervention purchase prices were gradually declared in 2009 and 2010 and the prices given above are average prices.

Chart 53. Rye Price Rates in Commodity Exchanges in 2006- 2010 Period (TL/Ton)

Years	Eskişehir						Konya						Polatlı					
	Jul	Aug	Sep	Oct	Nov	Dec	Jul	Aug	Sep	Oct	Nov	Dec	Jul	Aug	Sep	Oct	Nov	Dec
2006	260	287	318	318	321	316	243	260	270	279	265	302	247	277	306	309	330	305
2007	409	413	421	461	476	475	391	375	384	440	-	-	404	389	402	449	478	485
2008	430	427	414	400	380	350	429	432	391	404	339	412	429	425	406	423	399	421
2009	316	296	336	370	350	336	304	295	315	333	338	-	285	303	326	338	352	363
2010	379	404	427	433	483	-	371	405	424	456	470	482	368	401	503	475	-	-

Source: Eskişehir, Konya and Polatlı Commodity Exchanges

Chart 53 shows average monthly rye prices of last five years traded in mercantile exchanges being periods where the rye traded most in respective mercantile exchanges. Generally, the prices are low during harvest period; however, the prices tend to increase especially towards the end of the year.

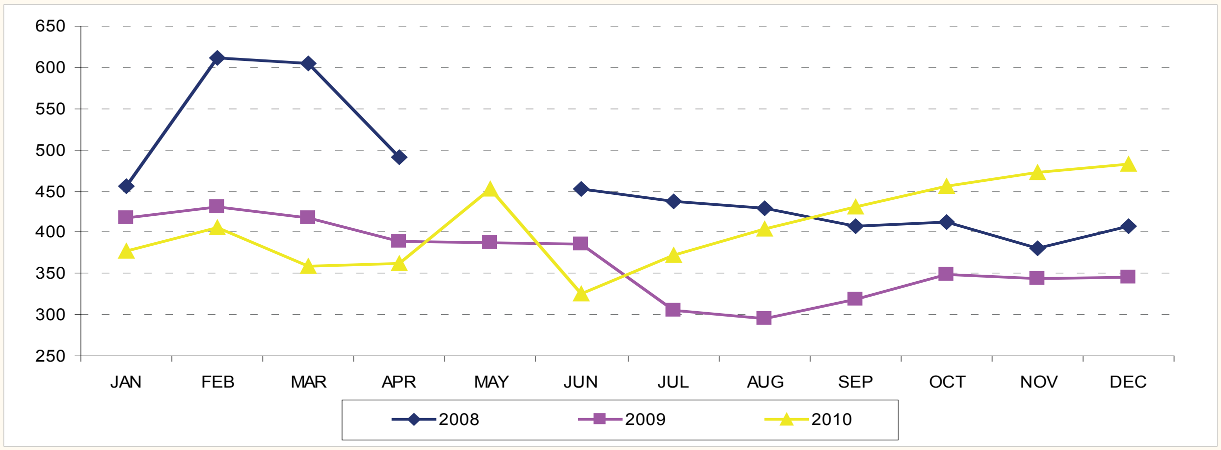
Chart 54. Average Rye Price Rates in Commodity Exchange on Monthly Basis in 2008- 2010 Period (TL/Ton)

Years	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2008	456	612	604	491	-	452	437	429	407	413	380	407
2009	417	430	418	389	388	386	306	296	318	348	344	346
2010	378	405	358	362	452	325	372	404	430	456	472	482

Source: Eskişehir, Konya and Polatlı Mercantile Exchanges

Chart 54 above provides prices in commodity exchanges in recent three years extended to the months. The prices 2008 were higher than the prices of 2009 due to drought caused by global warming and global financial crisis. After starting of harvesting period in 2010, the prices were increased due to negative fluctations in the world market and it was higher than 2009. (Chart 54, Graphic 40).

Graphic 40. Average Monthly Rye Prices at Mercantile Exchanges in Recent Three Years (TL/Ton)



Source: Eskişehir, Konya and Polatlı Mercantile Exchanges

Furthermore, the Chart 55 also provides monthly rye market transaction volumes in recent three years. The rye was traded more in mercantile exchanges in 2009 and 2010 compared to 2008.

Chart 55. Rye Transaction Volumes in Commodity Exchange in 2008-2010 on Monthly Basis (Ton)

Years	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2008	25	8	32	12	0	49	692	163	83	62	221	41
2009	16	18	40	51	20	18	2,570	704	277	303	186	37
2010	16	118	271	30	148	30	1,114	230	107	139	12	78

Source: Eskişehir, Konya and Polatlı Mercantile Exchanges

2.3.3. Production, Consumption, Import, Export, Stocks and Prices of Rye in the World

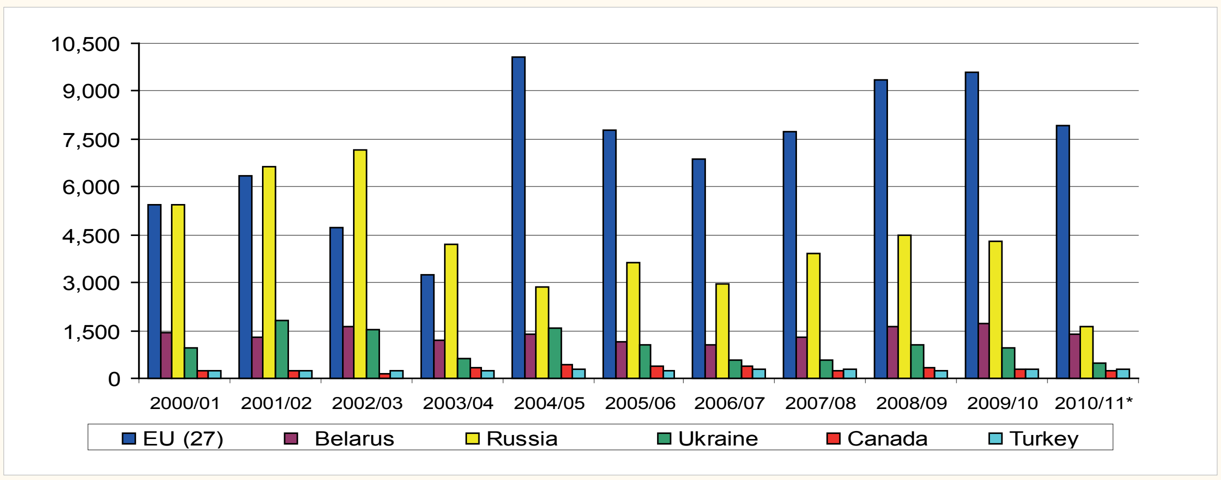
Decreasing over the years, world rye production is estimated to be 13.11 million tons decreasing by 34.6 % in MY 2010/11 compared to MY 2000/01 period. Half of the world rye production is carried out now in EU(27) countries starting from MY 2004/05 period (Chart 56, Graphic 41).

Chart 56. World Rye Production and Major Producer Countries (Thousand Ton)

Countries	2000/01	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10*	2010/11**
EU(27)	5,439	6,341	4,717	3,264	10,050	7,801	6,873	7,726	9,364	9,608	7,929
Belarus	1,450	1,294	1,600	1,200	1,397	1,155	1,072	1,300	1,600	1,700	1,400
Russia	5,440	6,613	7,139	4,200	2,872	3,628	2,959	3,905	4,505	4,300	1,600
Ukraine	966	1,822	1,511	625	1,593	1,054	584	563	1,051	954	465
Canada	260	228	134	327	418	359	383	233	316	281	216
Turkey	260	220	255	240	270	250	271	265	250	270	270
Other	6,233	7,129	6,110	4,953	1,326	1,256	1,152	1,281	1,285	1,207	1,240
World	**20,048**	**23,647**	**21,466**	**14,809**	**17,926**	**15,503**	**13,294**	**15,273**	**18,371**	**18,320**	**13,120**

Source: IGC March/2011 Report (*) Estimate, (**) Forecast
Note: EU(27) data; represents EU(15) until 2003/04 period; EU(25) in 2004-/05- 2005/06 period and EU(27) in 2006/07-2010/11 period

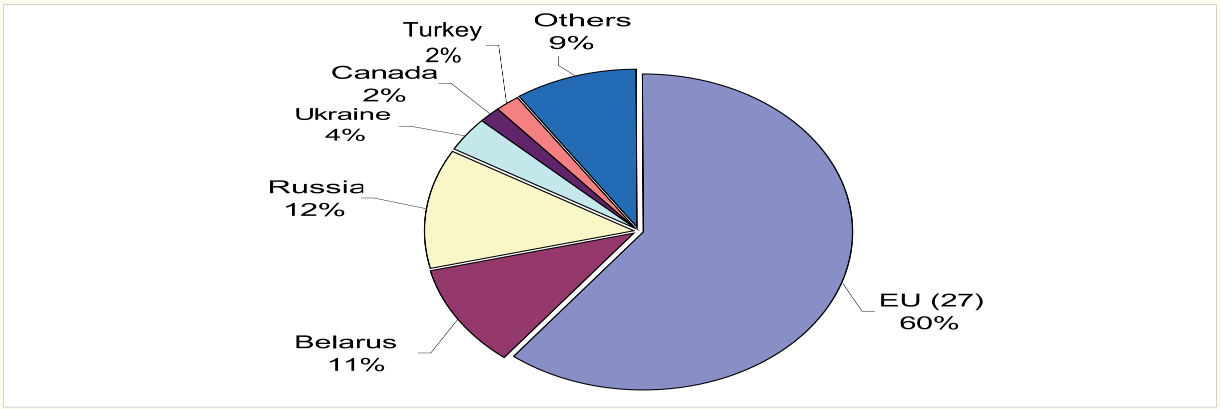
Graphic 41. Major Rye Producer Countries in the World (Thousand Ton)



Source: IGC March/2011 Report (*) Forecast
Note: EU(27) data; represents EU(15) until 2003/04 period; EU(25) in 2004-/05- 2005/06 period and EU(27) in 2006/07-2010/11 period

Graphic 42 shows breakdown of world rye production in 2010/11 period. As it can be seen from the Graphic, EU (27) leads in world rye production by 60 % share followed by Russia (12 %) and Belarus (11 %). The share of Turkey in world rye production is 2 %.

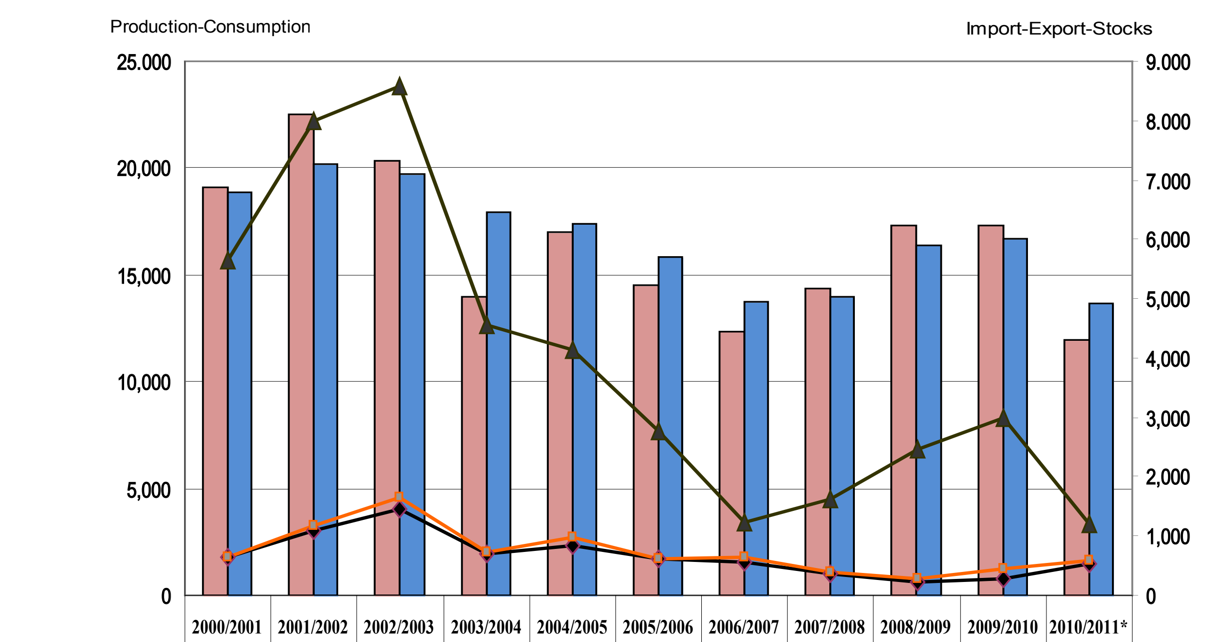
Graphic 42. Distribution of World Rye Production in 2010/11 (%)



Source: IGC March/2011 Report .The percentages are calculated according to forecast figures for 2010/11 period.

Graphic 43 provides rye production, consumption, import, export and year ending stocks in the world extended to the years. Production, consumption and year ending stocks of rye has decreased in the world over the years. Indeed, world rye production was 19.0 million tons in 2000/01 period; however, it dropped to 11.9 million tons in 2010/11 period; likewise, its consumption decreased from 18.9 million tons to 13.7 tons during the same period. As the decrease in production is higher than decrease in consumption in our country, year ending stocks have reduced from 5.6 million tons to 1.2 million tons.

Graphic 43. World Rye Balance Graphic (Thousand Ton)



	2000/2001	2001/2002	2002/2003	2003/2004	2004/2005	2005/2006	2006/2007	2007/2008	2008/2009	2009/2010	2010/2011*
Production	19,062	22,529	20,366	13,976	17,007	14,493	12,380	14,392	17,326	17,323	11,943
Consumption	18,894	20,208	19,718	17,932	17,359	15,870	13,773	13,968	16,415	16,689	13,675
Import	633	1,088	1,465	712	825	608	572	367	217	275	536
Export	648	1,181	1,644	730	974	622	636	398	266	436	580
Ending Stocks	5,649	7,980	8,570	4,552	4,129	2,762	1,240	1,609	2,462	2,998	1,188

Source: USDA 2011 (*) Forecast

Shrinking by approximately 50 % in last 10 years period, world rye cultivation area is determined to be 5.8 million ha in 2010/11 period. EU(27) is ranked on top of the list with 45.9 % share in world rye cultivation areas followed by Russia with 24.3 % share. The share of Turkey in world rye cultivation areas is 2.3 % (Chart 57).

Chart 57. World Rye Cultivation Areas (Thousand Ha)

Countries	2000/01	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10*	2010/11**
EU(27)	1,244	1,483	1,882	878	2,789	2,511	2,436	2,646	2,755	2,775	2,638
Belarus	725	777	709	700	592	531	488	500	500	600	450
Russia	3,500	3,600	3,760	2,350	1,895	2,342	1,785	2,034	1,900	2,150	1,400
Ukraine	637	879	748	395	716	610	360	338	465	461	279
Canada	115	123	77	147	185	148	166	109	132	115	89
Turkey	147	141	147	147	143	170	130	170	130	130	130
Other	2,976	3,351	2,667	2,553	829	765	706	783	773	777	765
World	**9,344**	**10,354**	**9,990**	**7,170**	**7,149**	**7,077**	**6,071**	**6,580**	**6,655**	**7,008**	**5,751**

Source: IGC March/2011 Report (*) Estimate, (**) Forecast

The world average rye yield per hectare for 2010/11 period is 2.28 tons and Belarus leads the first in yield with 3.11 ton/ha rate. EU (27) (3.01 ton/ha) and Canada (2.43 ton/ha) follows Belarus respectively. Turkey's rye yield is below world average which is 2.08 ton/ha (Chart 58).

Chart 58. World Rye Yield (Ton/Ha)

Countries	2000/01	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10*	2010/11**
EU(27)	4.37	4.28	2.51	3.72	3.60	3.11	2.82	2.92	3.40	3.46	3.01
Belarus	2.00	1.67	2.26	1.71	2.36	2.18	2.20	2.60	3.20	2.83	3.11
Russia	1.55	1.84	1.90	1.79	1.52	1.55	1.66	1.92	2.37	2.00	1.14
Ukraine	1.52	2.07	2.02	1.58	2.22	1.73	1.62	1.67	2.26	2.07	1.67
Canada	2.26	1.85	1.74	2.22	2.26	2.43	2.31	2.14	2.39	2.44	2.43
Turkey	1.77	1.56	1.73	1.63	1.89	1.47	2.08	1.56	1.92	2.08	2.08
World	**2.15**	**2.28**	**2.15**	**2.07**	**2.51**	**2.19**	**2.19**	**2.32**	**2.76**	**2.61**	**2.28**

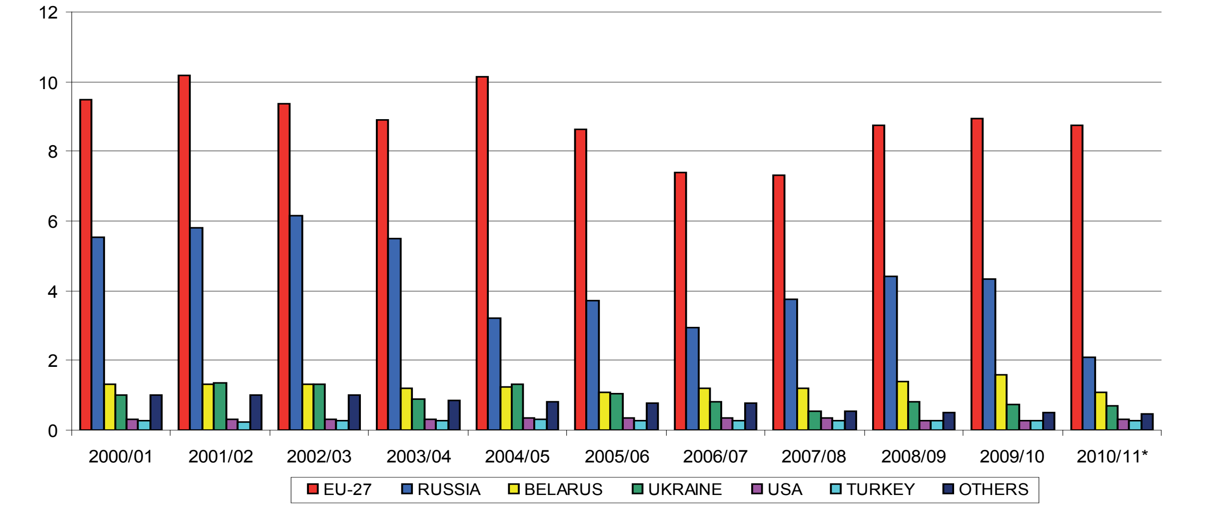
Source: IGC March/2011 Report (*) Estimate, (**) Forecast

Decreasing by 32.3 % in recent 10 years period, world rye consumption is foreseen to be 13.7 million tons in 2010/11 period. Due to severe decreases in production of Russia and European Union, use of rye as food and feed material is limited (IGC March/2011 Report). EU(27) is ranked on top of the list of world rye consumption with 64 % share followed by Russia with 16 % share and Belarus with 8 % share in consumption. The share of Turkey in world rye consumption is 2 % and remains at considerable low levels (Chart 59, Graphics 44 and 45).

Chart 59. Rye Consumption in Major Consumer Countries and in Rest of the World (Million Ton)											
Countries	**2000/01**	**2001/02**	**2002/03**	**2003/04**	**2004/05**	**2005/06**	**2006/07**	**2007/08**	**2008/09**	**2009/10**	**2010/11***
EU(27)	9.48	10.19	9.38	8.91	10.14	8.62	7.40	7.30	8.75	8.95	8.75
Russia	5.55	5.80	6.15	5.50	3.20	3.70	2.95	3.75	4.40	4.33	2.10
Belarus	1.30	1.30	1.30	1.20	1.25	1.10	1.20	1.20	1.40	1.60	1.10
Ukraine	1.01	1.35	1.30	0.90	1.30	1.05	0.80	0.55	0.80	0.75	0.70
USA	0.30	0.31	0.32	0.30	0.34	0.33	0.34	0.34	0.29	0.28	0.30
Turkey	0.26	0.24	0.27	0.28	0.30	0.28	0.29	0.28	0.28	0.27	0.28
Other	0.99	1.02	1.00	0.84	0.83	0.79	0.79	0.55	0.50	0.51	0.45
World	**18.89**	**20.21**	**19.72**	**17.93**	**17.36**	**15.87**	**13.77**	**13.97**	**16.42**	**16.69**	**13.68**

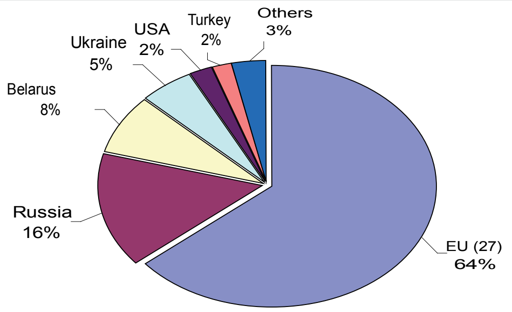
Source: USDA 2011 (*) Forecast

Graphic 44. World Rye Consumption and Major Consumer Countries (Million Ton)



Source: USDA 2011 (*) Forecast

Graphic 45. Distribution of World Rye Consumption in 2010/11 Period (%)



Source: USDA 2011. The percentages are calculated according to forecast figures for 2010/11 period

Chart 60 below shows that world rye export volume was 1.6 million ton in 2000/01 period and it reduced to 0.5 million ton in 2010/11 period. EU(27) countries lead in world rye export with 27.8 % share.

Chart 60. World Rye Export and Major Exporter Countries (Thousand Ton)											
Countries	**2000/01**	**2001/02**	**2002/03**	**2003/04**	**2004/05**	**2005/06**	**2006/07**	**2007/08**	**2008/09**	**2009/10***	**2010/11****
EU(27)	1,272	705	698	522	574	359	419	76	113	85	150
Canada	91	69	29	141	135	114	188	163	54	115	125
USA	9	7	3	1	4	-	2	7	8	5	50
Russia	9	5	290	203	-	4	26	125	19	15	5
Ukraine	1	294	288	-	105	69	2	9	6	55	40
Other	217	147	99	84	50	4	11	16	11	10	170
World	**1,599**	**1,227**	**1,407**	**951**	**868**	**550**	**648**	**396**	**211**	**285**	**540**
Source: IGC March/2011 Report (*) Estimate, (**) Forecast											

World rye export in 2010/11 is 540 thousand tons and is led by US and Japan with their 23.1 % share each. These two countries are followed by Israel (8.4 %) (Chart 61).

Chart 61. World Rye Import and Major Importer Countries (Thousand Ton)											
Countries	**2000/01**	**2001/02**	**2002/03**	**2003/04**	**2004/05**	**2005/06**	**2006/07**	**2007/08**	**2008/09**	**2009/10***	**2010/11****
USA	87	132	121	88	132	128	139	144	91	100	125
Japan	375	302	418	318	253	267	299	47	60	70	125
S. Korea	109	121	27	86	2	1	3	-	-	-	20
EU(27)	5	277	323	42	1	5	26	99	13	5	20
Israel	35	32	42	111	110	29	100	35	7	10	45
Other	988	363	476	306	370	120	81	71	40	100	205
World	**1,599**	**1,227**	**1,407**	**951**	**868**	**550**	**648**	**396**	**211**	**285**	**540**
Source: IGC March/2011 Report (*) Estimate, (**) Forecast											

Chart 62. Rye Ending Stocks of Some Countries and of the World (Thousand Ton)											
Countries	**2000/01**	**2001/02**	**2002/03**	**2003/04**	**2004/05**	**2005/06**	**2006/07**	**2007/08**	**2008/09**	**2009/10**	**2010/11***
EU(27)	5,107	6,532	6,177	3,834	3,156	1,874	616	1,017	1,424	1,763	670
Belarus	45	9	199	139	240	241	193	218	268	318	168
Russia	293	1,096	1,805	355	177	126	182	213	297	260	110
Ukraine	75	256	325	140	336	267	65	65	309	453	80
Canada	77	49	25	43	145	185	117	35	123	139	95
Other	52	38	39	41	75	69	67	61	41	65	65
World	**5,649**	**7,980**	**8,570**	**4,552**	**4,129**	**2,762**	**1,240**	**1,609**	**2,462**	**2,998**	**1,188**
Source: USDA 2011 (*) Forecast											

Chart 62 below shows world rye ending stocks. As it can be seen clearly from the Chart, year ending stock in the world has decreased by 85 % in 10 years time. EU(27) constitutes 56.4 % of the world stocks corresponding to 670 thousand tons.

2.4. Oat

2.4.1. Vegetal characteristics

Like it is the case for rye, the oat (Avena) is relatively newer cultivated crop compared with wheat and barley. The oats cultivated in the world and in Turkey belong to Hexaploid species. This group belonging composed of 2n = 42 chromosomes is also called Denticulatae. This group is divided into two sub groups. These are;

- Avena fatua sub group: White oats (Avena sativa) is covered under this sub group. This sub group constitutes 2/3 of the oats cultivated in the world.
- Avena sterilis sub group: It is accepted that cultivated form of red oats (Avena byzantina) is covered under this sub group (Gecit et al. 2009).

Like rye crop, the oats are sowed generally on March and harvested on June- August. Though oats used to be an ingredient for animal feed only till the recent past years, it has become one of wanted product for human dieting.

2.4.2. Production, Consumption, Import, Export, Stocks and Prices of Oat in Turkey

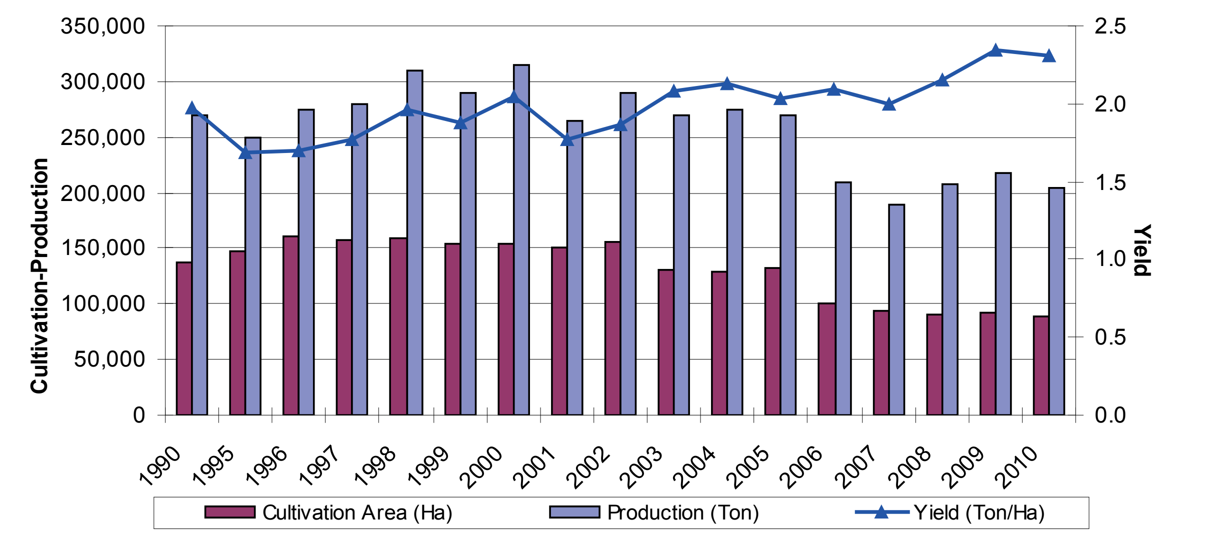
Oat cultivation in our country was 153,600 hectare in 2000; however it reduced to 88,390 hectare in 2010. Yield rate of has increased (Chart 63, Graphic 46).

Chart 63. Oat Production, Cultivation Area and Yield in Turkey

Years	Cultivation Area (Ha)	Production (Ton)	Yield (Ton/Ha)
2000	153,600	314,000	2.04
2001	150,000	265,000	1.77
2002	155,000	290,000	1.87
2003	130,000	270,000	2.08
2004	129,000	275,000	2.13
2005	133,000	270,000	2.03
2006	100,112	208,787	2.09
2007	94,477	189,099	2.00
2008	91,036	207,000	2.15
2009	92,778	218,286	2.35
2010	88,390	203,870	2.31

Source: TSA 2011

Graphic 46. Production, Cultivation Area and Yield of Oat in Turkey



Source: TSA 2011

Although oat is similar to wheat in terms of sowing-harvest period and cultivation in cool climate, it is harvested after the wheat.

Chart 64. Oat Production in Turkey According to TSA, IGC and USDA Statistics (Ton)

Years	TSA	IGC	USDA
2000	314,000	314,000	314,000
2001	265,000	263,000	265,000
2002	290,000	290,000	290,000
2003	270,000	285,000	270,000
2004	275,000	275,000	270,000
2005	270,000	300,000	270,000
2006	208,787	290,000	210,000
2007	189,099	250,000	200,000
2008	207,000	220,000	200,000
2009	218,286	210,000	210,000
2010	203,870	210,000	210,000

Source: TSA 2011, USDA 2011 and IGC 2011

Chart 64 above represents data obtained from IGC, USDA and TSA in regard to oat production in Turkey. As it can be derived from the Chart, oat production has been 210 thousand tons in 2010 according to IGC and USDA, 204 thousands tons according to TSA.

Chart 65. Consumption, Stock Change and Sufficiency Level of Oat in Turkey								
Market Year*	**Domestic Use (Ton)**	**Con-sumption As Food (Ton)**	**Usage As Seed (Ton)**	**Usage As Feed (Ton)**	**Losses (Ton)**	**Stock Change (Ton)**	**Con-sump-tion Per Capita (Kg)**	**Sufficiency Rate (%)**
2000/01	318,359	290,808	18,000	…	5,628	-5,686	1.28	97.84
2001/02	266,057	239,475	18,600	…	…	-180	…	97.84
2002/03	290,464	266,150	15,600	…	…	2,191	…	97.84
2003/04	279,247	255,390	15,480	…	8,892	-2,302	3.84	97.84
2004/05	296,387	271,536	15,960	…	8,377	-	3.66	97.84
2005/06	…	…	…	…	8,714	…	3.87	97.84
2006/07	…	…	…		7,982	…	3.53	97.84
2007/08	202,835	90,201	11,337	95,669	5,628	-	1.28	92.48
2008/09	201,917	85,947	10,924	99,210	5,836	-	1.20	96.34
2009/10	214,691	86,626	11,133	110,435	6,496	3,739	1.00	100.86

Source: TSA 2011
(*) Market Year: Covers July- June period for 2000/01 – 2004/05 and 1 June- 31 May Period for 2005/06 ¬– 2007/08-2008/2009- 2009/2010 (see APPENDIX 1 for explanation)

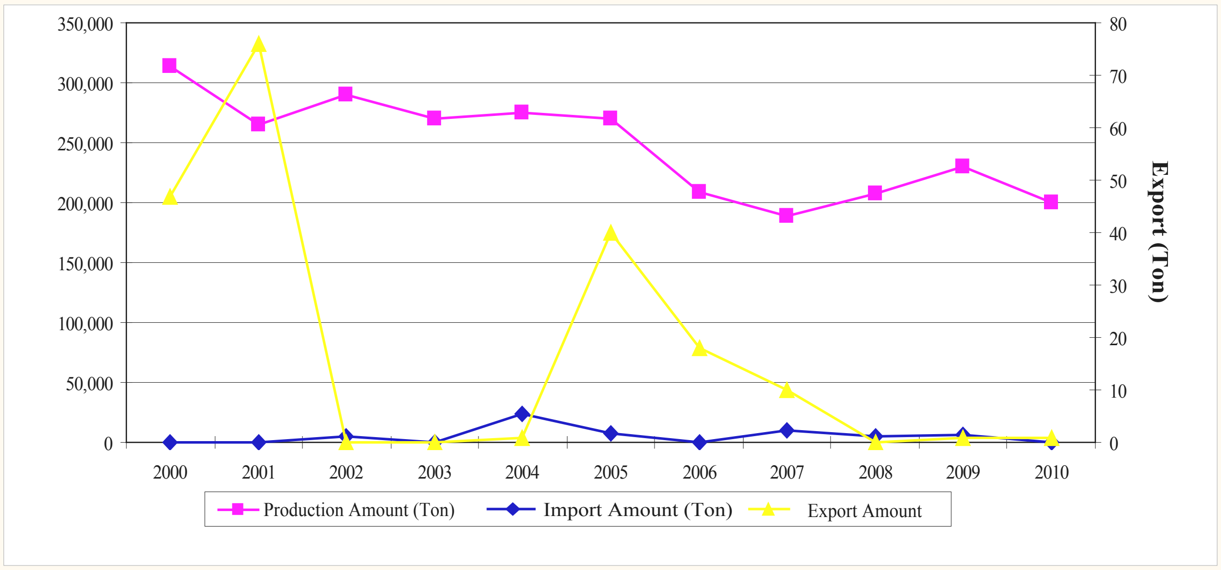
Chart 65 above gives the data concerning oats production in our country. However, the table does not include information about the industrial use. Domestic use of oat peaked in 2000/01 period increasing to 318 thousand tons for the respective year and domestic use in 2009/10 period remained in 215 thousand tons.

Chart 66. Turkey's Oats Export and Import Quantities Extended to Years						
Years	**Export**			**Import**		
	Quantity (Ton)	**Value (Thousand $)**	**Average Export Price ($/Ton)**	**Quantity (Ton)**	**Value (Thousand $)**	**Average Im-port Price ($/Ton)**
2000	47	12	261	298	19	64
2001	76	15	194	215	13	60
2002	0	0	690	5,223	318	61
2003	0	0	473	600	43	72
2004	1	1	765	23,634	2,770	117
2005	40	9	232	7,201	789	110
2006	18	4	241	500	75	150
2007	10	7	666	9,843	3,017	307
2008	0	0	0	4,606	1,450	315
2009	1	0	0	6,166	760	0
2010	1	0,51	51	0	0	0

Source: TSA 2011

Chart 66 above shows quantity and value of oat imports and exports of our country extended to years. Analyzing oat import quantities of our country in 2000-2010 period, it is seen that the import peaked in 2004 with 24 thousand tons import volume in said year. No oat import has been realized in 2010 (Chart 47).

Graphic 47. Turkey's Oats Production, Export and Import Volumes Extended to Years (Ton)



Source: TSA 2011

Chart 67. Oat Procurement Price of TGB (TL/Ton)											
Years	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**
Oat	77	123	184	250	278	245	260	315	400	405	430
Producer Price Index Increase Rate (%)	59.16	57.71	49.30	33.69	16.62	5.59	7.66	7.14	16.53	-2.46	9.20

Source: TGB and Official Journals
Note: Shows annual change rates (%) based on Producer Price Index (PPI) on May. Prices for 2008 are fiduciary procurement price and intervention procurement price was not announced. Intervention procurement price was announced gradually in 2009 and 2010 and the average was reflected on the Chart.

The table below shows average oat prices on commodity exchanges where the oat was transacted most. Though the prices are low during harvest period, they tend to increase especially towards the end of the year.

Chart 68. Oat Price Rates in Commodity Exchanges in 2006- 2010 Period (TL/Ton)																		
Years	**Eskişehir**						**Konya**						**Polatlı**					
	Jul	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**
2006	243	253	306	307	342	404	234	246	264	290	345	364	246	251	287	313	363	407
2007	792	695	684	781	760	801	806	699	697	577	700	600	832	758	769	670	817	-
2008	502	515	517	514	550	505	530	504	464	456	458	484	520	520	510	526	534	552
2009	308	304	333	378	395	450	295	328	331	335	398	0	317	317	355	397	423	423
2010	397	488	545	608	905	782	427	504	524	609	741	800	452	518	607	657	825	904

Source: Eskişehir, Konya and Polatlı Mercantile Exchanges

Chart 68 gives monthly average prices of oat in mercantile exchanges where the oat has been traded mostly. In 2010, oat was transacted in 397–905 TL/ton price range in Eskişehir Commodity Exchange, in 427-800 TL/ton price range in Konya Commodity Exchange and in 452-904 TL/ton price range in Polatlı Commodity Exchange.

Average price and transaction volume of oat in commodity exchanges in recent three years are summarized in Charts 69 and 70 below. The prices in 2008 were higher than the prices of 2009 due to drought caused by global warming and global financial crisis. Prices in 2010 seemed lower until harvest period compared to 2009; however, increased towards the end of the year.

Chart 69. Average Oat Commodity Exchange Prices on Monthly Basis in 2008- 2010 Period (TL/Ton)

Years	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2008	695	801	784	670	-	700	520	508	494	511	506	510
2009	511	539	512	444	411	351	300	320	345	381	414	430
2010	423	422	422	385	383	400	429	511	555	612	789	811

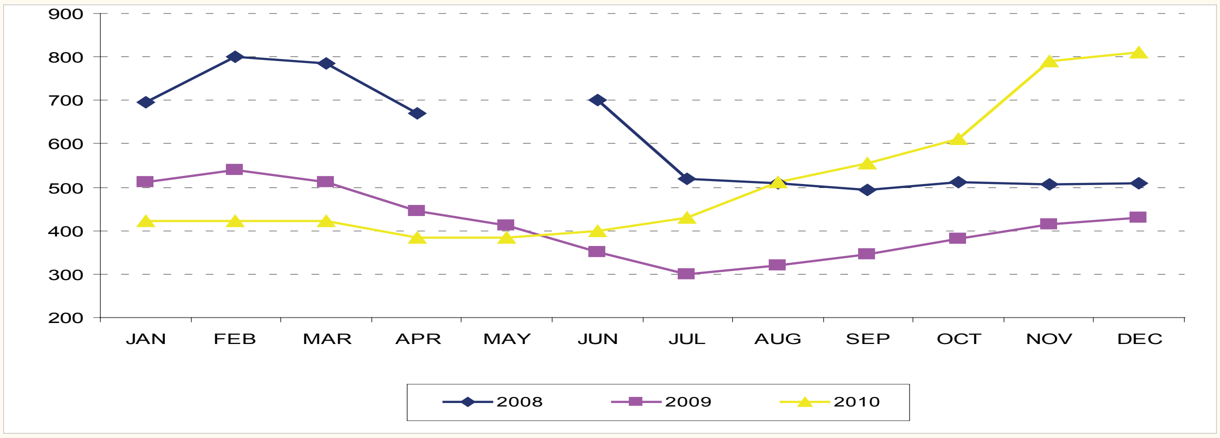
Source: Eskişehir, Konya and Polatlı Mercantile Exchanges

Chart 70. Oat Transaction Volumes in Commodity Exchange in 2008- 2010 on Monthly Basis (Ton)

Years	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2008	67	56	105	19	0	2	484	464	259	209	82	89
2009	61	163	376	189	59	32	517	512	262	308	132	79
2010	169	308	361	120	39	8	224	315	223	116	79	205

Source: Eskişehir, Konya and Polatlı Mercantile Exchanges

Graphic 48. Average Monthly Oat Prices at Mercantile Exchanges in Recent Past Three Years (TL/Ton)



Source: Eskişehir, Konya and Polatlı Mercantile Exchanges

As seen in Graphic 48, oat prices has started to increase in 2010 on monthly basis especially starting from August and it has reached to the peak of last three years on December.

2.4.3. Production, Consumption, Import, Export, Stocks and Prices in the World

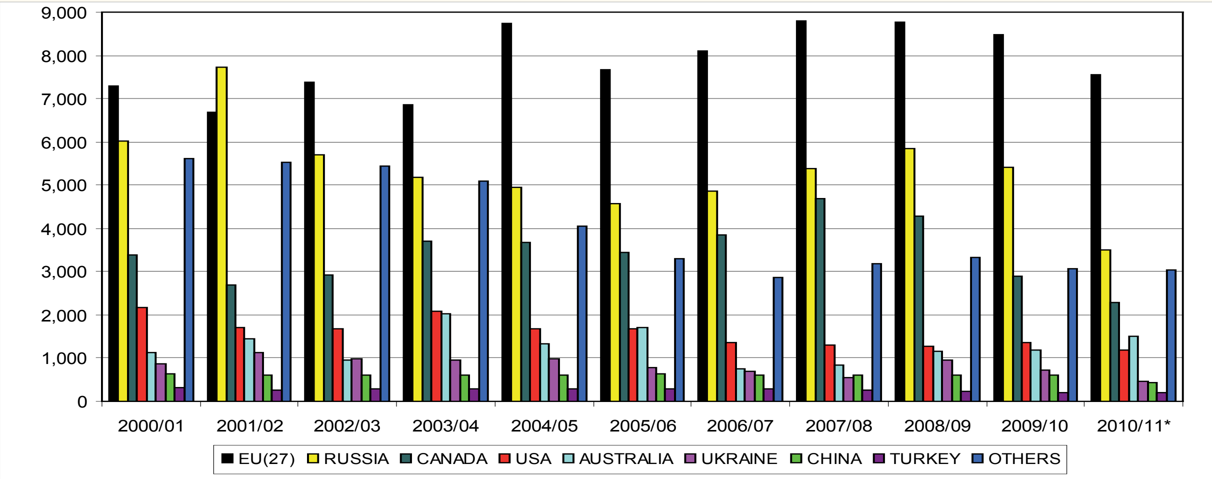
World oat production volume has decreased over past 10 years and the forecast for 2010/11 is approximately 20 million tons. World oat production has suffered a groundbreaking decrease in 2010/11 season due to significant decrease of production especially in EU(27) and Canada (IGC March/2011 Report). EU(27) is the biggest oat producer and represents 37.5 % of world oat production. EU(27) is followed by Russia with 17.4 % share. Turkey's share in world oat production is 1 % (Chart 71, Graphic 49 and 50).

Chart 71. World Oat Production and Major Producer Countries (Thousand Ton)

Countries	2000/01	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10*	2010/11**
EU (27)	7,293	6,696	7,365	6,848	8,727	7,666	8,103	8,789	8,778	8,470	7,557
Russia	6,009	7,723	5,693	5,175	4,955	4,565	4,861	5,384	5,835	5,400	3,500
Canada	3,389	2,691	2,911	3,691	3,683	3,432	3,852	4,696	4,273	2,906	2,298
USA	2,165	1,707	1,684	2,096	1,683	1,667	1,357	1,313	1,287	1,351	1,178
Australia	1,131	1,434	957	2,018	1,321	1,695	748	843	1,160	1,180	1,500
Ukraine	880	1,116	975	941	997	790	690	544	944	731	458
China	650	600	600	600	600	650	600	600	600	600	420
Turkey	314	263	290	285	275	300	290	250	220	210	210
Other	5,618	5,513	5,439	5,94	4,044	3,299	2,865	3,183	3,319	3,061	3,034
World	**27,449**	**27,743**	**25,914**	**26,748**	**26,285**	**24,064**	**23,366**	**25,602**	**26,416**	**23,909**	**20,155**

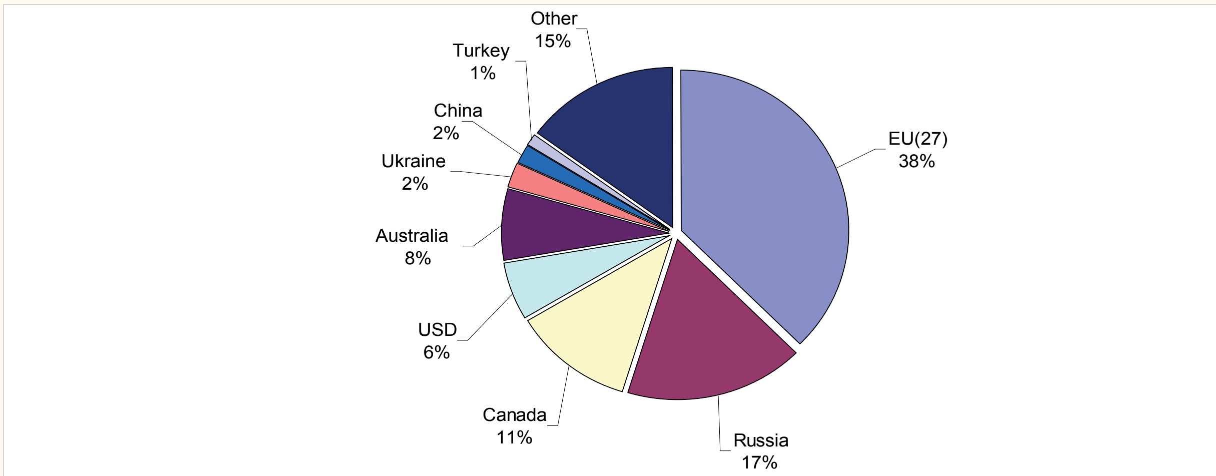
Source: IGC March/2011 Report (*) Estimate, (**) Forecast

Graphic 49. World Oat Production and Major Producer Countries (Thousand Ton)



Source: IGC March/2011 Report (*) Forecast

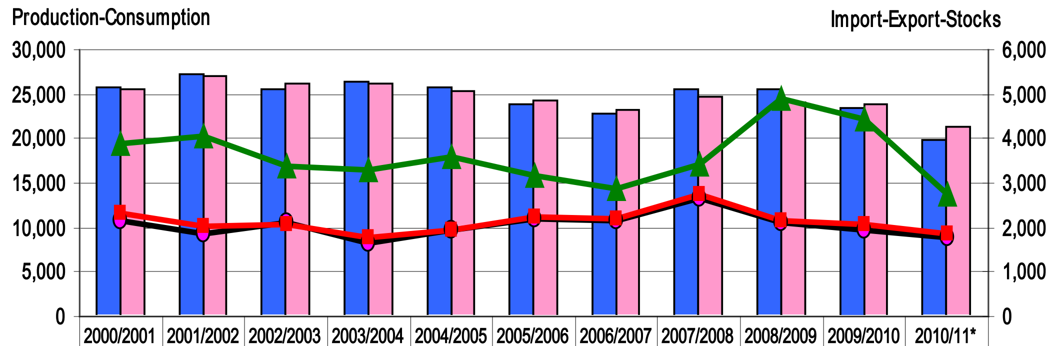
Graphic 50. Distribution of World Oat Production in 2010/11 Period (%)



Source: IGC March/2011 Report. The percentages are calculated according to forecast figures for 2010/11 period.

Graphic 51 provides oat production, consumption, import, export and year ending stocks in the worldextended to the years. Production, consumption and ending stocks of oat has decreased in theworld over the years. Indeed, world oat production was 25.9 million tons in 2000/01 period; however,it dropped to 19.8 million tons in 2010/11 period; likewise, its consumption decreased from25.5 million tons to 21.4 tons during the same period. The decrease in production has also resultedwith the decrease in world oat ending stocks. World oat ending stock was 3.9 million tons in 2000/01 season; however it reduced to 2.7 million tons in 2010/11 season.

Graphic 51. World Oat Balance Graphic (Thousand Ton)



	2000/2001	2001/2002	2002/2003	2003/2004	2004/2005	2005/2006	2006/2007	2007/2008	2008/2009	2009/2010	2010/11*
Production	25,860	27,290	25,472	26,374	25,728	23,932	22,817	25,506	25,537	23,520	19,802
Consumption	25,472	27,123	26,102	26,177	25,426	24,315	23,193	24,638	24,067	23,937	21,382
Import	2,175	1,842	2,102	1,644	1,927	2,193	2,144	2,657	2,110	1,941	1,760
Export	2,336	2,016	2,052	1,775	1,955	2,254	2,179	2,743	2,147	2,069	1,840
Ending Stocks	3,868	4,067	3,377	3,309	3,596	3,176	2,882	3,432	4,883	4,421	2,736

Source: USDA 2011 (*) Forecast

World oat production area is 10.2 million hectare area in 2010/11 and Russia has biggest share in terms of production area with its 29.3 % share, EU(27) in second position with its share of 26.5 % and Australia in third position with share 9 %. Turkey's share in world oat cultivation areas is 1 % (Chart 72).

Chart 72. World Oat Cultivation Areas (Thousand Ha)											
Countries	**2000/01**	**2001/02**	**2002/03**	**2003/04**	**2004/05**	**2005/06**	**2006/07**	**2007/08**	**2008/09**	**2009/10***	**2010/11****
EU(27)	2,092	2,128	2,185	2,036	2,737	2,644	2,928	2,783	2,963	2,889	2,710
Russia	4,500	4,870	4,440	3,700	4,300	3,900	3,900	3,317	3,700	3,350	3,000
Ukraine	481	559	498	544	527	450	442	384	455	416	311
Canada	1,299	1,238	1,379	1,575	1,315	1,326	1,537	1,816	1,448	948	841
USA	941	773	833	898	725	738	634	610	565	558	511
Turkey	153	150	154	154	129	160	155	130	160	100	100
China	500	500	500	500	270	400	500	400	400	500	240
Australia	658	784	911	1,089	892	936	1,003	897	870	865	917
Other	2,770	2,782	2,757	2,566	1,935	1,740	1,499	1,718	1,642	1,604	1,599
World	**13,394**	**13,784**	**13,657**	**13,062**	**12,830**	**12,294**	**12,598**	**12,055**	**12,203**	**11,230**	**10,229**
Source: IGC March/2011 Report (*) Estimate, (**) Forecast											

Chart 73 below presents information on world oat yield. EU(27) has led in world oat yield in 2010/11 period with 2.79 ton/ha and followed by Canada with 2.73 ton/ha and USA with 2.31 ton/ha yield. Oat yield in Turkey has been increasing in recent years and it has become 2.1 ton/ha above world average yield in 2010/11 period.

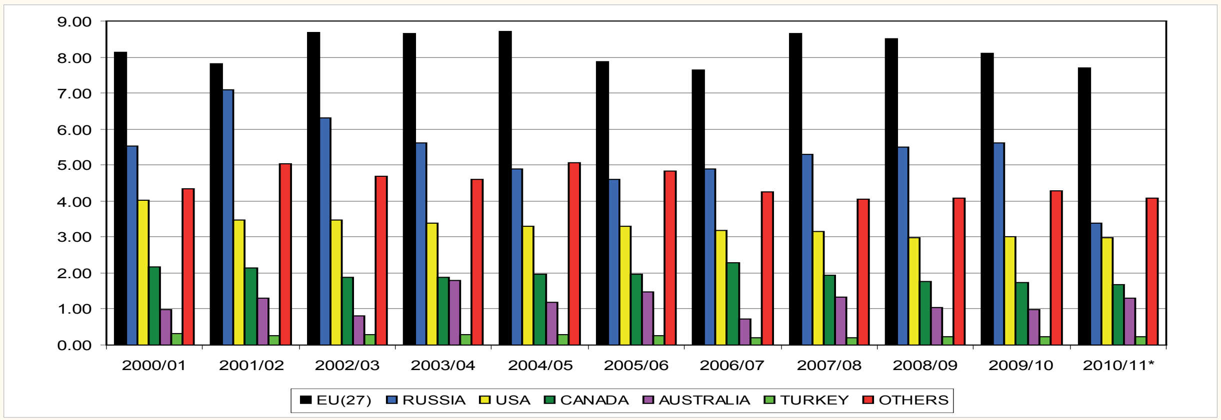
Chart 73. World Oat Yield (Ton/Ha)											
Countries	**2000/01**	**2001/02**	**2002/03**	**2003/04**	**2004/05**	**2005/06**	**2006/07**	**2007/08**	**2008/09**	**2009/10***	**2010/11****
EU(27)	3.49	3.15	3.37	3.36	3.19	2.90	2.77	3.16	2.96	2.93	2.79
Russia	1.34	1.59	1.28	1.40	1.15	1.17	1.25	1.62	1.58	1.61	1.17
Ukraine	1.83	2.00	1.96	1.73	1.89	1.76	1.56	1.42	2.07	1.76	1.47
Canada	2.61	2.17	2.11	2.34	2.80	2.59	2.51	2.59	2.95	3.07	2.73
USA	2.30	2.21	2.02	2.33	2.32	2.26	2.14	2.15	2.28	2.42	2.31
Turkey	2.05	1.75	1.88	1.85	2.13	1.88	1.87	1.92	1.38	2.10	2.10
China	1.30	1.20	1.20	1.20	2.22	1.63	1.20	1.50	1.50	1.20	1.75
Australia	1.72	1.83	1.05	1.85	1.48	1.81	0.75	0.94	1.33	1.36	1.64
World	**2.05**	**2.01**	**1.90**	**2.05**	**2.05**	**1.96**	**1.85**	**2.12**	**2.16**	**2.13**	**1.97**
Source: IGC March/2011 Report (*) Estimate, (**) Forecast											

World oat consumption has decreased over the years. Oat consumption of the world was 25.47 million tons in 2000/01 season; however, it has decreased to 21.38 million tons in 2010/11 representing 19 % decrease. EU(27) countries consume 7.7 million tons oat (Chart 74, Graphic 52).

Chart 74. Oat Consumption in Major Consumer Countries and in Rest of the World (Million Ton)											
Countries	**2000/01**	**2001/02**	**2002/03**	**2003/04**	**2004/05**	**2005/06**	**2006/07**	**2007/08**	**2008/09**	**2009/10**	**2010/11***
EU (27)	8.14	7.82	8.68	8.64	8.72	7.87	7.65	8.65	8.50	8.10	7.70
Russia	5.53	7.10	6.30	5.60	4.90	4.60	4.90	5.30	5.50	5.60	3.40
USA	4.02	3.46	3.48	3.39	3.30	3.29	3.18	3.16	2.97	3.01	2.99
Canada	2.16	2.13	1.87	1.87	1.98	1.97	2.28	1.94	1.77	1.75	1.68
Australia	0.97	1.31	0.80	1.80	1.18	1.48	0.71	1.34	1.04	0.98	1.30
Turkey	0.31	0.27	0.29	0.28	0.29	0.27	0.21	0.21	0.22	0.22	0.22
Other	4.34	5.03	4.68	4.60	5.06	4.84	4.26	4.04	4.07	4.28	4.09
World	**25.47**	**27.12**	**26.10**	**26.18**	**25.43**	**24.32**	**23.19**	**24.64**	**24.07**	**23.94**	**21.38**

Source: USDA 2011 (*) Forecast

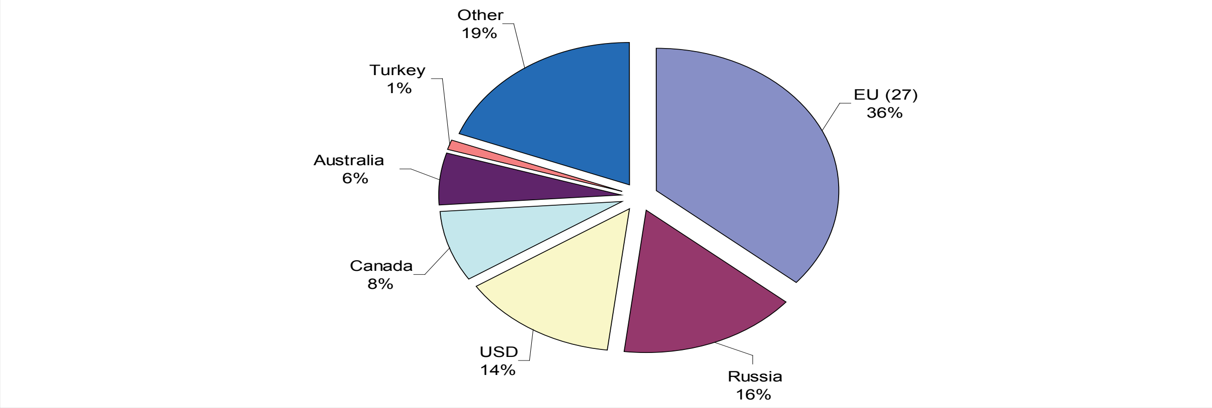
Graphic 52. World Oat Consumption and Major Consumer Countries (Million Ton)



Source: USDA 2011 (*) Forecast

EU (27) countries leads in world oat consumption in 2010/11 and represents 36 % of the whole consumption. EU(27) is followed by Russia in second place with 16 % share and USA in third place with 14 %. Turkey's share in world oat consumption is 1 % (Graphic 53).

Graphic 53. Distribution of World Oat Consumption in 2010/11 Period (%)



Source: USDA 2011. The percentages are calculated according to forecast figures for 2010/11 period.

World oat export values and major oat exporting countries are given in Chart 75 below. As it can be concluded from the Chart, Canada represents 77.3 % of the oat export in the world. Canada is followed by Australia in second place with its 12.0 % share and by EU(27) with 6.2 % share.

Chart 75. World Oat Export and Major Exporter Countries (Thousand Ton)

Countries	2000/01	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10*	2010/11**
Canada	1,454	1,144	822	1,185	1,268	1,408	1,923	2,288	1,936	1,572	1,550
Australia	97	142	166	168	166	191	66	122	192	233	240
EU(27)	609	563	885	521	349	276	98	154	92	228	125
USA	26	39	35	33	38	30	34	41	44	30	30
Ukraine	34	47	6	9	17	1	1	24	6	16	10
Other	136	116	41	77	51	40	54	34	31	56	50
World	**2,356**	**2,051**	**1,955**	**1,993**	**1,889**	**1,946**	**2,176**	**2,663**	**2,301**	**2,135**	**2,005**

Source: IGC March/2011 Report (*) Estimate, (**) Forecast

World oat import values and major oat importing countries are given in Chart 76 below. World oat import 2.4 million tons in 2000/01 season; however it reduced to 2.0 million tons in 2010/11 season. In 2010/11 season, USA is ranked in first position in world oat import with 73.6 % share.

Chart 76. World Oat Import and Major Importer Countries (Thousand Ton)

Countries	2000/01	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10*	2010/11**
USA	1,862	1,567	1,565	1,607	1,513	1,540	1,812	2,223	1,922	1,645	1,475
Japan	86	92	72	61	65	58	58	53	57	59	65
Switzerland	51	58	39	47	27	46	40	44	50	56	70
Mexico	64	62	50	26	82	19	63	51	23	11	40
Norway	2	11	1	1	2	45	57	47	5	32	50
Turkey	6	-	4	6	22	1	1	25	6	1	5
Other	285	261	224	245	178	237	145	220	238	331	300
World	**2,356**	**2,051**	**1,955**	**1,993**	**1,889**	**1,946**	**2,176**	**2,663**	**2,301**	**2,135**	**2,005**

Source: IGC March/2011 Report (*) Estimate, (**) Forecast

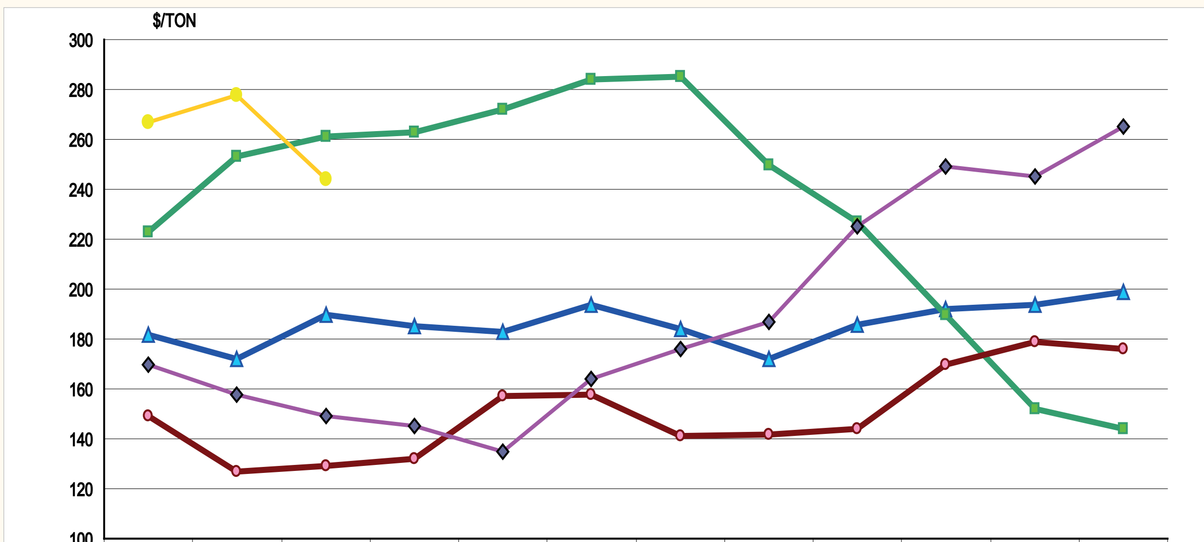
It is foreseen that world ending oat stocks will recess to 2.7 million tons in 2010/11 season representing 38.1 % decrease compared to previous year and 32.7 % decrease compared to last ten years period. EU(27) is listed in first position with 27.5 % share in world oat ending stocks in 2010/11 period (Chart 77).

Chart 77. Oat Ending Stocks of Some Countries and of the World (Thousand Ton)											
Countries	**2000/01**	**2001/02**	**2002/03**	**2003/04**	**2004/05**	**2005/06**	**2006/07**	**2007/08**	**2008/09**	**2009/10**	**2010/11***
Canada	854	363	524	788	974	872	556	950	1,527	1,170	508
USA	1,056	917	723	941	841	763	734	969	1,221	1,166	690
EU (27)	800	905	1,010	835	906	769	795	625	972	1,150	753
Russia	579	1,176	575	186	242	190	186	283	581	378	173
Australia	216	150	187	195	167	187	197	183	147	141	191
Other	363	556	358	364	466	395	414	422	435	416	421
World	**3,868**	**4,067**	**3,377**	**3,309**	**3,596**	**3,176**	**2,882**	**3,432**	**4,883**	**4,421**	**2,736**

Source: USDA 2011 (*) Forecast

Graphic 54 shows option oat prices traded in Chicago mercantile exchanges. As it can be concluded from the graphic, the prices in 2008 were realized very high. As known, MY 2008 was passed under drought and global financial crisis. Devaluation of Dollar in respective period created a major impact on all commercial goods causing increases on the prices. A considerable decrease has been experienced in oat production in 2010 due to severe drought in the world. Deterioration in demand- supply balance caused the prices moving upwards. Option trade price of oat increased up to 278 $ on February 2011.

Graphic 54. Average Monthly Option Prices for Oat in USA Chicago (CME) Exchange



	January	February	March	April	May	June	July	August	September	October	November	December
2007	182	172	190	185	183	194	184	172	186	192	194	199
2008	223	253	261	263	272	284	285	250	227	190	152	144
2009	149	127	129	132	157	158	141	142	144	170	179	176
2010	170	158	149	145	135	164	176	187	225	249	245	265
2011	267	278	244									

Source: IGC 2011.

2. 5. Corn

The maize is cultivated for thousands of years. It is known that motherland of the maize is American continent and it has spread everywhere from that continent. Maize grains and corncob pieces found on the rock shelters during archaeological excavations carried out in New Mexico State of USA are dated approximately 5 thousand years old. On the other hand, the archaeological excavations carried out in 1954 in Mexico City, capital city of Mexico, report founding maize farina/ pollens under 50- 60 m depth and dated 7 thousand years (Gecit et al. 2009).

As maize can be cultivated in tropical, subtropical and mild climatic belts, it can be cultivated in almost any part of the globe. Today, maize can be cultivated any part of the world excluding Antarctica (Gecit, et all, 2009).

Used to be cultivated as primary product especially in Black Sea, Marmara, Aegean and Mediterranean Regions in Turkey, the maize is also cultivated nowadays as secondary product in Cukurova, Amik Valley, Southeast and Aegean Regions.

2.5.1. Vegetal characteristics

The maize is cultivated in mild and tropical regions. Optimum temperature during growing period should be 25- 30 ºC. The minimum temperature for germination is 10 ºC. The vegetation period of the maize changes between 90- 120 days. April - May period is the optimum time for sowing the maize when it is the primary product and it can be sowed between June- mid July when it is the second product (Gecit et all, 2009).

There are 4 critical periods in irrigation of corn crop. The water requirements of the crop must be met in those terms. These are Seedling period, Tassel development phase and finally grain development (corncob development) phase.

However, most critical period in terms of grain yield is two weeks before tassel development period and two weeks after development of the tassel.

For high yield, 400- 750 mm water should be provided during development period. The soil should be rich in terms of organic substances and vegetal nutrition for high yield and quality. The best soil for maize cultivation is argillaceous soils due to its high humidity holding capacity, nutritive storage capacity, cultivation easiness and aeration characteristics.

Pesticide use is required during vegetation period of the crop in order to protect it from the diseases and pests.

Grain harvest of the maize should be performed when the leaves and corncobs become yellow and the moisture content in the grains drops down to 20 %.

The maize varieties constitute 7 groups each of which includes different types inside (group of varieties). These are as follows (Gecit et al. 2009):

Latin Name	English name	Turkish Name
-Zea mays indentata Sturt.	Dent corn	At dişi mısır
-Zea mays indurata Sturt.	Flint corn	Sert mısır
-Zea mays amylaceae Sturt.	Floury corn	Unlu mısır
-Zea mys sacharata Sturt.	Sweet corn	Şeker mısır
-Zea mays everta Sturt.	Pop corn	Patlak (cin) mısır
-Zea mays ceratina Kulesch	Waxy corn	Mumlu mısır
-Zea mays tunicata Sturt.	Pod corn	Kavuzlu mısır

Majority of the corn produced in Turkey is dent corn. Flint corn production is common in Black Sea region for local and household consumption. Pop corn and sweet corn are preferred for consumption as nut.

The number of species/varieties certified by Agricultural Researches General Directorate of Ministry of Agriculture and Rural Affairs is 30 and the number of varieties actively cultivated is 16. As an example to the varieties developed by the public sector, we can mention Ant-Bey (Hybrid White Corn), Ant-Cin 98 (Hybrid Pop Corn), Karaçay (Hybrid Silage Corn), Ada 523 (Hybrid Corn), Ada 95–10 (Hybrid Corn), Ada 95–16 (Hybrid Corn) Sakarya(Corn), Gözdem (Hybrid Silage Corn). Private sector has developed more than 100 varieties of dent corns (Emeklier, 2002).

2.5.2. Production, Consumption, Import, Export, Stocks and Prices of Corn in Turkey

Corn has the third widest cultivation area in Turkey among the grains after wheat and barley. Mediterranean Region has the largest portion in terms of seize of corn cultivation areas followed by Black Sea Region. Though corn production is widespread in Turkey, intensively corn producing provinces are Adana, Sakarya, Manisa, Mardin, Mersin, Osmaniye, Şanlıurfa, Aydın, Kahramanmaraş, Samsun, Hatay, Bursa, İzmir, Denizli and Antalya. Southeast Anatolian Region has also gained a major potential for corn production after increase of irrigation opportunities together with Southeast Anatolian Project (GAP). Figuring 1.24 million ton in 1980, Turkey's corn production reached to 4.31 million tons in 2010 increasing 3.5 times during the respective period.

Chart 78. Grain Corn Cultivation Area (Ha), Production (Million Ton) and Yield (Ton/Ha) in Turkey in 1930- 2000 Period

Years	Cultivation Area (Ha)	Production (Mil. Ton)	Yield (Ton/Ha)
1930	378,501	0.47	1.01
1935	409,361	0.45	1.11
1940	509,990	0.75	1.48
1945	510,071	0.29	0.57
1950	593,161	0.62	1.05
1955	706,000	0.85	1.21
1960	695,000	1.09	1.56
1965	650,000	0.94	1.45
1970	648,000	1.04	1.60
1975	600,000	1.20	2.00
1980	583,000	1.24	2.12
1985	567,000	1.90	3.35
1990	515,000	2.10	4.07
2000	555,000	2.30	4.14

Source: TSA 2011

In 1930, corn production area was approximately 379 thousand hectare and yield 1.01 ton/ha and in 2000, it increased to 555 thousand hectare and the yield quadrupled and became 4.14 ton/ha (Chart 78).

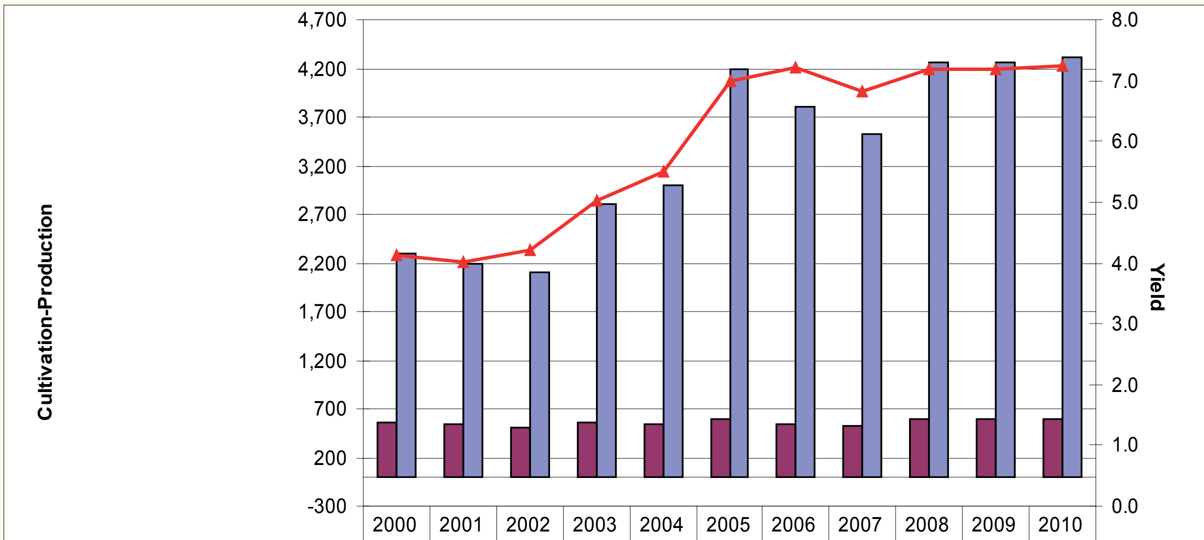
Chart 79. Grain Corn Cultivation Area (Ha), Production (Million Ton) and Yield (Ton/Ha) in Turkey in 2001- 2010 Period			
Years	**Cultivation Area (Ha)**	**Production (Mil. Ton)**	**Yield (Ton/Ha)**
2001	550,000	2.20	4.01
2002	500,000	2.10	4.22
2003	560,000	2.80	5.02
2004	545,000	3.00	5.51
2005	600,000	4.20	7.00
2006	536,000	3.81	7.21
2007	517,500	3.53	6.83
2008	595,000	4.27	7.20
2009	592,000	4.25	7.18
2010	594,000	4.31	7.26
Source: TSA 2011			

Corn yield rate was 7.26 ton/ha in 2010 and this figure was above world average yield rate which was as 5.08 ton/ha (Chart 79).

Chart 80. Grain Corn Production in Turkey According to TSA, IGC and USDA Statistics (Million Ton)			
Years	**TSA**	**IGC**	**USDA**
2000	2.30	2.10	2.10
2001	2.20	2.00	2.00
2002	2.10	2.70	2.10
2003	2.80	2.50	2.50
2004	3.00	3.00	3.00
2005	4.20	3.70	3.70
2006	3.81	2.80	2.80
2007	3.53	2.90	2.90
2008	4.27	4.15	4.15
2009	4.25	3.80	4.00
2010	4.31	4.00	3.60
Source: TSA, IGC and USDA 2011.			

According to 2010 data of TSA, corn production of Turkey is 4.31 million tons (Chart 80).

Graphic 55. Cultivation Area, Production Volume and Yield of Grain Corn in Turkey



	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Cultivation Area (Thousand Ha)	555	550	500	560	545	600	536	518	595	592	594
Production(Thousand Ton)	2,300	2,200	2,100	2,800	3,000	4,200	3,810	3,530	4,270	4,270	4,310
Yield(Ton/Ha)	4.14	4.01	4.22	5.02	5.51	7.00	7.21	6.83	7.20	7.18	7.26

Source: TSA 2011

In 2010, corn production of Turkey has increased to 4.31 million tons representing 87 % increase compared to year 2000. The basic underlying reason for increase in corn production in our country is widespread use of hybrid seed and developments in production techniques in major production regions. The corn yield rate in our country is 7.26 ton/ha which is above the world average and below USA's yield rate. (Graphic 55).

Chart 81. Fodder and Silage Corn Production in Turkey (Million Ton), Cultivation Area (Ha) and Yield (Ton/Ha)

		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Green Fodder	Cultivation Area	-	-	-	-	25,000	20,000	19,230	13,739	16,579	13,118
	Production	0.70	0.71	0.74	0.65	0.60	0.46	0.43	0.30	0.32	0.24
	Yield	-	-	-	-	24.04	23.01	22.96	22.08	19.51	18.55
Silage	Cultivation Area	-	-	-	-	130,000	180,000	240,661	255,273	272,303	260,885
	Production	-	-	-	-	6.20	7.60	10.06	10.25	11.18	11.10
	Yield	-	-	-	-	47.71	42.22	41.18	40.02	41.79	42.93
Total	Cultivation Area	555,000	550,000	500,000	560,000	700,000	800,000	795,891	786,513	883,882	869,003
	Production	3.00	2.91	2.84	3.45	9.80	12.26	14.31	14.09	15.77	15.77

Source: TSA 2011

Multipurpose use of corn in recent years has increased cultivated area of the corn for silage purposes. Corn production is preferred due to high yield, suitability for producing silage and high nutritive value (Chart 81).

The corn is used as grain, gren fodder and silage. Chopped version of the corn crop together with its all parts in a manner to be consumed by livestock animals is called fodder. For silage preparation, the corn must be harvested in early phases of grain development when the leaves of the crop are still green. The crop is cut closest to the surface together with the corncobs and slicing is performed with silage machine.

Chart 82. Consumption and Sufficiency Level of Corn in Turkey Extended to Years

Market Year*	Domestic Use (Million Ton)	Consumption As Food (Ton)	Consumption as Seeds (Ton)	Consumption As Feed (Million Ton)	Industrial Use (Ton)	Losses (Ton)	Stock Change (Ton)	Consumption Per Capita (Kg)	Sufficiency Rate (%)
2000/01	3.08	1.36	33,000	2.94	-	92,512	66,304	20.43	73.84
2001/02	3.35	1.46	30,000	2.96	-	100,763	9	21.59	64.85
2002/03	3.16	1.36	33,600	3.06	-	94,833	278	19.84	65.77
2003/04	4.14	2.79	34,200	2.03	-	124,338	16,787	25.78	66.88
2004/05	3.46	1.28	36,000	2.18	-	103,840	400,413	18.23	85.81
2005/06	4.37	0.99	16,000	1.66	169,900	122,200	-560,200	-	93.15
2006/07	4.21	1.02	14,000	1.76	151,000	110,900	490,500	-	86.53
2007/08	4.2	1.02	14,000	1.59	120,726	102,869	267,466	14.53	81.43
2008/09	5.19	1.04	14,875	3.87	140,703	124,373	-705,948	14.55	79.92
2009/10	5.15	1.20	14,800	3.69	117,873	123,675	-851,776	17.00	79.99

Source: TSA 2011
(*) Market Year: Covers July- June period for 2000/01 – 2004/05 and 1 June- 31 May Period for 2005/06 – 2007/08 - 2008/2009- 2009/2010 (see APPENDIX 1 for explanation)

The corn can be used in human dieting, animal feed and industrial raw material. In addition, its stems and leaves are used as animal feed as well as utilization in paper production and small fretwork/wickerwork articles. Different varieties of the corn can also be used as nuts in addition to these usage areas. In parallel with the increase in corn production, its involvement in feed, oil and sweetener industries and biofuel- bio ethanol production has also increased. Sufficiency rate of the corn in our country is around 80 % in 2008/09 and 2009/10 (Chart 82).

Chart 83. Sectoral Distribution of Corn Consumption in 2010

Area of Use	Quantity	Remarks (Average)
Usage as Feed material	Approximately 3,200,000 (71 %)	1,500,000 ton Broiller and Turkey Feed
		1,300,000 Ton Feed for Cattle- Sheep and Goats Feed
		400,000 Ton Chicken and Brood Feed
Starch industry	780,000 (% 17)	
Local consumption	300,000 (% 7)	
Industrial consumption	100,000 (% 2)	
Production losses	120,000 (% 3)	
Total	4,500,000	

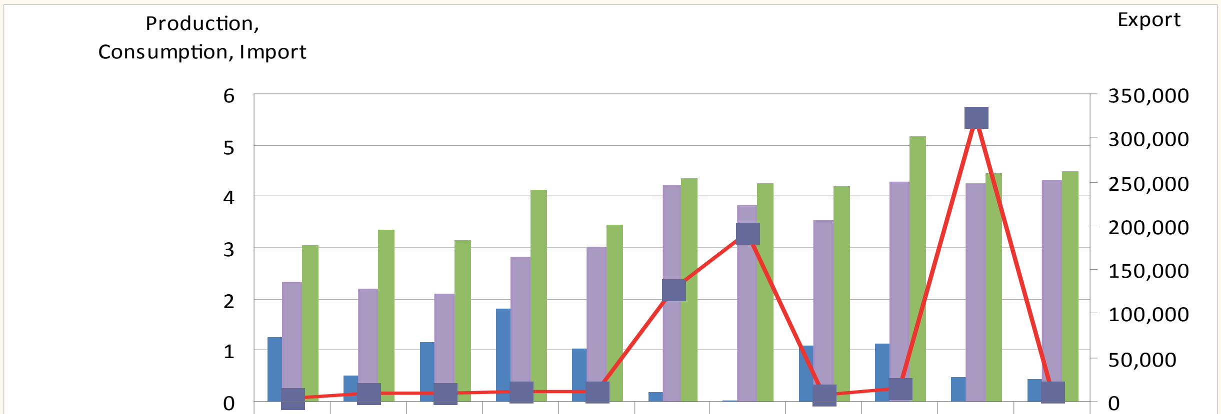
Source: TGB 2011

According to sectoral distribution of corn consumption in Turkey, highest share belongs to feed sector with 71 % share (Chart 83).

Chart 84. Turkey's Corn Import and Export Quantities Extended to Years						
Years	Import			Export		
	Quantity (Ton)	Value (Thousand $)	Av. Import Price ($/Ton)	Quantity (Ton)	Value (Thousand $)	Av. Export Price ($/Ton)
2000	1,286,190	146,887	114	3,963	4,096	1,034
2001	537,481	65,635	122	9,382	8,333	888
2002	1,179,937	133,754	113	9,019	10,953	1,214
2003	1,818,458	276,182	152	11,039	13,105	1,187
2004	1,049,744	190,477	182	10,525	15,805	1,502
2005	218,059	47,335	217	127,581	22,327	175
2006	30,579	12,702	415	192,950	35,951	186
2007	1,128,456	269,337	239	8,320	12,478	1,500
2008	1,151,407	381,938	332	15,056	24,948	1,657
2009	484,374	134,715	278	323,128	75,772	234
2010	450,760	123,722	274	10,655	26,014	2,442
Source: TSA 2011						

Import and export figures for 2000- 2010 period have been in Chart 84. Highest corn import volume in 2000- 2010 period was 1,818,458 tons in 2003 and highest corn export volume was in 323,128 in 2009. In 2010 season, corn export has been 10,655 tons while corn import has been 450,760 tons.

Graphic 56. Corn Production (million ton), Consumption (Million Ton), Import (Million Ton) and Export (Thousand Ton) in Turkey



	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
IMPORT	1.28	0.53	1.17	1.81	1.04	0.21	0.03	1,12	1.15	0.48	0.45
PRODUCTION	2.30	2.20	2.10	2.80	3.00	4.20	3.81	3.53	4.27	4.25	4.31
CONSUMPTION	3.08	3.35	3.16	4.14	3.46	4.37	4.27	4.21	5.18	4.47	4.50
EXPORT	3,963	9,382	9,019	11,039	10,525	127,58	192,95	8,320	15,056	323,12	10,655

Source: TSA 2011
Note: 2009- 2010 data represents the data on Division of Procurement and Protection of Turkish Grain Board.

The corn production failed to meet the domestic need for long years. The outstanding corn requirement was met via importing. In 2004, the cultivation areas and yield increase upon starting supporting policy for the corn production. Thus, the production deficit in 2005 was generally closed. Together with increased production in the country, the prices decreased. Corn cultivation and production areas diminished in 2006 due to the low corn prices in 2005.

Unfavourable climatic conditions prevailed in the world in 2007 also affected Turkey. The corn prices increased due to low amount of corn production resulted from the drought. Following the drought experienced in 2007 Turkish Grain Board (TGB) imported corn to regulate and balance the market again.

In 2008, the farmers expecting high prices of 2007 increased their corn cultivation areas. Therefore, the corn production in 2008 increased compared to the previous year. The total consumption remained the same with 2007 and consumption decrease was observed generally in feed, industrial usage and stock changes. The self sufficiency rate of the country was 86 % in 2007; however, it decreased to 81 % in 2008 and this situation was influential for the imports carried out in 2008.

The corn output for 2009 was 4.25 million tons representing 0.6 % decrease compared to previous year.

The corn production in 2010 has been 4.31 million tons representing 1.4 % increase compared to previous year. The consumption trend is foreseen to be same with the previous year.

Considering years 2000- 2010, it is seen TGB corn procument prices have been over world average prices (Chart 85).

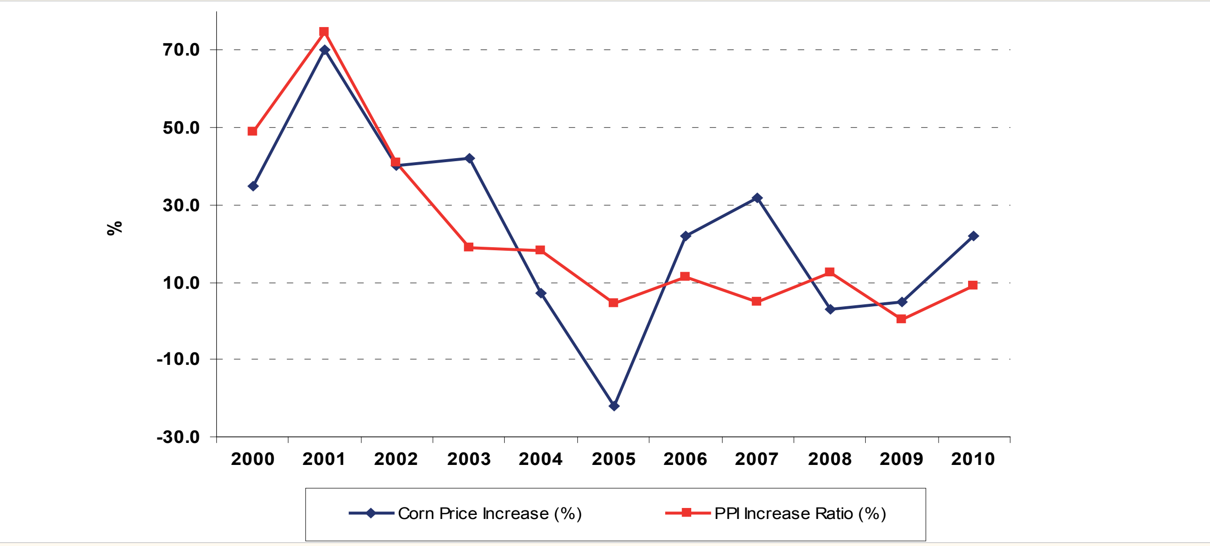
Chart 85. TGB Corn Procurement Price, PPI Increase Rate and World Price

Year	TGB Procurement Price (TL/Ton)	Producer Price Index Increase Rate (%)**	TGB Procurement Price ($/Ton)	World Price (FOB $/Ton) ***
2000	91.8	48.90	150	76
2001	155.8	74.70	143	91
2002	218.5	40.90	145	100
2003	310.0	19.10	210	108
2004	332.0	17.99	215	112
2005	260.0	4.38	196	99
2006	316.0*	11.19	215	122
2007	416.0*	5.02	350	156
2008	430.0	12.49	361	261
2009	450.0	0.47	302	156
2010	490.0	8.91	327	201

Source: TGB, TSA.
The procurement prices were calculated over TL/ton parity for all years. The foreign exchange buying rate of Central Bank effective on date of price announce of TGB was taken into consideration for $/ton calculations.
(*) Price at Commodity Exchange, TGB did not announce procurement price.
(**) shows annual change rates based on Producer Price Index (PPI) on August
(***) represents USD 3YC corn price on date of declaring the price.

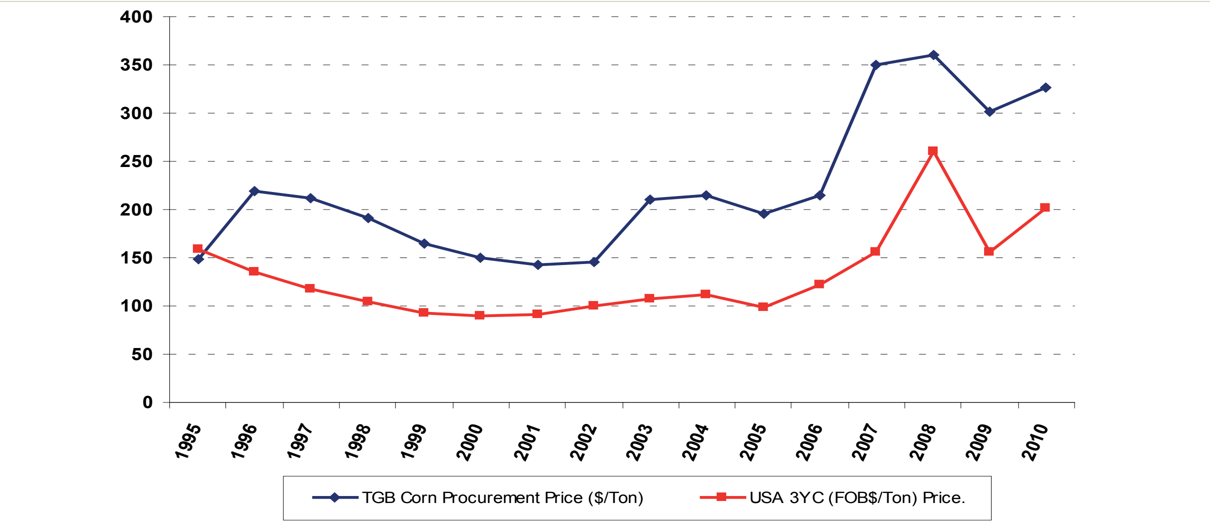
Corn price increase and PPI increase rates are shown in Chart 57 below.

Graphic 57. Increase in TGB Procurement Price for Corn and Increase Rate in Producer Price Index (PPI)



Source: TGB, TSA 2011

Graphic 58. Procurement Price Applied by TGB ($/Ton) and USA 3YC Corn (FOB $/Ton) Price



Source: TGB, Reuters 2011.

Chart 86 below shows monthly breakdown of the prices in mercantile exchanges in recent three years. Corn price has increased by 7 % in Adana Trade Exchange in 2010 compared to 2009 and traded in 430-491 TL/ton.

Chart 86. Average Corn Commodity Exchange Prices on Monthly Basis in 2008- 2010 Period (TL/Ton)												
Years	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**
2008	420	427	437	481	485	485	-	392	388	387	366	366
2009	394	435	442	456	453	461	501	456	409	413	414	413
2010	430	462	462	454	456	456	474	467	476	491	481	484
Source: Calculated based on daily prices received from Adana Commodity Exchanges												

Chart 87 below presents information on trade volumes of corn in mercantile exchanges in 2008-2010 period. Trade volume in 2010 has surpassed by trade volume of 2008 and 2009.

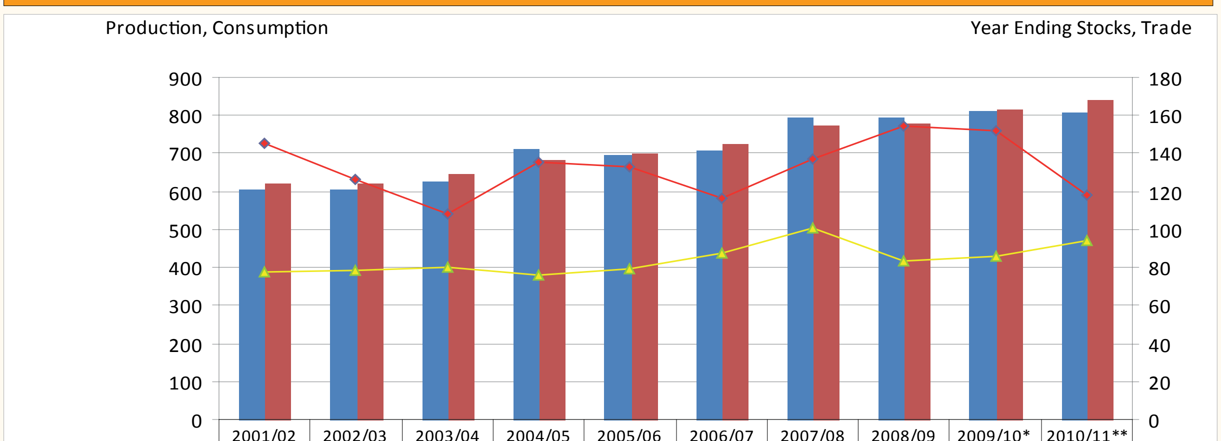
Chart 87. Commodity Exchange Transaction Quantities of Corn on Monthly Basis in 2008- 2010 Period (Ton)												
Years	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**
2008	10,854	8,770	2,891	11,192	3,180	7	-	2,698	147,067	35,766	11,697	88,354
2009	2,920	3,737	27,366	22,901	6,811	8,470	7,512	11,799	69,802	133,740	47,716	60,572
2010	12,252	34,718	33,175	21,983	39,177	38,111	39,953	54,265	100,822	100,977	41,978	58,936
Source: Calculated based on transaction volumes received from Adana Commodity Exchange												

2.5.3. Production, Consumption, Import, Export, Stocks and Prices in the World

The corn comes in first place among the grain in terms of yield while it is in the second place in terms of cultivation area. Excluding small fluctuations depending on the climatic conditions and small exceptions for the alternative products, corn production is generally on increase in the globe.

The corn has a significant place in animal feed as grain and green fodder. Production of oil, sweetener, and biofuel from corn and also its recent use as packaging material have increased the significance of this product.

Graphic 59. World Corn Balance Graphic (Million Ton)

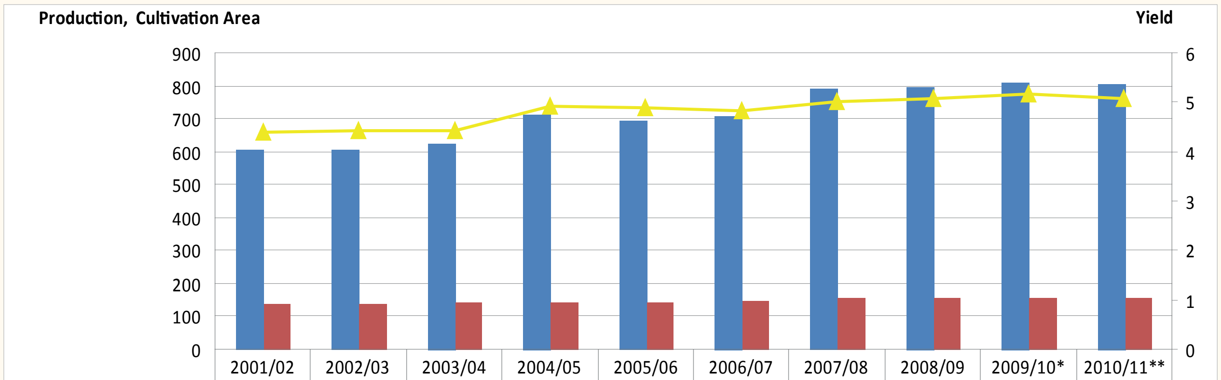


	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10*	2010/11**
Production	606.7	605.9	628.4	713.4	697.8	709.5	795.0	798.6	813.4	808.2
Consumption	622.2	624.9	646.4	685.9	700.9	725.3	774.9	780.8	816.2	842.3
Trade	77.5	78.4	80.4	76.0	79.3	87.3	101.1	83.6	86.2	94.4
Year Ending Stocks	145.3	126.2	108.1	135.7	132.5	116.7	136.8	154.6	151.8	117.7

Source: IGC March/2011 Report. (*) Estimate, (**) Forecast

Slight decrease is foreseen in world corn production in 2010/11 season; corn production and trade volume is estimated to increase and remarkable decrease is foreseen in year ending stocks (Graphic 59).

Graphic 60. Grain Corn Cultivation Area (Ha) , Production (Million Ton) and Yield (Ton/Ha) in the World



	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10*	2010/11**
Production	606.7	605.9	628.4	713.4	697.8	709.5	795.0	798.6	813.3	808.2
Cultivation Area	137.9	137.0	142.4	145.0	142.9	147.1	158.2	157.8	157.5	159.6
Yield	4.4	4.4	4.4	4.9	4.9	4.8	5.0	5.1	5.2	5.1

Source: IGC March/2011 Report (*) Estimate, (**) Forecast

In 2010/11, the world corn cultivation areas are expected to increase however yield is expected to decrease compared to previous year (Graphic 60).

The table below shows sowing and harvesting times of the corn in various countries. Thus, seeding time for corn continues on April- May in Turkey and that period corresponds to harvest period in countries such as India, Brazil and Argentina.

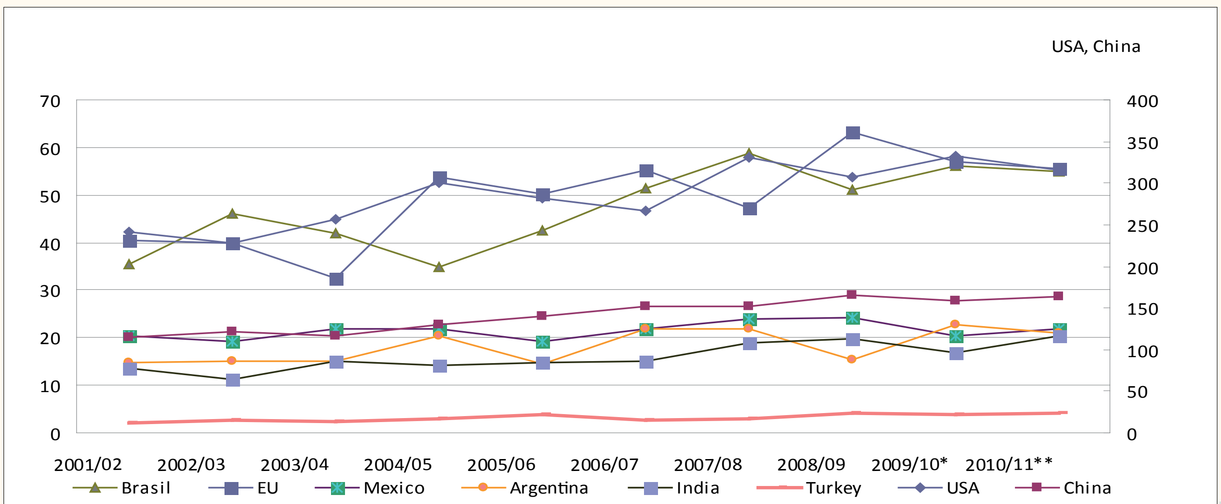
Table 2. Seeding and Harvesting Periods of Corn

	Jan	Feb	Mar	Apr	May	Jun	Jul	Agu	Sep	Oct	Nov	Dec
Turkey				1st Crop								
					2nd Crop							
EU												
China												
India												
USA												
Canada												
Brazil		1st Crop									1st Crop	
	2st Crop					2nd Crop						
Mexico												
Argentina												
	Sowing Period							Harvesting Period				

Chart 88. Corn Production in Major Producer Countries in the World (Million Ton)										
Countries	**2001/02**	**2002/03**	**2003/04**	**2004/05**	**2005/06**	**2006/07**	**2007/08**	**2008/09**	**2009/10***	**2010/11****
USA	241.4	227.8	256.3	299.9	282.3	267.5	331.2	307.1	332.6	316.2
China	114.1	121.3	115.8	130.3	139.4	151.6	152.3	165.9	158.0	164.0
Brazil	35.5	46.0	42.0	35.0	42.5	51.4	58.7	51.0	56.0	55.0
EU	40.5	39.9	32.4	53.7	50.3	55.2	47.3	63.1	57.1	55.5
Mexico	20.4	19.3	21.8	22	19.3	21.9	24.0	24.2	20.4	22.0
Argentina	14.7	15.0	15.0	20.5	14.4	21.8	22.0	15.5	22.7	21.0
India	13.5	11.1	15.0	14.2	14.7	15.1	19.0	19.7	16.7	20.5
Turkey	2.0	2.7	2.5	3.0	3.7	2.8	2.9	4.1	3.8	4.0
Other	124.6	122.8	127.6	134.7	131.1	122.2	137.6	148	146.1	150.0
World	**606.7**	**605.9**	**628.4**	**713.3**	**697.7**	**709.5**	**795.0**	**798.6**	**813.4**	**808.2**

Source: IGC March/2011 Report (*) Estimate, (**) Forecast
Note: EU(27) data includes EU(15) until 2003/04 period, EU(25) from 2004/05 to 2005/06 period and EU(27) for 2006/07-2009/10 period.

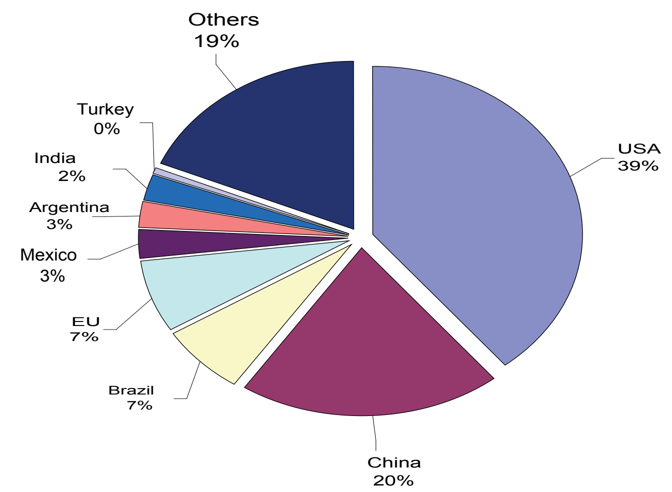
Graphic 61. Corn Production in Major Producer Countries in the World (Million Ton)



Source: IGC March/2011 Report (*) Estimate, (**) Forecast EU(27) data includes EU(15) until 2003/04 period, EU(25) from 2004/05 to 2005/06 period and EU(27) for 2006/07- 2009/10 period.

World corn production estimates for 2010/11 period has decreased 5 million tons compared to record breaking amount of previous year and become 808 million tons. Still, this value is considered to be second groundbreaking volume in corn production. Respective decrease in corn production mainly results from severe decrease in production estimates of USA, Argentina and EU (Chart 88 and Graphic 61).

Graphic 62. Shares of Major Countries in 2010/11 World Corn Production (%)



Source: IGC March/2011 Report. The percentages are calculated according to forecast figures for 2010/11 period.

According to 2010/11 forecasts, USA produces 39 % of world corn production while China produces 20 % (Graphic 62).

Chart 89. Corn Yield in Major Producer Countries and in Rest of the World (Ton/Ha)

Countries	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10*	2010/11**
USA	8.7	8.1	8.8	10.0	9.3	9.3	9.5	9.6	10.3	9.6
EU	8.9	8.9	7.4	8.2	8.3	5.9	5.9	7.0	6.8	6.9
China	4.7	4.9	4.8	5.1	5.3	5.6	5.4	5.7	5.0	5.2
Kazakhstan	3.2	3.2	4.2	3.0	3.2	3.4	4.2	3.0	3.0	3.3
Canada	6.6	7.0	7.8	8.2	8.5	8.4	8.5	9.0	8.4	9.7
Egypt	8.2	8.5	7.8	7.8	3.4	10.8	7.9	7.9	8.0	8.0
Argentina	6.0	6.4	6.5	6.0	4.5	7.6	52	6.2	7.8	6.6
Turkey	3.8	4.5	4.0	4.6	4.6	6.6	6.4	8.0	7.6	7.4
Mexico	2.6	2.7	2.8	2.8	2.9	3.0	2.9	3.3	3.2	3.0
World	**4.4**	**4.4**	**4.4**	**4.9**	**4.8**	**4.8**	**5.0**	**5.1**	**5.2**	**5.1**

Source: IGC March/2011 Report (*) Estimate, (**) Forecast

According to 2010/11 forecasts, highest corn yield in the world belongs to Canada that is followed by USA and Egypt (Chart 89).

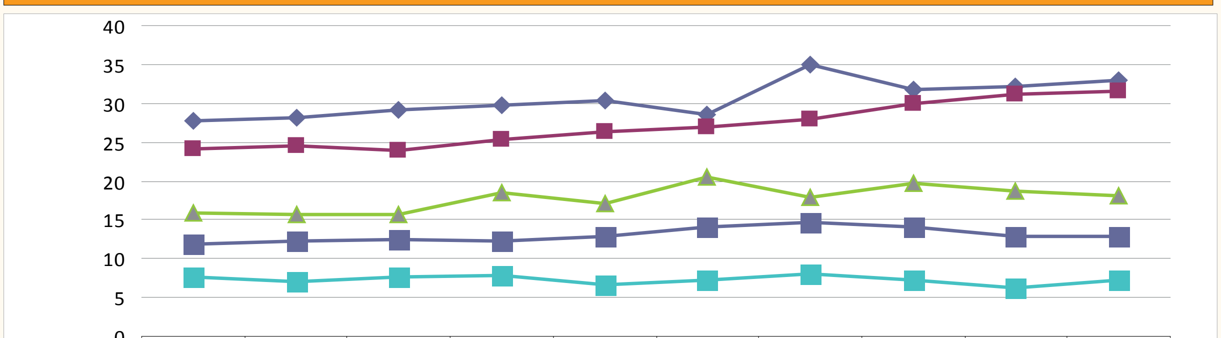
Chart 90. Corn Cultivation Areas in Major Producer Countries and in Rest of the World (Million Ha)

Countries	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10*	2010/11**
USA	27.8	28.1	29.2	29.7	30.3	28.5	35.0	31.8	32.2	33.0
China	24.2	24.6	24.0	25.4	26.3	26.9	28.0	29.9	31.2	31.5
EU	15.8	15.7	15.6	18.4	17.0	20.5	17.8	19.7	18.8	18.0
Brazil	11.8	12.3	12.4	12.2	12.9	14.0	14.6	14.1	12.9	12.8
Mexico	7.7	7.0	7.6	7.8	6.6	7.2	8.1	7.3	6.3	7.2
Indonesia	3.0	3.0	3.2	3.3	3.3	3.3	3.5	3.2	3.3	3.3
Philippines	2.4	2.3	2.4	2.4	2.4	2.6	2.6	2.7	2.7	2.7
Argentina	2.4	2.3	2.3	3.4	3.1	2.8	4.2	2.5	2.9	3.2
Ukraine	1.1	1.1	1.9	2.5	1.6	1.7	1.9	2.3	2.1	2.6
Canada	1.2	1.2	1.2	1.0	1.0	1.0	1.3	1.1	1.1	1.2
Turkey	0.5	0.6	0.6	0.6	0.8	0.4	0.4	0.5	0.5	0.5
World	**137.9**	**137.0**	**142.4**	**144.9**	**142.9**	**147.1**	**158.2**	**157.8**	**157.5**	**159.6**

Source: IGC March/2011 Report (*) Estimate, (**) Forecast
Note: EU(27) data includes EU(15) until 2003/04 period, EU(25) from 2004/05 to 2005/06 period and EU(27) for 2006/07-2009/10 period.

The corn cultivation areas in the world increased starting from 2000 due to increase in demand for in various branches of the industry (food, feed, starch, cosmetics, seed, nuts, frozen food). Even though cultivation area shrank in 2008- 2010 period due to unfavourable climate conditions, decrease in support (direct income) prices, shifting to alternative soy bean, it is estimated that cultivation area will increase 2.1 million ha in 2010/11 period compared to 2009/10 season (Chart 90).

Graphic 63. Corn Cultivation Areas in Major Producer Countries (Million Ha)



	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10*	2010/11**
USA	27.8	28.1	29.2	29.7	30.3	28.5	35	31.8	32.2	33
China	24.2	24.6	24	25.4	26.3	26.9	28	29.9	31.2	31.5
EU	15.8	15.7	15.6	18.4	17	20.5	17.8	19.7	18.7	18.0
Brasil	11.8	12.3	12.4	12.2	12.9	14	14.6	14.1	12.9	12.8
Mexico	7.7	7	7.6	7.8	6.6	7.2	8.1	7.3	6.3	7.2

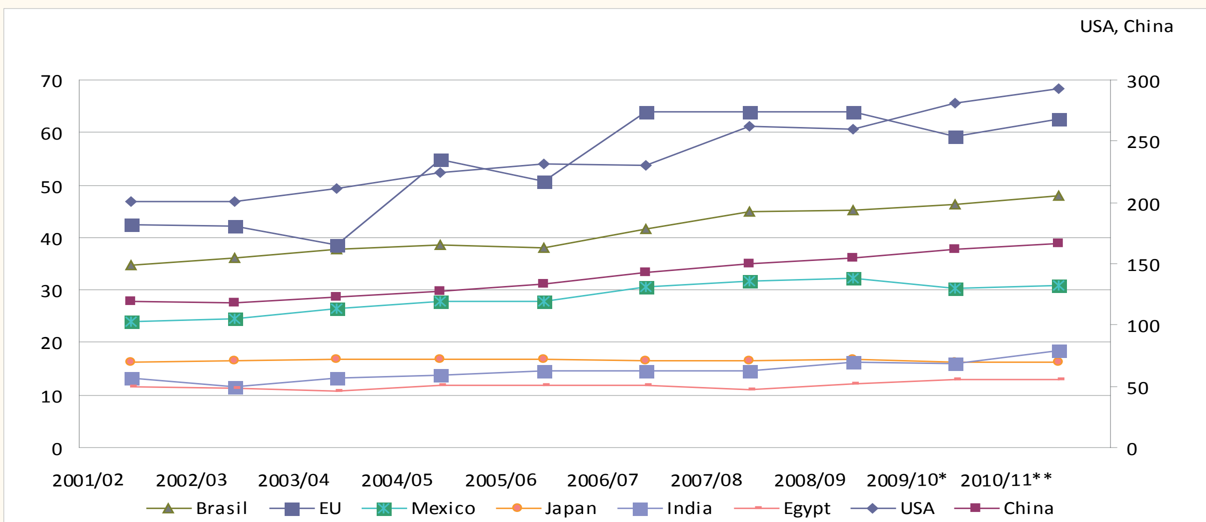
Source: IGC March/2011 Report (*) Estimate, (**) Forecast
Note: EU(27) data includes EU(15) until 2003/04 period, EU(25) from 2004/05 to 2005/06 period and EU(27) for 2006/07-2009/10 period.

USA, China and EU have the largest corn cultivation areas in the world and it is foreseen that USA will lead again in 2010/11 with its 33 million tons corn production representing 0.8 million tons increase compared to 2009/10 period which was 32.2 million tons (Graphic 63).

Chart 91. Corn Consumption in Major Consumer Countries in the World (Million Ton)										
Countries	**2001/02**	**2002/03**	**2003/04**	**2004/05**	**2005/06**	**2006/07**	**2007/08**	**2008/09**	**2009/10***	**2010/11****
USA	200.9	200.8	211.6	224.7	232.0	230.7	261.6	259.3	281.5	293.3
China	119.0	118.1	122.5	127.8	133.8	143.3	150.1	154.2	162.1	166.1
Brazil	34.7	36.1	37.7	38.5	38.0	41.5	44.8	45.2	46.3	47.9
EU	42.4	42.2	38.7	54.8	50.7	64.0	64.1	63.9	59.2	62.6
Mexico	23.9	24.6	26.6	27.9	27.9	30.6	31.8	32.3	30.4	31.0
Japan	16.2	16.5	16.8	16.8	16.8	16.6	16.5	16.7	16.3	16.2
India	13.1	11.7	13.3	13.7	14.7	14.7	14.5	16.2	16.1	18.5
Egypt	11.7	11.3	10.7	11.9	11.8	11.7	11.2	12.1	13.0	13.0
South Korea	8.7	8.8	8.7	8.7	8.6	8.8	8.6	7.9	8.5	8.0
Argentina	4.4	4.1	4.5	5.2	6.1	6.6	6.9	6.2	6.7	7.1
Turkey	3.2	3.9	3.6	3.5	3.5	3.7	4.1	4.2	4.1	4.0
Other	143.9	147.0	151.8	152.6	157.1	153.2	160.9	162.7	172.3	174.8
World	**622.2**	**624.9**	**646.4**	**685.9**	**700.9**	**725.3**	**774.9**	**780.8**	**816.2**	**842.3**

Source: IGC March/2011 Report. (*) Estimate, (**) Forecast
Note: EU(27) data includes EU(15) until 2003/04 period, EU(25) from 2004/05 to 2005/06 period and EU(27) for 2006/07-2009/10 period.

Graphic 64. Corn Consumption in Major Consumer Countries in the World (Million Ton)

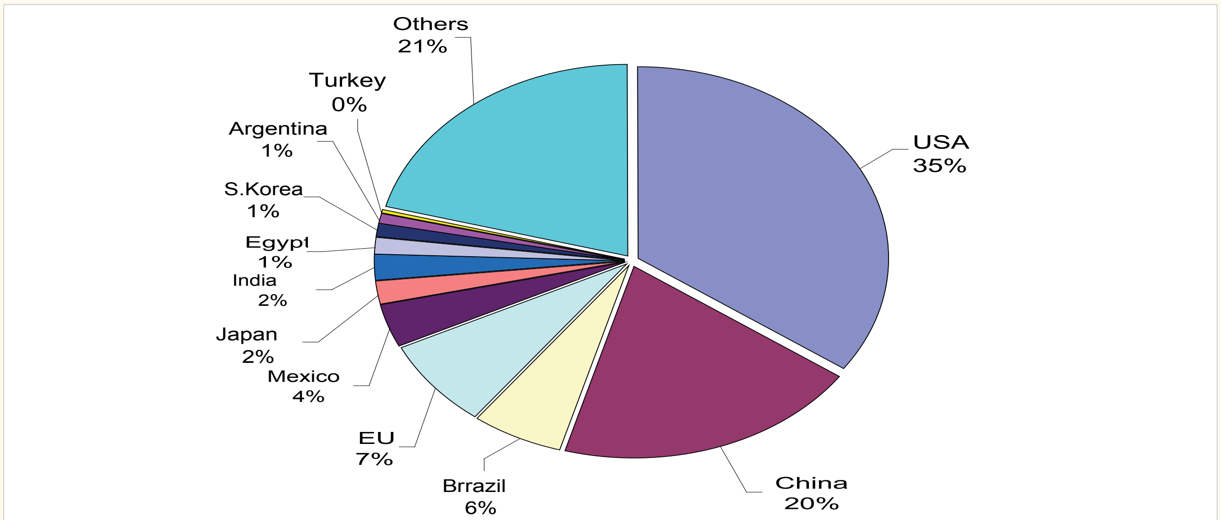


Source: IGC March/2011 Report. (*) Estimate, (**) Forecast
Note: EU(27) data includes EU(15) until 2003/04 period, EU(25) from 2004/05 to 2005/06 period and EU(27) for 2006/07-2009/10 period.

Global corn consumption foreseen for 2010/11 period has increased to groundbreaking volume of 842.3 million tons representing approximately 3 % increase (an increase of 26.1 million tons) compared to 2009/10 period (Chart 91, Graphic 64).

The forecast for Japan has remained unchanged as the damage of the earthquake and tsunami on corn processing factories in the region has not been measured yet.

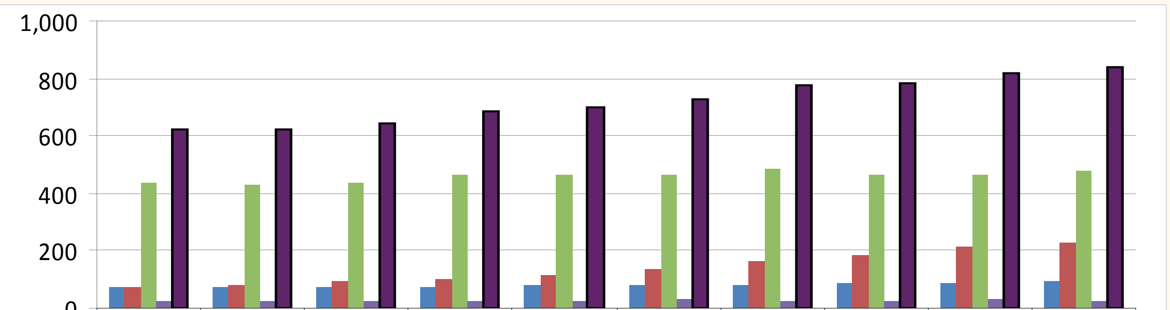
Graphic 65. Shares of Major Countries in 2010/11 World Corn Consumption (%)



Source: IGC March/2011 Report. The percentages are calculated according to forecast figures for 2010/11 period.

According to 2010/11 forecasts, USA leads in world corn consumption with 35 % share followed by China, EU, Brazil and Mexico. Total consumption in USA and China represents 55 % of the total consumption (Graphic 65).

Graphic 66. World Corn Consumption According to Utilization Areas (Million Ton)



	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10*	2010/11**
Food	76.5	77.5	78.2	78.8	80.9	84.0	86.4	90.3	93.0	95.3
Industrial	78.6	87.0	97.3	107.2	120.5	141.3	170.6	189.4	219.0	233.3
Feed	440.0	433.6	442.8	469.5	469.7	467.9	487.8	471.0	471.8	482.7
Others	27.1	26.8	28.0	30.4	29.9	32.1	30.2	30.1	32.4	31.0
Total	622.2	624.9	646.4	685.9	700.9	725.3	774.9	780.8	816.2	842.3

Source: IGC March/2011 Report. (*) Estimate, (**) Forecast

Total corn consumption is expected to increase by 3 % in 2010/11 period compared to the figures in 2009/10 period and corn consumption as animal feed is foreseen to increase by 2.3 % compared to previous year (Graphic 66).

Following strong growth period lasting years, industrial use of the corn is expected to improve and a slight improvement is also expected in usage of corn starch production. A minor increase in global corn use may cause major decline in world corn stocks.

It is foreseen that corn demand animal feed will increase 11 million tons and reach to 483 million tons which is the highest volume in last three years. Even though highest growth rates are expected in developing countries in Asia and Latin America, shrinking regional demand for high quality wheat and barley for animal feed will also trigger the consumption of corn in EU member countries. Industrial corn usage is foreseen to be 233 million tons.

Use of biofuels in the energy industry is a new development. In addition, the usage areas of biofuels are expanding. Some countries supports biofuel generation through some incentives including but not limited to tax exemptions and increase the blending rates. Thus, corn cultivation for biofuel requirement is developing in every passing year. Many countries in the world, especially developed countries, try to increase the share of renewable energy resources as a requirement of their energy policies. Thus, incentive and support programs were shaped under pertinent laws. For example, bio-diesel is exempted from taxation in Austria, France, Germany, Italy, Ireland, Norway, Sweden, Poland, Slovakia and Czech Republic.

Being biggest corn producer, USA used 44.2 million tons corn for ethanol purposes in 2005/06 season and its is foreseen that this figure will increase to 128 million tons in 2010/11 and use of corn for ethanol production was 9.4 million tons in 2005/06 period and it is foreesen that China will increase this figure to 11.5 million tons. Grain usage for bio ethanol purposes is steadily increasing in European Union. Even though EU entered into this business in 2004/05 period, it is forecasted that EU will use approximately 3.4 million ton corn for this purpose in 2010/11.

It is foreseen that 148.4 million tons of global corn production estimated to 842.3 million tons in 2010/11 will be used to produce ethanol and 137.1 million tons of corn will be used for generating bio-fuel (IGC Industrial Grain Utilization Report).

Chart 92. Corn Import in Major Import Countries and in Rest of the World (Million Ton)

Countries	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10*	2010/11**
Japan	16.2	16.5	16.2	16.0	16.5	16.2	15.2	16.0	16.5	16.1
Mexico	5.3	4.9	5.2	5.8	6.1	8.9	9.3	7.8	8.4	8.5
South Korea	8.0	8.7	9.9	7.9	9.3	8.6	9.2	6.9	7.8	7.8
Egypt	5.5	4.8	4.1	4.9	4.3	4.8	4.3	5.2	5.3	6.0
EU	2.8	3.1	5.4	2.8	2.7	5.2	15.0	3.5	2.2	6.5
Turkey	1.2	1.3	1.2	0.3	0.1	0.9	1.1	0.5	0.5	0.2
Other	38.5	39.1	39.1	38.3	40.2	42.7	47.0	43.7	45.5	49.3
World	**77.5**	**78.4**	**81.1**	**76.0**	**79.2**	**87.3**	**101.1**	**83.6**	**86.2**	**94.4**

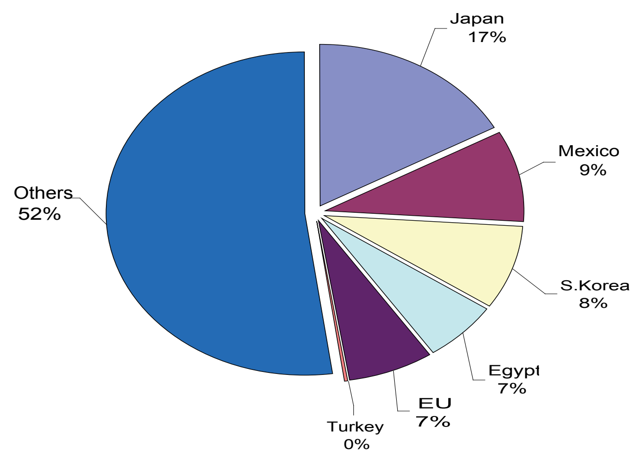
Source: IGC March/2011 Report. (*) Estimate, (**) Forecast
Note: EU(27) data includes EU(15) until 2003/04 period, EU(25) from 2004/05 to 2005/06 period and EU(27) for 2006/07-2009/10 period.

In 2010/11 period, high demand for corn is expected to increase global trade and it is foreseen that global corn trade will reach to 94.4 million ton increasing 8.2 million tons compared to 2009/10 and this figure will be highest in recent 3 years (Charts 92, 94)

To reflect speed of transport that has been stronger than expected, import volume of EU will reach to 6.5 million tons representing 4.3 million tons increase compared to previous year.

Decreasing animal feed grain harvest and shrinkage supply of wheat and barley in Black Sea has increased procurements in EU countries and the suppliers has been mostly Brazil, Ukraine and Serbia. Even though severe drought experienced in Russia in 2010 was expected to introduce remarkable increase in demand for the corn, the procurements have been in nominal levels so far. Recent natural disasters in Japan have caused short term delays or redirections in shipments; however, trade forecasts in commercial year ending on June 2011 has not changed compared to previous month and remained at 16.1 million tons.

Graphic 67. Shares of Corn Major Importing Countries (%)



Source: IGC March/2011 Report. The percentages are calculated according to forecast figures for 2010/11 period.

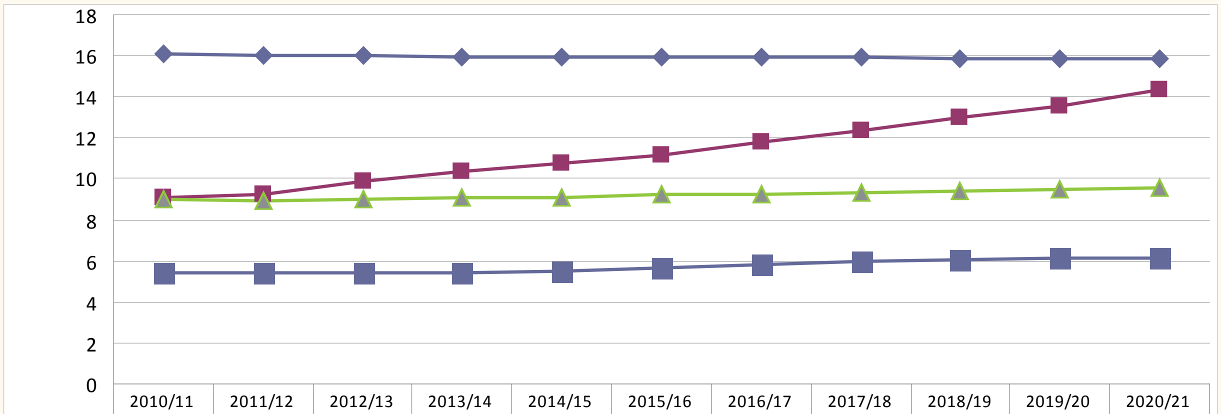
According to corn import forecasts, Japan leads in corn import with 17 % share followed by Mexico, South Korea, Egypt and EU respectively (Graphic 67).

Chart 93. Corn Import Projections for Future (Million Ton)

Countries	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21
Japan	16.1	16.0	16.0	16.0	15.9	15.9	15.9	15.9	15.9	15.8	15.8
Mexico	9.1	9.2	9.9	10.4	10.8	11.1	11.8	12.3	13.0	13.6	14.3
South Korea	9.0	9.0	9.0	9.1	9.1	9.2	9.3	9.3	9.4	9.5	9.5
Egypt	5.4	5.4	5.4	5.5	5.5	5.6	5.8	6.0	6.1	6.1	6.2
Taiwan	4.7	4.9	4.9	4.9	4.9	5.0	5.0	5.0	5.0	5.0	5.0
EU	4.5	3.4	3.0	2.8	2.7	3.0	3.0	3.0	2.8	2.8	2.6
Canada	1.8	1.8	1.9	1.9	1.9	1.8	1.8	1.8	1.9	1.9	1.8
China	1.0	1.2	1.8	2.5	3.2	4.1	4.9	5.8	6.6	7.5	8.0
Turkey	0.7	0.8	0.8	0.9	0.9	1.0	1.0	1.0	1.1	1.1	1.2
USA	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
World	**93.2**	**93.0**	**95.2**	**97.4**	**99.3**	**102.3**	**104.8**	**107.5**	**109.4**	**111.6**	**113.2**

Source: USDA 2020 Projection (February 2011)

Graphic 68. Future Corn Import Projections of Major Importer Countries (Million Ton)



	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21
Japan	16,1	16,0	16,0	16,0	15,9	15,9	15,9	15,9	15,9	15,8	15,8
Mexico	9,1	9,2	9,9	10,4	10,8	11,1	11,8	12,3	13,0	13,6	14,3
S.Korea	9,0	9,0	9,0	9,1	9,1	9,2	9,3	9,3	9,4	9,5	9,5
Egypt	5,4	5,4	5,4	5,5	5,5	5,6	5,8	6,0	6,1	6,1	6,2

Source: USDA 2020 Projection (February 2011)

Corn import of Japan is foreseen to decrease to 15.8 million tons by 2020 and Mexico is foreseen to increase its import to 14.3 million ton by 2020 (Chart 93, Graphic 68).

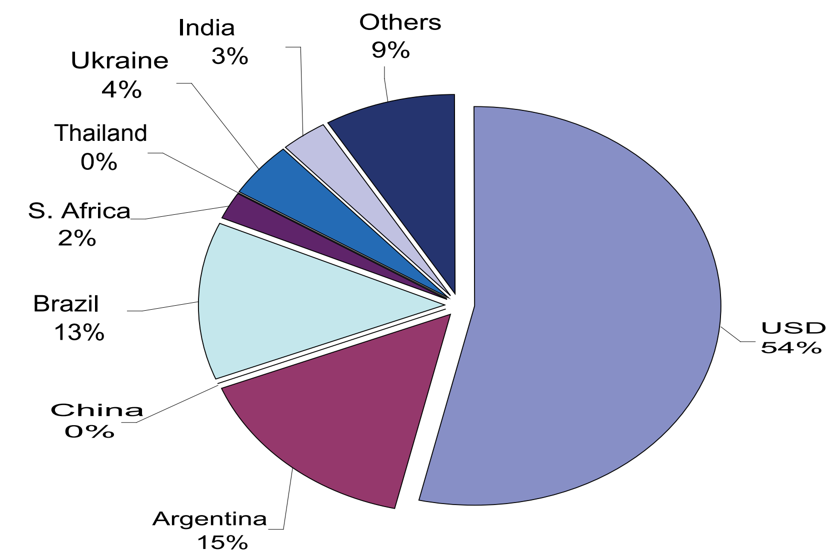
Chart 94. World Corn Export and Major Exporter Countries (Million Ton)

Countries	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10*	2010/11**
USA	50.0	42.5	45.8	46.8	51	55.6	62.2	45.8	50.7	50.5
Argentina	9.2	11.5	9.9	12.4	11.4	13.2	15.0	12.1	12.9	14.5
China	6.3	14.8	11.3	5.6	5.9	4.4	1.3	0.2	0.2	0.1
Brazil	4.9	2.4	5.7	2.6	1.2	5.9	10.6	6.8	6.4	12.0
South Africa	1.3	1.0	1.0	1.0	2.2	0.5	0.6	2.4	1.4	2.0
Thailand	0.3	0.2	0.8	0.9	0.1	0.5	0.3	0.5	1	0.2
Ukraine	0.3	0.9	1.1	2.2	2.6	1.1	1.6	5.5	5.3	4.0
India	0	0	0.8	0.5	0.4	0.5	4.4	2.5	1.9	3.0
Other	5.2	5.1	4.7	4.0	4.5	5.6	5.1	7.8	6.4	8.1
World	**77.5**	**78.4**	**81.1**	**76.0**	**79.3**	**87.3**	**101.1**	**83.6**	**86.2**	**94.4**

Source: IGC March/2011 Report. (*) Estimate, (**) Forecast

USA, leading corn exporter of the world, is expected to increase its export to 50.5 million tons in 2010/11. Even though sales pending are above the average, export activities are expected to accelerate in next coming months (Chart 94).

Graphic 69. Shares of Major Exporter Countries in 2010/11 World Corn Export (%)



Source: IGC March/2011 Report. Calculated using the figures foreseen for MY 2010/11.

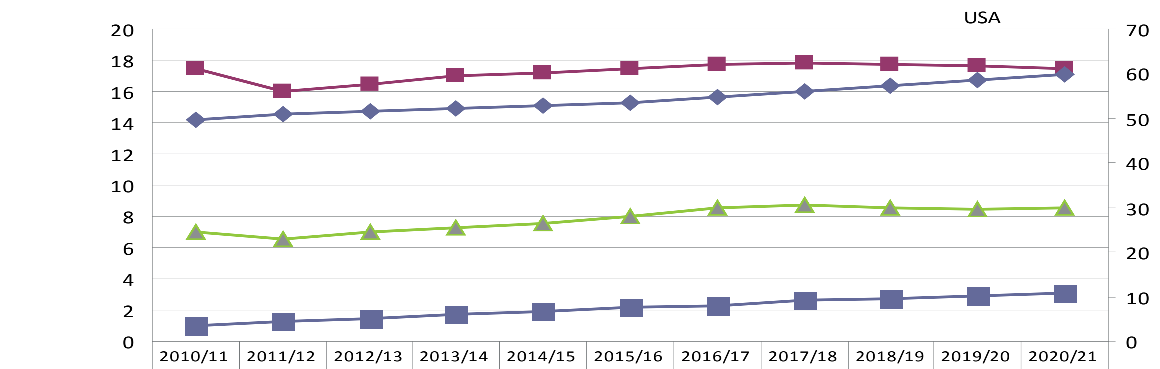
Similar to the corn production tendency in 2010/11, USA leads in corn export with 54 % share and is followed by Argentina with 15 % share (Graphic 69).

Chart 95. Corn Export Projections for Future (Million Ton)

Countries	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21
USA	49.5	50.8	51.4	52.1	52.7	53.3	54.6	55.9	57.2	58.4	59.7
Argentina	17.5	16.0	16.5	17.0	17.2	17.5	17.7	17.8	17.7	17.7	17.4
Brazil	7.0	6.5	7.0	7.2	7.5	8.0	8.5	8.8	8.5	8.5	8.5
EU	1.0	1.3	1.5	1.7	1.9	2.2	2.3	2.6	2.7	2.9	3.1
China	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1
World	**93.2**	**93.0**	**95.2**	**97.4**	**99.3**	**102.3**	**104.8**	**107.5**	**109.4**	**111.6**	**113.2**

Source: USDA 2020 Projection, February 2011.

Graphic 70. Future Corn Export Projections of Major Exporter Countries (Million Ton)



	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21
Argentina	17.5	16.0	16.5	17.0	17.2	17.5	17.7	17.8	17.7	17.7	17.4
Brasil	7.0	6.5	7.0	7.2	7.5	8.0	8.5	8.8	8.5	8.5	8.5
EU	1.0	1.3	1.5	1.7	1.9	2.2	2.3	2.6	2.7	2.9	3.1
USA	49.5	50.8	51.4	52.1	52.7	53.3	54.6	55.9	57.2	58.4	59.7

Source: USDA 2020 Projection (February 2011)

Corn has a dominant position in feed grains traded in international markets. Corn is expected to increase its rate in the grains slowly and reach to 78 % in expectation period. The driving factors for the increase of corn's share are higher development in yield compared to other grains, new varieties creating competitiveness in wider climatic regions, preference for feed, bio fuel and other industrial usages.

USA corn export is expected to continue increasing in next ten year period and reach to a ground breaking volume by 2020. Nevertheless, high quality wheat is foreseen to compete with USA corn export at the beginning of the forecast period due to wide supply of the wheat. It is foreseen that current 60 % share of USA in world corn trade will reduce to 53 % by 2020 in line with increase in exports in Community of United Nations, Brazil, EU and Argentina (Chart 95, Graphic 70).

Chart 96. Corn Ending Stocks of Some Countries and of the World (Million Ton)

Countries	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10*	2010/11**
China	72.5	60.5	46.3	41.3	43.2	46.4	48.1	59.7	56.8	55.5
USA	40.6	27.6	24.3	53.7	50.0	33.1	41.3	42.5	43.4	17.1
EU	3.4	4.1	2.4	6.2	8.9	9.3	6.0	6.2	5.7	4.4
Mexico	3.4	3.2	4.1	4.2	2.4	2.5	4.1	3.7	1.5	1.5
South Africa	2.7	3.0	3.4	3.7	2.3	1.7	2.7	3.4	4.0	2.3
Brazil	1.2	6.6	6.9	3.3	4.2	4.5	11.2	11.1	10.2	9.1
Other	21.5	21.2	20.7	23.4	21.5	19.3	23.4	28.1	30.3	27.8
World	**145.3**	**126.2**	**108.1**	**135.7**	**132.5**	**116.7**	**136.8**	**154.6**	**151.8**	**117.7**

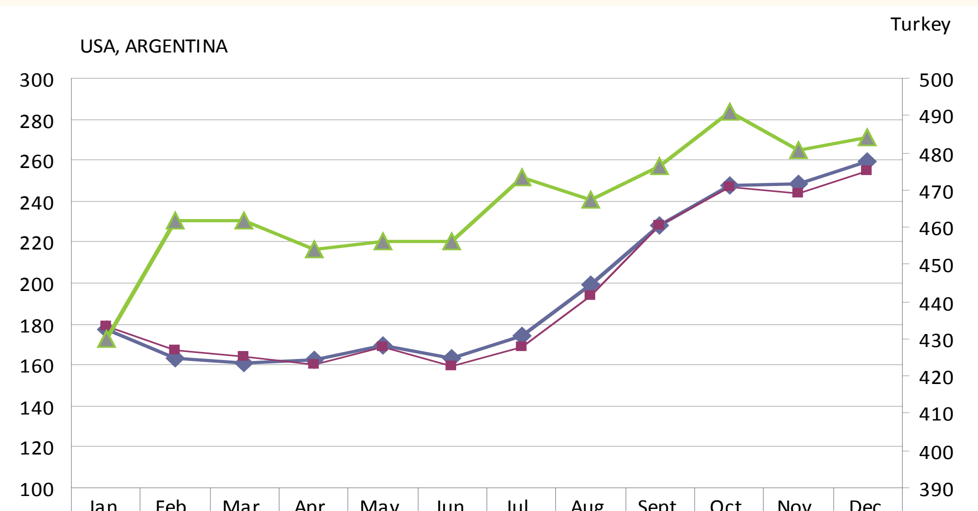
Source: IGC March/2011 Report. (*) Estimate, (**) Forecast
Note: EU(27) data includes EU(15) until 2003/04 period, EU(25) from 2004/05 to 2005/06 period and EU(27) for 2007/07-2009/10 period.

Whereas the corn supply is narrower in 2010/11 compared to previous year in spite of peak demands in corn, it is foreseen that ending stocks will decrease by 34 million tons in 2010/11 and decrease to 118 million tons which is lowest stock since 2006/07 period and USA ending stock is also foreseen to decrease to 17.1 million tons which is lowest volume of last ten years (Chart 96).

Chart 97. World Corn Price (FOB $/Ton)						
Years	**USA 3YC Gulf**	**Argentina Up River**	**China**	**Japan**	**Mexico**	**Brazil Paranagua**
2000	91	89	117	148	139	-
2001	90	84	115	141	137	-
2002	115	90	119	137	135	-
2003	117	105	118	135	133	-
2004	109	131	119	137	135	-
2005	99	90	-	-	-	-
2006	122	115	-	-	-	-
2007	200	-	-	-	-	-
2008	228	211	-	-	-	166
2009	172	170	-	-	-	175
2010	195	197	-	-	-	204

Source: Reuters. The price information given represents the prices realized in Adana Commodity Exchanges.

Graphic 71. World Corn Prices in 2010 (FOB $/Ton)

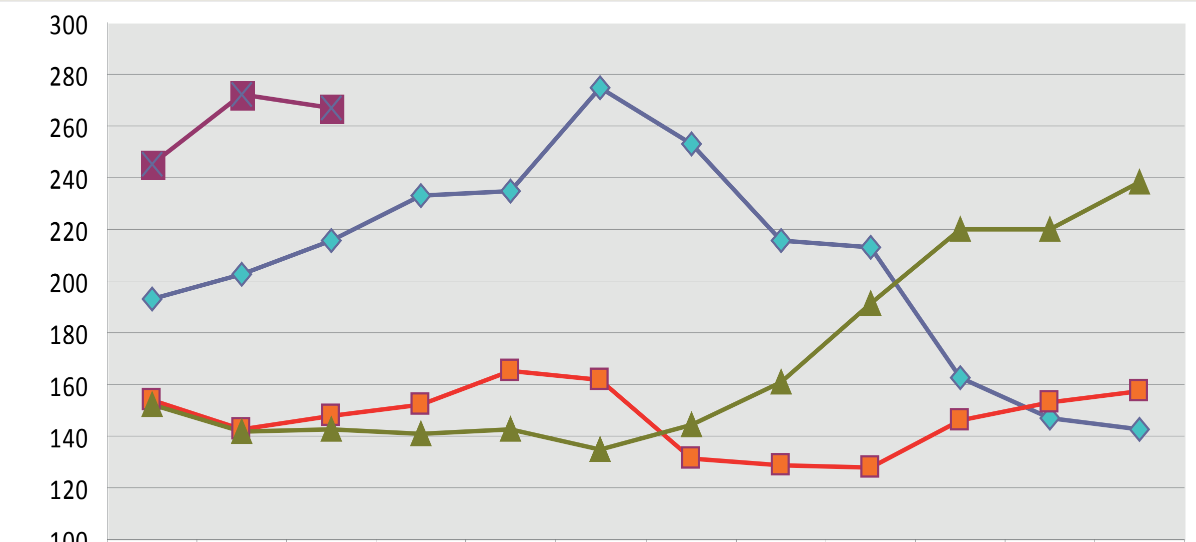


	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sept.	Oct.	Nov.	Dec.
ARGENTINA (Up River)	178	163	161	162	170	164	175	199	229	248	249	259
USA (3YC Fob Gulf)	179	167	164	160	169	159	169	194	228	247	244	255
TURKEY	430	462	462	454	456	456	474	467	476	491	480	484

Source: IGC, Reuters 2011

Global corn prices has increased depending on the increase in oil prices, demand for bio fuel and animal feed requirement and prices in Turkey have also been affected from these factors (Chart 97, Graphic 71).

Graphic 72. Monthly Option Prices (US 3YC) for Corn in USA Chicago Mercantile Exchange ($/Ton)



	January	February	March	April	May	June	July	August	September	October	November	December
2008	193	203	216	233	235	275	253	216	213	163	147	143
2009	154	143	148	152	165	162	131	129	128	146	153	157
2010	152	142	143	141	143	135	144	161	191	220	220	238
2011	245	272	267									

Source: IGC April 2011
Note: Option transactions in USA Commodity Exchanges are realized for March, May, July, September and December and the Chart provides the data of the nearest month.

Option trade price of corn in US Chicago Mercantile Exchange (US 3YC) was 152 $/ton in January 2010; however, it has increased to 238 $/ton in December of the same year due to unfavourable weather conditions in Argentina, increase of China's demand for the corn and impacts of developments in other markets (Graphic 72).

2.6. Paddy

2.6.1. Vegetal characteristics

Paddy (Oryza L.) is the most important cultivated crop after wheat. The rice obtained through processing the paddy has close usage quantity and rate with wheat in human dieting due to its richness for amino acids content which is an absolute requirement for dieting even though the rice is poor in terms of its protein content.

Paddy crop expanded from South India to China in 3000 AD and towards Java in 1000 AD. It was brought to Europe 300 AD during the Asian raids of Alexander the Great. It is accepted that the paddy crop reached Anatolia in 15th century from the south over Egypt and first paddy cultivation was performed in Tosya (Kastamonu) (Gecit et al. 2009).

Paddy is the only grain crop that can use oxygen dissolved in water without its roots rotting in the water. It is not a selective crop in terms of soil requirement. It can be cultivated in almost any type of soil that can preserve the water. However, the crop develops better in soils with pH 3-8. Paddy requires excessive water as its roots can be cultivated only in water. The temperature of the irrigation water should not decrease below 12 oC or increase above 30 ºC. The ideal temperature for irrigation water must be 25–30 ºC. The paddy crop is harvested when its trunk and clusters become yellowish and hang downwards. The paddy crop harvested is dried and threshed. The harvest and threshing of paddy crop is being done with harvester thresher machines.

There are 45 registered varieties in our country and only 15 of them are being cultivated and all paddy varieties produced are developed in research institutions of Ministry of Agriculture and Rural Affairs.

Mostly used variety with highest yield is Osmancik variety. 95 % of the paddy cultivation areas is used for cultivation of this variety.

As the rice production is done only in irrigable areas in our country, the size of cultivation areas cannot be changed easily as it is the case for other vegetal crops. Furthermore, the paddy cultivation is subjected to special permit under Law No 3039 dated 11.06.1936 to protect the public health (Gecit et al, 2009).

Below is given Basic Definitions concerning Paddy Processing Technology:

Paddy: Grain in husk

Brown Rice: Grained removed from the husk but not subjected to processing and polishing operation

Rice: Final product husked and brightened

Beer Rice: Smallest parts of the crushed rice grains generally in ¼ length of a normal grain It is used in beer production and other fermented products.

Crushed grains: Rice grains smaller than ¾ of the complete grain size. A particular amount is used for fermentation in beer production.

Rice bran: It is obtained during husking operation that is one of processing steps of rice. It is composed of the husks and shells peeled off. It is used in livestock breeding and cake industry.

Rice Bran Oil: High quality oil extracted from rice bran

Rice Flour: It is obtained during husking process. The husk peeled off is composed of seed shell (testa) and fruit shell (pericarp). It is used for human dieting and animal feeding.

Husk: It is used as fuel and insulation material.

Through processing 100 kg paddy, it is obtained

55-60 kg grain rice,

7-8 kg crushed rice,

8-10 kg bran,

2- 3 kg photocell return (chalky rice grains with red line and damages)

2 kg raw/green grain

15-20 kg husk is obtained.

2.6.2. Production, Consumption, Import, Export, Stocks and Prices of Paddy in Turkey

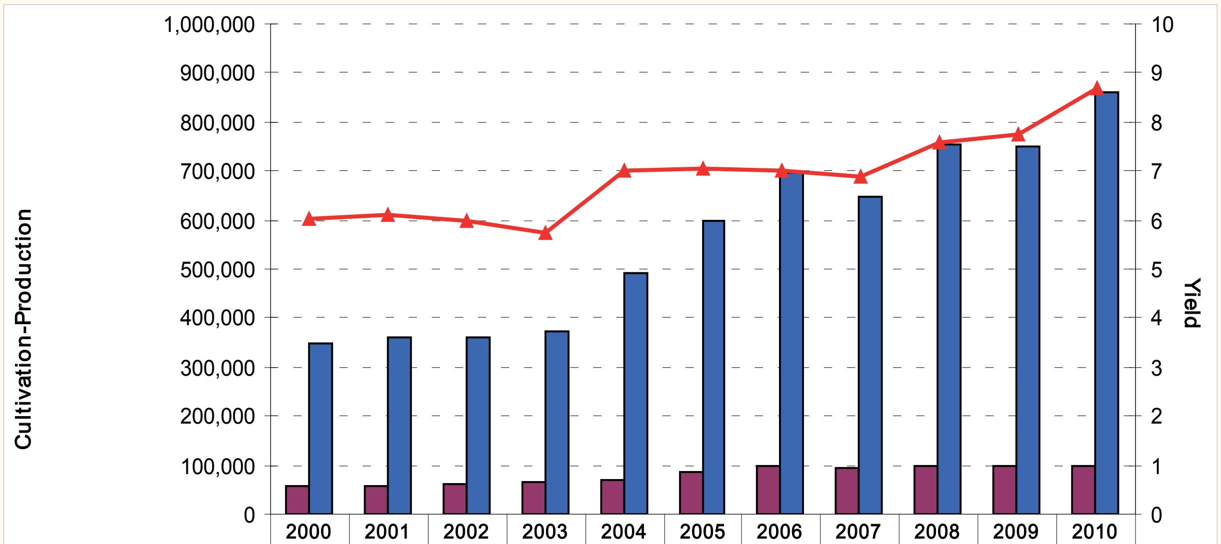
In 2000, 350 thousand tons of paddy was produced on 58 thousand ha area corresponding to yield of 6.04 ton/ha and the production volume has been 860,000 tons from 99 thousand ha area corresponding to 8.69 ton/ha yield in 2010. There is significant increase in cultivation area, production volume and yield of paddy in our country (Chart 98, Graphic 73).

Chart 98. Paddy Production, Cultivation Area and Yield in Turkey

Year	Cultivation Area (Ha)	Production (Ton)	Yield (Ton/Ha)
2000	58.000	350.000	6,04
2001	59.000	360.000	6,10
2002	60.000	360.000	6,00
2003	65.000	372.000	5,72
2004	70.000	490.000	7,00
2005	85.000	600.000	7,06
2006	99.100	696.000	7,02
2007	93.900	648.000	6,90
2008	99.500	753.000	7,57
2009	97.000	750.000	7,75
2010	99.000	860.000	8,69

Source: TSA 2011

Graphic 73. Production, Cultivation Area and Yield of Paddy in Turkey



	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Cultiv ation Area (Ha)	58,000	59,000	60,000	65,000	70,000	85,000	99,100	93,900	99,500	97,000	99,000
Production (Ton)	350,000	360,000	360,000	372,000	490,000	600,000	696,000	648,000	753,325	750,000	860,000
Yield (Ton/Ha)	6.04	6.10	6.00	5.72	7.00	7.06	7.02	6.90	7.57	7.75	8.69

Source: TSA 2011

Being 350 thousand tons in 2000, the paddy production has increased to 860 thousand tons in 2010 representing 146 % increase in ten years time (Graphic 73).

Chart 99. Paddy Production in Turkey According to TSA and USDA Statistics

Years	Paddy Production in Turkey	
	TSA	USDA
2000	350,000	354,000
2001	360,000	360,000
2002	360,000	360,000
2003	372,000	415,000
2004	490,000	500,000
2005	600,000	600,000
2006	696,000	675,000
2007	648,000	600,000
2008	753,000	700,000
2009	750,000	667,000
2010	860,000	750,000

Source: TSA 2011. USDA 2011.

According to 2010 data of TSA, paddy production of Turkey is 860 thousand tons (Chart 99).

Chart 100. Consumption, Stock Change and Sufficiency Level of Rice in Turkey Extended to Years							
Market Year*	Domestic Use (Ton)	Consump-tion as Seeds (Ton)	Consump-tion As Food (Ton)	Losses (Ton)	Stock Change (ton)	Consump-tion Per Capita (Kg)	Sufficiency Rate (%)
2000/01	497,797	7,080	479,517	11,200	4,256	7.17	41.34
2001/02	520,915	7,200	501,995	11,721	2,283	7.39	40.64
2002/03	593,532	7,800	572,377	13,354	6,829	8.31	35.66
2003/04	315,451	8,400	299,953	7,098	14,683	4.30	69.34
2004/05	588,078	10,200	564,646	13,232	-31,562	7.99	48.99
2005/06	558,460	11,890	534,990	11,580	2,610	-	63.82
2006/07	580,030	11,270	555,320	13,440	-15,420	-	71.28
2007/08	636,651	11,268	612,874	12,510	-36,324	8.68	60.46
2008/09	591,436	19,900	556,993	14,543	3,165	7.79	75.66
2009/10	589,000	15,000	560,000	14,000	166,078	7.72	75.64
2010/11	634,000	20,000	600,000	14,000	-81,192	8.27	80.57

Source: TSA 2011
(*) Market Year: Covers September- August period (see APPENDIX 1 for explanation)

Rice consumption per capita is 8 kg and total annual demand is between 580- 600 thousand tons. In addition to direct consumption, the rice is also consumed in feed industry in form of rice flour and rice barn and in livestock breeding through adding to different rations. As seen in Chart 100, rice sufficiency level has been increasing in our country in every year.

Table 3. Paddy Production Regions in Turkey

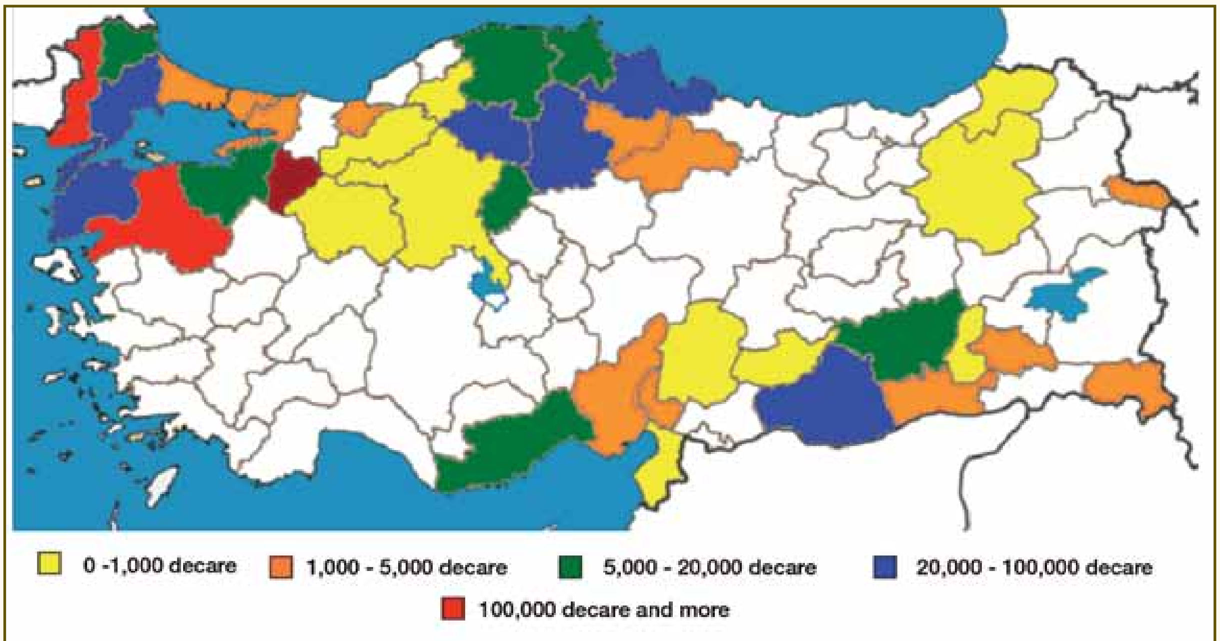


Chart 101. Provinces Producing Paddy in Turkey (2010)					
Provinces	**Cultivated Area (Da)**	**Production (Ton)**	**Provinces**	**Cultivated Area (Da)**	**Production (Ton)**
Edirne	350,875	341,318	Tokat	1,859	1,368
Samsun	144,638	125,182	Amasya	1,360	1,025
Balıkesir	120,109	101,737	Adana	1,189	845
Çanakkale	97,651	79,321	Mardin	1,165	377
Çorum	77,755	60,615	İzmir	816	879
Şanlıurfa	33,445	17,885	Hakkari	695	260
Tekirdağ	27,153	26,330	Artvin	563	364
Diyarbakır	24,376	12,346	Bolu	467	84
Çankırı	22,297	18,291	Antakya	466	151
Bursa	22,175	16,820	Osmaniye	380	228
Sinop	20,161	18,901	Karabük	333	305
Kırklareli	14,443	15,488	Erzurum	225	134
Kastamonu	6,005	3,883	Ankara	221	214
Kırıkkale	5,718	6,021	Adıyaman	158	64
Mersin	4,851	2,590	Bingöl	144	77
Iğdır	4,041	3,048	K.Maraş	62	23
İstanbul	2,140	2,076	Siirt	5	3
Düzce	2,059	1,747	**Total**	**990,000**	**860,000**
Source: TSA 2011					

Paddy crop has only 0.6 % share in cultivated lands of Turkey and its share in agricultural production is 1.5 %. 990 thousand decare agriculture area in 35 provinces is used for cultivation of paddy crop. Marmara Region leads in terms of cultivated area size and production obtained. Approximately 635 thousand decare area is used for cultivation of paddy in Marmara Region. This figure represents approximately 68 % of the total paddy cultivation areas in our country. Marmara Region is followed by Black Sea, Central Anatolia, outheastern Anatolia and Mediterranean Regions respectively in terms of size of cultivation areas (Chart 101).

Chart 102. Turkey's Paddy Export and Import Quantities Extended to Years						
Years	Export			Import		
	Quantity (Ton)	Value (Thousand $)	Av. Export Price ($/Ton)	Quantity (Ton)	Value (Thousand $)	Av. Import Price ($/Ton)
2000	335	206	615	304,183	59,591	196
2001	234	179	762	135,069	24,437	181
2002	187	173	924	292,024	48,803	167
2003	398	375	944	247,724	55,538	224
2004	298	334	1.119	35,432	15,254	431
2005	298	351	1.178	102,197	26,231	257
2006	238	292	1.230	105,005	28,786	274
2007	157	258	1.640	6,016	2,101	349
2008	235	269	1.147	45,307	19,823	438
2009	198	314	1.585	62,617	25,906	414
2010	310	377	1.213	409,199	172,977	423
Source: TSA 2011						

Chart 102 shows yearly breakdown of paddy import and export values of Turkey. In 2010 season, paddy export has been 310 tons while paddy import has been 409,199 tons One of the reasons for increase of import quantites in 2010 is the rise of rice exports within the scope of interior cultivation system.

As the paddy production in our country cannot meet the domestic requirement, our country imports paddy or processed rice in almost every harvest period.

Chart 103. Turkey's Rice Export and Import Quantities Extended to Years						
Years	Export			Import		
	Quantity (Ton)	Value (Thousand $)	Av. Export Price ($/Ton)	Quantity (Ton)	Value (Thousand $)	Av. Import Price ($/Ton)
2000	1,435	706	492	146,909	48,576	331
2001	774	343	444	137,967	33,246	241
2002	307	222	723	131,431	37,031	282
2003	337	287	852	213,528	65,453	307
2004	475	760	1,603	103,887	39,496	380
2005	421	539	1,279	158,423	60,149	380
2006	465	590	1,268	113,175	43,267	382
2007	729	1,010	1,385	184,911	108,576	587
2008	4,058	4,986	1,229	179,603	144,310	803
2009	14,083	14,702	1,044	154,387	103,535	671
2010	51,050	46,757	916	125,643	91,340	727
Source: TSA 2011						

Chart 103 shows yearly breakdown of rice import and export values of Turkey. Rice import of Turkey has been 125,643 tons in 2010 while the rice export has been 51,050 tons. The reason for increase in 2010 exports is the exports made within the scope of interior cultivation system.

Chart 104. Turkey's Cargo (Brown Rice) Export and Import Quantities Extended to Years						
Years	Export			Import		
	Quantity (Ton)	Value (Thousand $)	Av. Export Price ($/Ton)	Quantity (Ton)	Value (Thousand $)	Av. Import Price ($/Ton)
2000	34	31	889	234	49	208
2001	49	42	863	0	0	0
2002	58	38	660	2,734	362	132
2003	48	50	1,036	10,935	1,694	155
2004	79	94	1,196	26,177	7,174	274
2005	77	112	1,455	42,193	10,806	256
2006	58	86	1,475	54,430	17,051	313
2007	79	119	1,519	4,840	2,074	428
2008	86	165	1,912	15,087	8,654	574
2009	125	235	1,887	5,172	3,314	0
2010	242	452	1,870	264	224	848
Source: TSA 2011						

Chart 104 shows yearly breakdown of Cargo (brown rice) import and export values of Turkey. In 2010 season, brown rice (cargo) export has been 242 tons while brown rice import has been 264 tons.

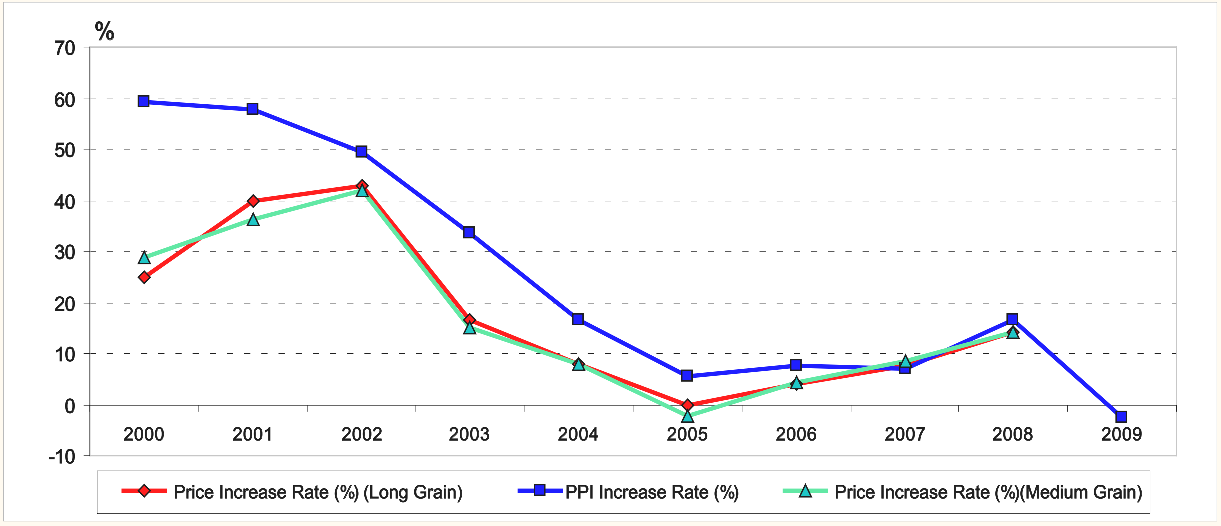
Chart 105. Prices of Paddy and Rice in the Market (TL/Ton)															
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Av.
2008	PADDY	Baldo	810	820	880	1,170	1,450	1,400	1,400	1,400	980	1,140	1,260	1,110	1,150
		Osmancık	730	730	780	1,150	1,029	1,230	1,270	1,270	920	940	970	940	1,020
	RICE	Baldo	1,820	1,880	1,960	3,180	3,650	3,490	3,460	3,520	2,950	2,570	2,600	2,580	2,800
		Osmancık	1,300	1,380	1,490	2,300	2,610	2,470	2,500	2,450	2,090	1,670	1,700	1,720	1,970
2009	PADDY	Baldo	1,081	1,178	1,325	1,344	1,369	1,60	1,472	1,457	1,260	1,369	1,413	1,380	1,420
		Osmancık	944	1,040	1,247	1,212	1,239	1,289	1,339	1,316	1,158	1,118	1,117	1,072	1,170
	RICE	Baldo	2,535	2,653	2,972	2,955	2,993	3,080	3,210	3,228	3,070	2,945	2,988	2,980	2,967
		Osmancık	1,733	1,828	2,146	2,128	2,170	2,252	2,373	2,420	2,223	2,040	2,038	2,044	2,116
2010	PADDY	Baldo	1,425	1,425	1,438	1,319	1,275	1,300	1,300	1,270	1,231	1,316	1,294	1,63	1,321
		Osmancık	1,127	1,206	1,165	1,051	997	1,038	1,048	980	938	993	1,007	1,041	1,047
	RICE	Baldo	3,070	3,140	3,118	3,023	2,480	2,936	2,883	2,904	2,868	2,835	2,760	2,778	2,938
		Osmancık	2,093	2,118	2,134	2,065	1,990	1,970	1,945	1,930	1,913	1,955	1,860	1,860	1,986
Source: Market values obtained from Branch Directorates of Edirne, Kırklareli, Tekirdağ, Bandırma, Polatlı and Samsun (wholesale rice prices)															

Chart 105 shows paddy and rice prices in 2008- 2010 period. Paddy and rice prices increased in 2009 and the prices decreased din 2010 based on the increase in production.

Chart 106. TGB Procurement Price for Long and Medium Grain Paddy (TL/Ton)						
Years	**Paddy (Long Grain) Purchase Price (TL/Ton)**	**Procurement Price (Long Grain) ($/Ton)**	**Paddy (Medium Grain) Purchase Price (TL/Ton)**	**Procurement Price (Medium Grain) ($/Ton)**	**Producer Price Index Increase Rate (%)***	**World (USA Long Grain) Paddy Price (FOB $/Ton)**
2000	300	487	290	471	59.16	-
2001	420	361	395	340	57.71	216
2002	600	419	560	391	49.30	132
2003	700	491	645	452	33.69	181
2004	756	549	696	506	16.52	242
2005	720	530	650	478	5.59	201
2006*	720	494	650	446	7.66	239
2007*	750	568	680	515	7.14	275
2008*	870	717	790	651	16.53	458
2009***	-	-	-	-	-2.46	326
2010***	-	-	-	-	9.21	308

Source: TGB, Official Journal . (*) The prices for 2006, 2007 and 2008 were given in TL/ton.
(**) shows annual change rates based on Producer Price Index (PPI) on May. (***) TGB did not announce any Interven- tion Procurement Price.

Graphic 74. Procurement Price Increase Rate Applied by TGB and Increase Rate in Producer Price Index (PPI)

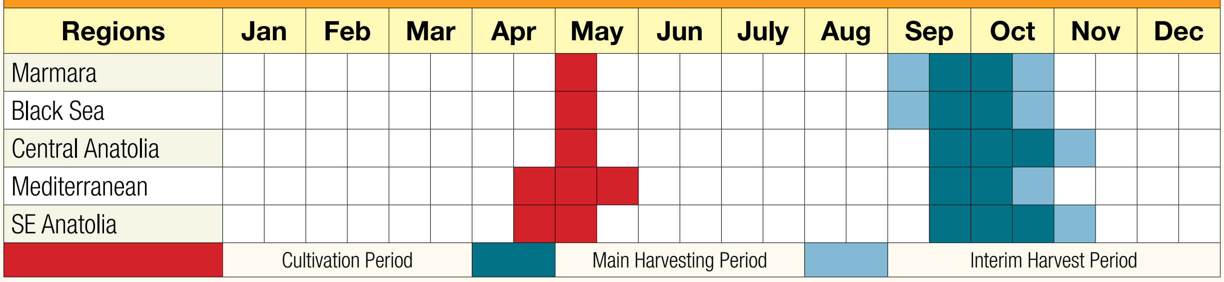


Source: TGB, TSA 2010

For determination of intervention purchase and sales prices by Turkish Grain Board (TGB), production costs, inflation rate, production quantity, developments in the world markets, prices of previous year and sustainability of the production are taken into consideration.

The Table 4 below shows sowing and harvesting periods of paddy according to the regions where it is cultivated in our country.

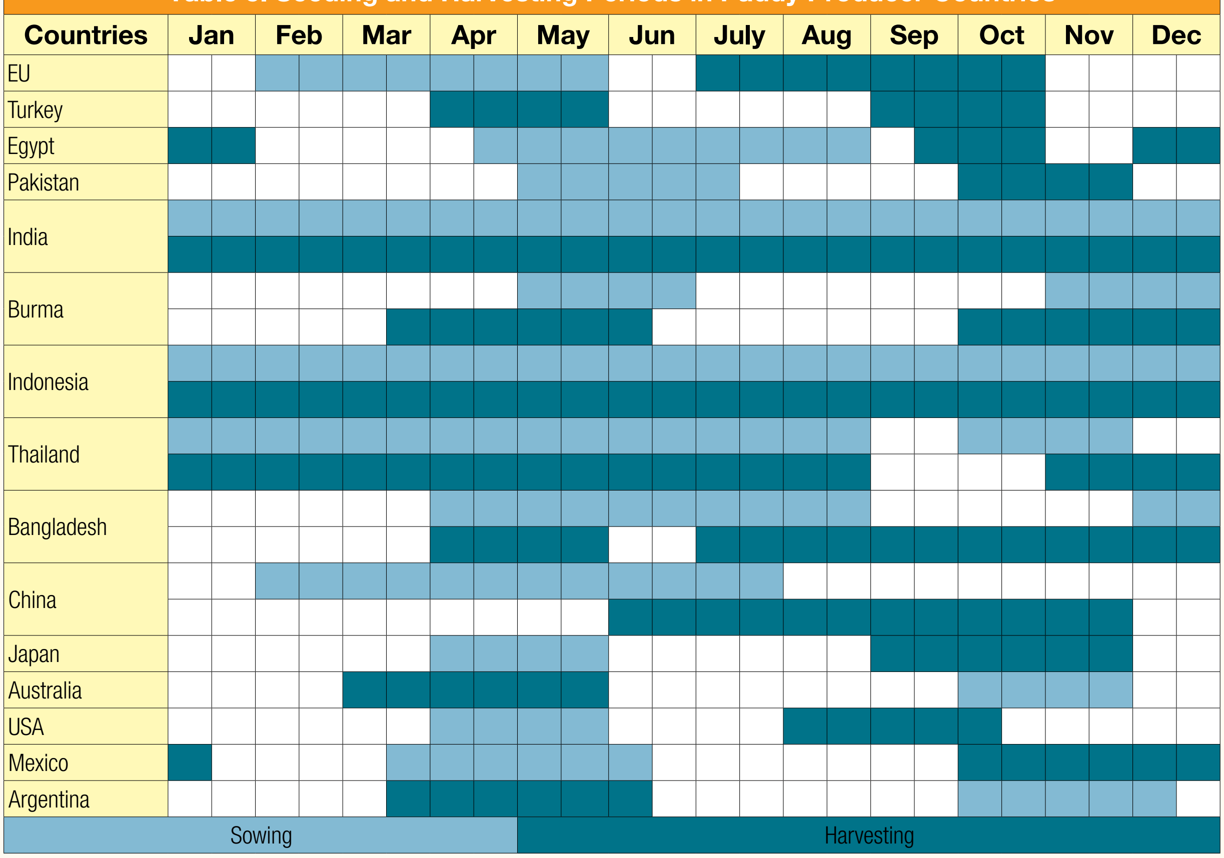
Table 4. Paddy Sowing and Harvesting Period for the Cultivation Areas in Turkey



2.6.3. Production, Consumption, Import, Export, Stocks and Prices in the World

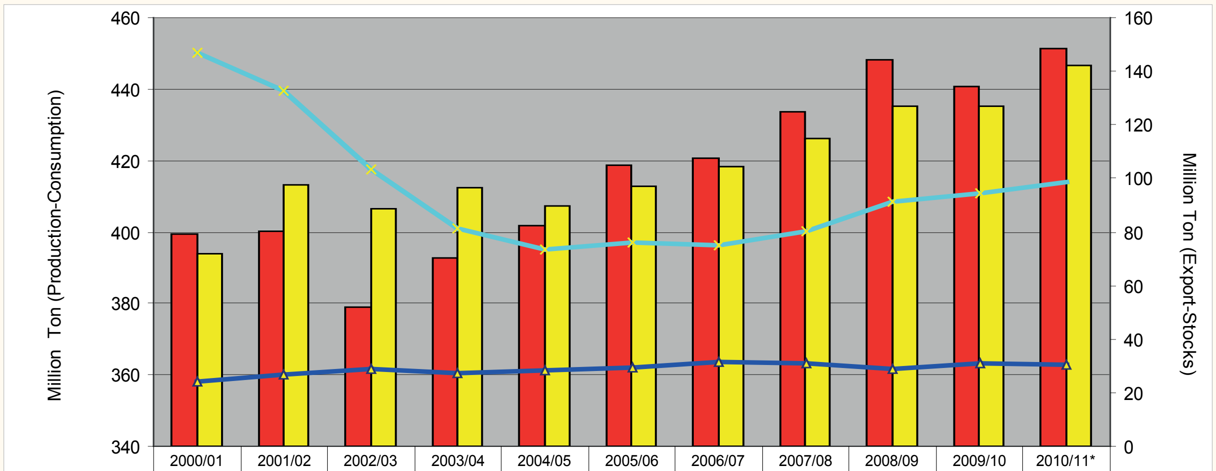
Approximately 158 thousand hectare area is used for cultivation of paddy in the world. This figure corresponds to 10 % of total cultivated areas. The distribution of paddy cultivation areas differs compared with the other hot climate grains. 60 % of the world population lives in Asia continent and majority of the paddy cultivation areas are in this continent. This continent produces 80 - 90 % of the paddy cultivation. Majority of the paddy produced is consumed again in Asia continent. Asia continent realizes more than 75 % of paddy export and more than 40 of the import. The countries in Africa continent is the second largest import community in paddy industry and the demand in these countries increase by 2 % every passing year. Leading rice suppliers in Africa are Thailand, Vietnam, China and India.

Table 5. Seeding and Harvesting Periods in Paddy Producer Countries



As seen in Table 5, India and Indonesia can sow and harvest paddy in 12 months of the year.

Graphic 75. World Rice Balance Graphic (Million Ton)



	2000/01	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11*
Production	399,5	400,3	379	392,6	401,8	418,6	420,8	433,6	448,1	440,9	451,5
Consumption	393,9	413,2	406,5	412,4	407,3	412,7	418,4	426,3	435,2	435,3	446,5
Export	24,1	26,9	28,7	27,4	28,3	29,2	31,5	31,2	28,9	30,7	30,6
Stocks	146,7	132,9	103,2	81,1	73,4	76,2	74,8	80,3	91,5	94,3	98,8

Source: USDA 2011 (*) Forecast.

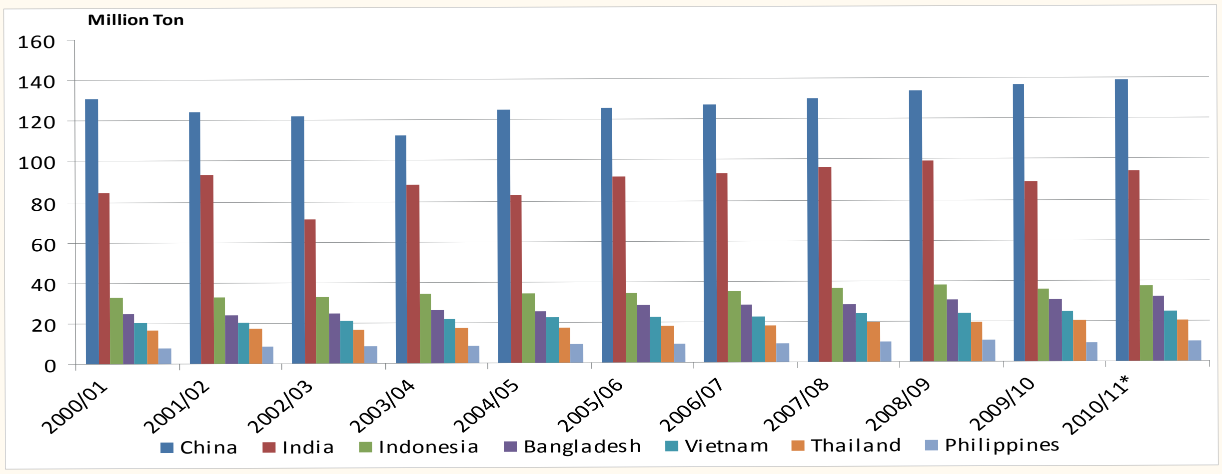
An increase is expected in world rice production, consumption and year ending stocks in 2010/11 and slight decrease is expected in trade of the rice (Graphic 75).

Chart 107. World Rice Production and Major Producer Countries (Million Ton)

Countries	2000/01	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11*
China	131.5	124.3	122.2	112.5	125.4	126.4	127.2	130.2	134.3	137.0	139.0
India	85.0	93.3	71.8	88.5	83.1	91.8	93.4	96.7	99.2	89.1	94.5
Indonesia	33.0	33.0	33.4	35.0	34.8	35.0	35.3	37.0	38.3	36.4	37.5
Bangladesh	25.1	24.3	25.2	26.2	25.6	28.8	29.0	28.8	31.0	31.0	32.3
Vietnam	20.5	21.0	21.5	22.1	22.7	22.8	22.9	24.4	24.4	25.0	25.0
Thailand	17.1	17.5	17.2	18.0	17.4	18.2	18.3	19.8	19.9	20.3	20.4
Philippines	8.1	8.5	8.5	9.2	9.4	9.8	9.8	10.5	10.8	9.8	10.4
Turkey	0.2	0.2	0.2	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.5
Other	79.0	78.2	79.0	80.9	83.1	85.5	84.6	86.7	88.8	91.9	91.9
World	**399.5**	**400.3**	**379.0**	**392.6**	**401.8**	**418.6**	**420.8**	**433.6**	**448.1**	**440.9**	**451.5**

Source: USDA 2011 (*) Forecast.

Graphic 76. World Rice Production and Major Producer Countries

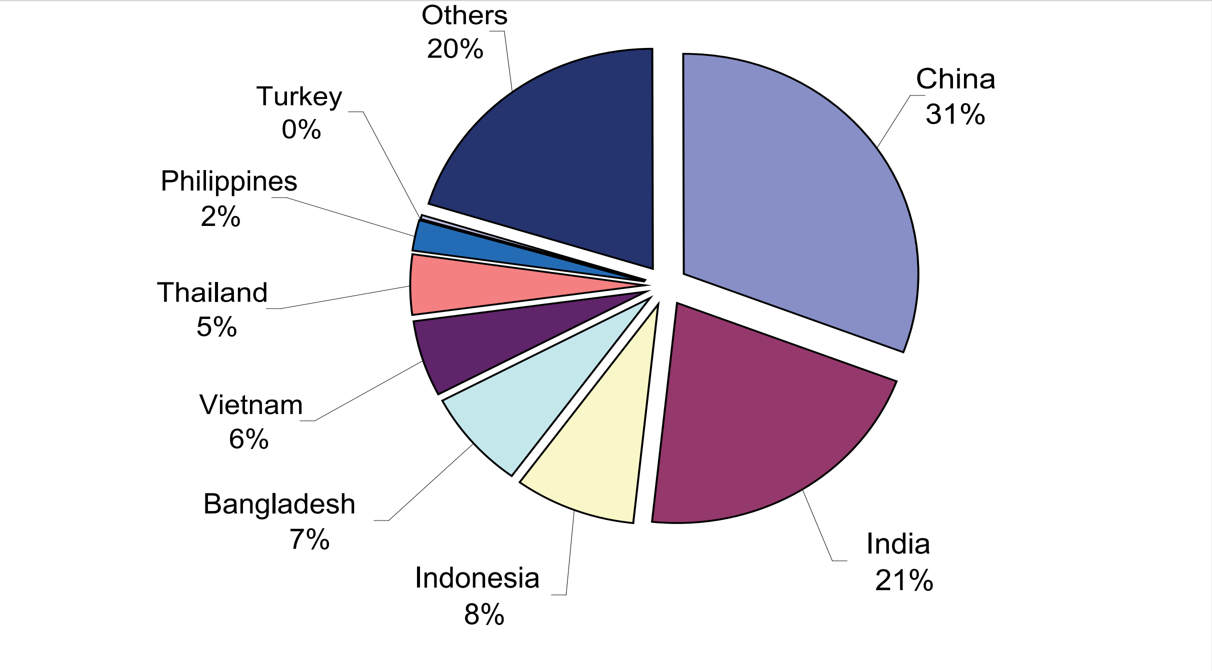


Source: USDA 2011 (*) Forecast.

Approximately 85 % of the rice is directly used for human dieting. This rate differs in countries depending on the development level and local consumption preferences in the countries. It is foreseen that world rice production will be 451.5 million tons in 2010/11 period representing 10.6 million ton increase compared to previous year (Chart 107, Graphic 76).

Major factors of such increase are elimination of drought in India in 2009/10 period resulting decrease in yield and production volume as well as production increase expected in China and Thailand. Higher production volumes in leading rice producer countries in Asia continent support forecasts and estimations made for the season. Yield has increased in some Asian countries depending on increased harvest amount and more moderate increases have also been observed in Sub- Saharan Africa and South America.

Graphic 77. Shares of Major Producer Countries in 2010/11 Rice Production (%)



Source: USDA 2011 (*) Forecast.

It is estimated that China will produce 31 % of world rice production in 2010/11 and India will produce 21 % in the same period (Graphic 77).

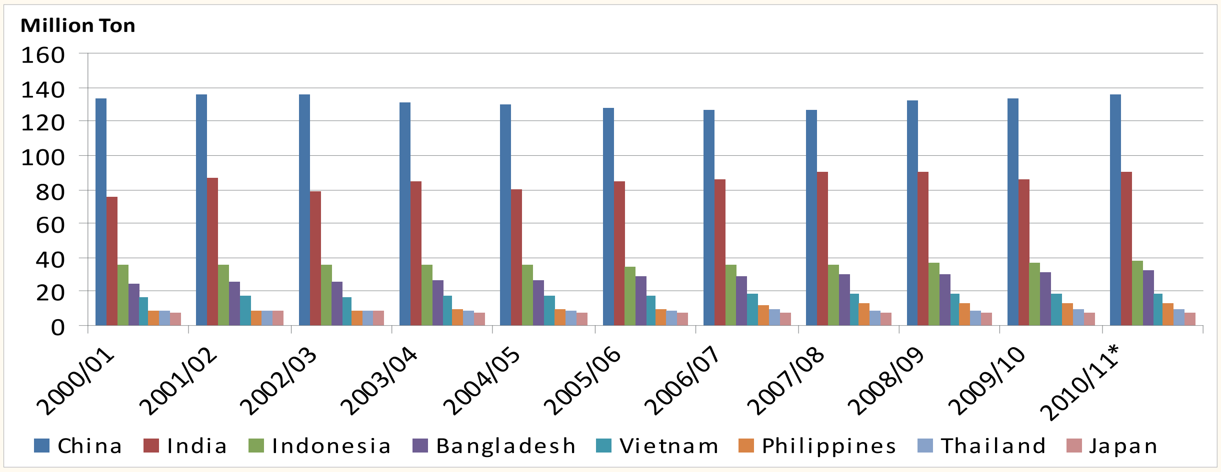
Chart 108. Paddy Yield in Major Producer Countries and in Rest of the World (Ton/Ha)											
Countries	**2000/01**	**2001/02**	**2002/03**	**2003/04**	**2004/05**	**2005/06**	**2006/07**	**2007/08**	**2008/09**	**2009/10**	**2010/11***
China	6.27	6.16	6.19	6.06	6.31	6.26	6.28	6.43	6.56	6.59	6.67
Egypt	9.31	9.77	9.69	9.76	9.85	9.51	10.08	10.07	10.08	9.87	10.15
Indonesia	4.44	4.41	4.50	4.56	4.64	4.59	4.60	4.82	4.88	4.73	4.84
Turkey	4.43	5.14	5.14	5.93	6.25	6.67	7.01	6.32	7.00	6.67	7.14
USA	7.04	7.28	7.37	7.48	7.83	7.43	7.73	8.09	7.68	7.9	7.5
World	**3.91**	**3.95**	**3.86**	**3.93**	**3.95**	**4.07**	**4.07**	**4.17**	**4.25**	**4.23**	**4.27**
Source: USDA 2011 (*) Forecast.											

It is estimated that world paddy yield will be 4.27 ton/ha in 2010/11 period and Egypt will have highest yield with 10.15 ton/ha as it was the same in recent years. The underlying reason for Egypt's high yield above the world average is that it cultivates paddy on most fertile lands feed with the Nil River. USA, Indonesia, China, Japan are above the world average yield in paddy production while India, Pakistan, Bangladesh etc has yield lower than world average. According to 2010/11 estimations, paddy yield in our country will be 7.14 ton/ha which is higher than the world's average (Chart 108).

Chart 109. World Rice Consumption and Major Consumer Countries (Million Ton)											
Countries	**2000/01**	**2001/02**	**2002/03**	**2003/04**	**2004/05**	**2005/06**	**2006/07**	**2007/08**	**2008/09**	**2009/10**	**2010/11***
China	134.3	136.5	135.7	132.1	130.3	128.0	127.2	127.5	133.0	134.3	136.0
India	76.0	87.6	79.9	85.6	80.9	85.1	86.7	90.5	91.1	85.7	91.0
Indonesia	35.9	36.4	36.5	36.0	35.9	35.7	35.9	36.4	37.1	38.0	38.9
Bangladesh	25.0	25.6	26.1	26.7	26.9	29.0	29.8	30.7	31.0	31.6	33.1
Vietnam	16.9	18.0	17.4	18.2	17.6	18.4	18.8	19.4	19.0	19.2	19.3
Philippines	8.8	9.0	9.6	10.3	10.4	10.7	12.0	13.5	13.1	13.3	13.3
Thailand	9.3	9.4	9.5	9.5	9.5	9.5	9.8	9.6	9.5	10.0	10.2
Japan	8.3	8.8	8.7	8.4	8.3	8.3	8.3	8.2	8.4	8.2	8.1
Turkey	0.5	0.5	0.5	0.6	0.6	0.6	0.6	0.6	0.6	0.8	0.7
Other	79.1	81.4	82.6	85.1	87.0	87.4	89.4	89.9	92.4	94.2	104.0
World	**393.9**	**413.2**	**406.5**	**412.4**	**407.3**	**412.7**	**418.4**	**426.3**	**435.2**	**435.3**	**446.5**
Source: USDA 2011 (*) Forecast.											

It is foreseen that world rice consumption will be 446.5 million tons in 2010/11 period representing 11.2 million ton increase compared to previous year (Chart 109).

Graphic 78. World Rice Consumption and Major Consumer Countries (Million Ton)

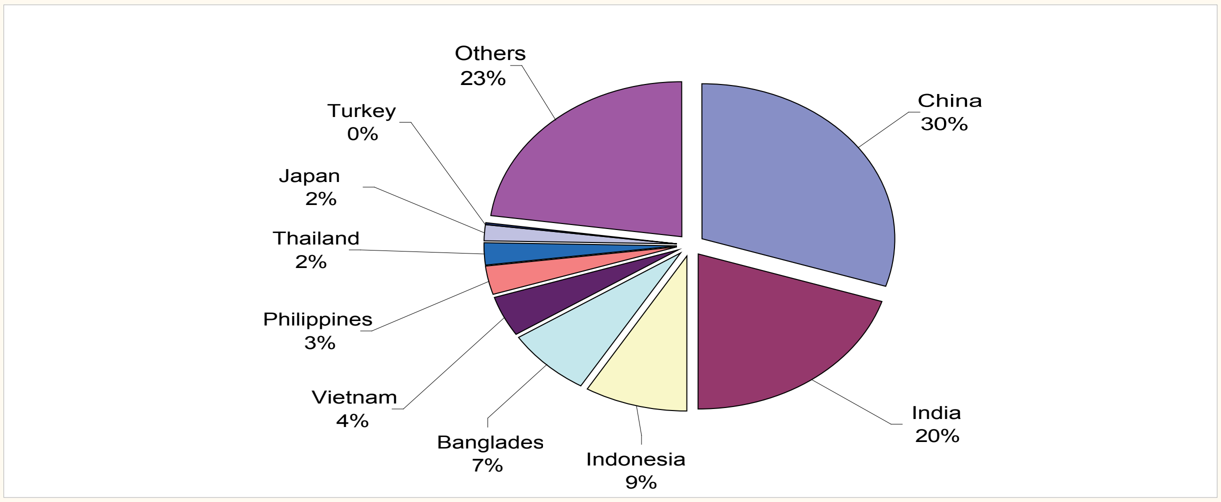


USDA 2011 (*) Forecast.

Underlying reason for such increase is increase of rice consumption in Near East and Middle Asia countries such as Iran, Iraq and Egypt. Increasing production and abundant supplies in India has supported a concrete increase in domestic consumption. It is expected that Chinese domestic demand will increase to record breaking points. Even though the government tries to decrease imports in considerable level, the consumption has increased in Philippines in parallel with population growth. There are also increases in Bangladesh and Indonesia.

China and India are two leading countries in rice consumption as it is the same in production of the rice in the world (Graphic 78).

Graphic 79. Shares of Major Consumer Countries in 2010/11 Rice Consumption (%)



Source: USDA 2011 (*) Forecast.

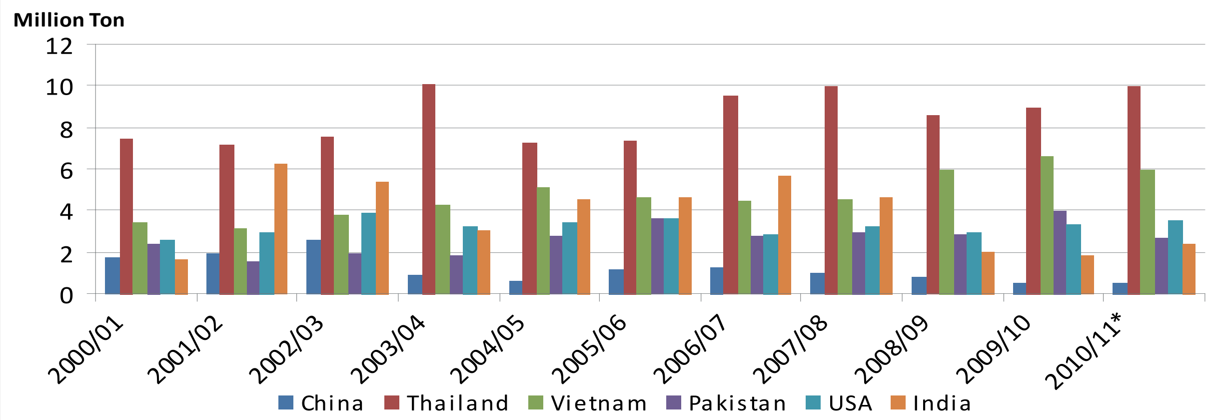
It is estimated that China will represent 30 % of world rice consumption in 2010/11 and India will represent 20 % in the same period (Graphic 79).

Chart 110. World Rice Export and Major Exporter Countries (Million Ton)											
Countries	**2000/01**	**2001/02**	**2002/03**	**2003/04**	**2004/05**	**2005/06**	**2006/07**	**2007/08**	**2008/09**	**2009/10**	**2010/11***
China	1.8	2.0	2.6	0.9	0.7	1.2	1.3	1.0	0.8	0.6	0.6
Thailand	7.5	7.2	7.6	10.1	7.3	7.4	9.6	10.0	8.6	9.0	10.0
Vietnam	3.5	3.2	3.8	4.3	5.2	4.7	4.5	4.6	6.0	6.7	6.0
Pakistan	2.4	1.6	2.0	1.9	2.8	3.7	2.8	3.0	2.9	4.0	2.7
USA	2.6	3.0	3.9	3.3	3.5	3.7	2.9	3.3	3.0	3.4	3.6
India	1.7	6.3	5.4	3.1	4.6	4.7	5.7	4.7	2.1	1.9	2.4
Other	4.5	3.5	3.7	4.7	5.0	4.4	4.6	4.6	5.5	5.1	5.3
World	**24.1**	**26.9**	**28.7**	**27.4**	**28.3**	**29.2**	**31.5**	**31.2**	**28.9**	**30.7**	**30.6**
Source: USDA 2011 (*) Forecast.											

It is forecasted that world rice export will be 30.6 million tons in 2010/11 period (Chart 110).

In spite of decrease in global import demand, Thailand's export is expected to increase to 10 million tons representing approximately 12 % increase depending on shrinking supplies especially in Pakistan and Vietnam. Recent official data confirm powerful speed of Thailand in international sales. Contrary to this case, it is expected that Vietnamese sales will decrease to 6 million tons regressing by 12 % compared with record breaking volume of last year and it is seen that Pakistan recessed to 2.7 million tons due to severe floods causing considerable yield losses. Indian exports that will be shaped mostly with demand for purchasing basmati species is expected to be in 2.4 million tons.

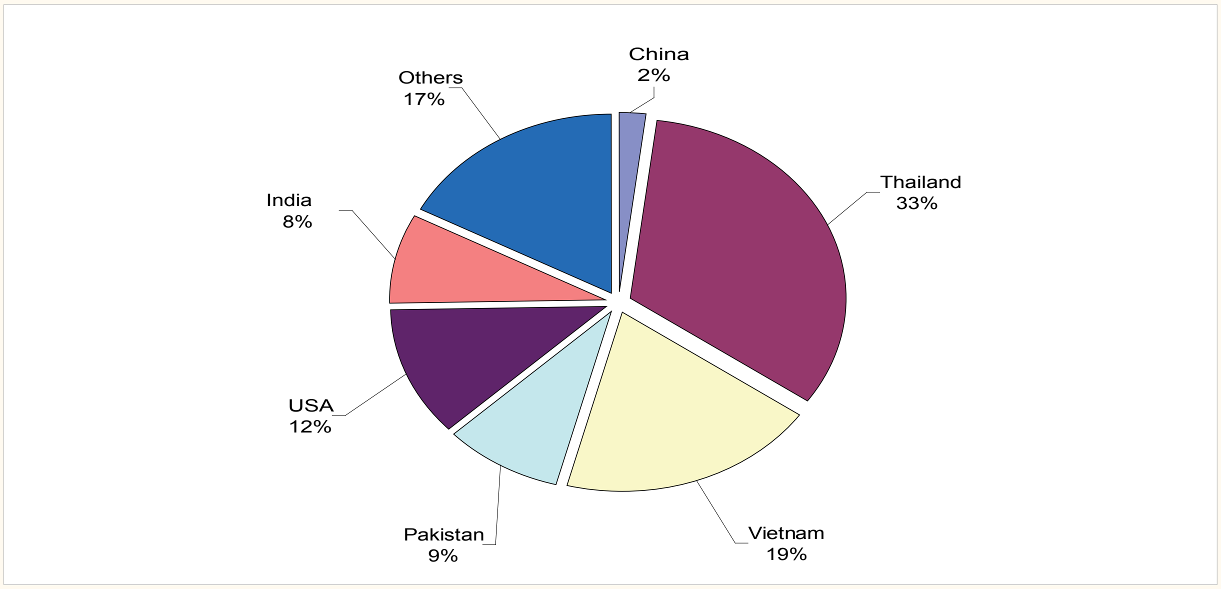
Graphic 80. World Rice Export and Major Exporter Countries



Source: USDA 2011 (*) Forecast.

Performing 1/3 of world rice export, Thailand has improved its share in the trade with good quality and plentiful supply (Graphic 80).

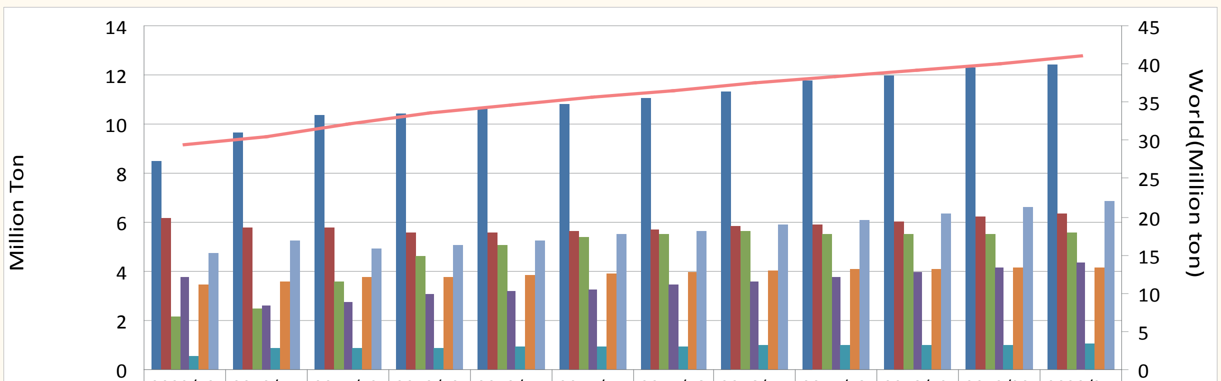
Graphic 81. 2011 World Rice Export and Major Exporter Countries (%)



Source: USDA 2011 (*) Forecast.

According to 2010/11 estimations, Thailand will perform 33 % of world rice export followed by Vietnam with 19 % share and US with 12 % share (Graphic 81).

Graphic 82. World Rice Export Projection (Million Ton)



	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21
Thailand	8.50	9.70	10.37	10.43	10.69	10.83	11.13	11.36	11.80	12.03	12.30	12.43
Vietnam	6.20	5.80	5.80	5.60	5.62	5.71	5.77	5.86	5.94	6.09	6.23	6.40
India	2.20	2.50	3.64	4.62	5.07	5.42	5.58	5.65	5.55	5.56	5.55	5.59
Pakistan	3.80	2.65	2.75	3.09	3.20	3.31	3.46	3.63	3.80	3.98	4.18	4.38
China	0.60	0.90	0.90	0.90	0.95	0.99	0.97	1.01	1.02	1.03	1.04	1.07
USA	3.47	3.64	3.79	3.82	3.88	3.94	4.01	4.05	4.10	4.15	4.18	4.21
Others	4.78	5.28	4.95	5.07	5.26	5.53	5.68	5.90	6.11	6.38	6.65	6.93
World	29.54	30.47	32.20	33.54	34.66	35.72	36.60	37.47	38.33	39.22	40.12	41.00

Source: USDA Projection, February 2011.

It is foreseen that world rice trade will increase by 3.8 % in 2009- 2020 period. World rice trade volume is foreseen to be 41 million ton in 2020 which will be 30 % higher than the volume in 2006. Main reasons for this increase in global trade are stable increase in demand due to the population growth mostly in developing countries and failure of key importers to increase the production in remarkable manner. World trade volume of the rice is 7 % and below other grains and oil seeds.

Long grain type of rice constitute ¾ of global rice trade and it is foreseen that it will general majority of the trade growth in next ten years period. Medium and short grain types constitute 10- 12 % global trade and its biggest market is Northeast Asia. Aromatic rice composed mostly of basmati and jasmine varieties constitute rest of global rice trade. Asia also maintains being the source of majority of world export in expectation period.

It is forecasted that Thailand will realize more than 12 million ton rice export at the end of 2020/21 period increasing its export volume by 4 million tons. The cultivation area and yield of Thailand is also forecasted to increase during the same period. It is forecasted that export of Vietnam will increase comparatively lesser than Thailand increasing their export volume from 6.2 million ton to 6.4 million ton.

India is used to be an exporter country in 1990s; however, India has lost its exporter identity in early 2000s due to governmental policies, stocking tendency and increase in internal consumption. However, it is forecasted that India will increase its export volume to 5.6 million ton by the end of 2020/21 period through increasing export of especially basmati (aromatic) type of rice.

Chart 111. World Rice Import and Major Importer Countries (Million Ton)

Countries	2000/01	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11*
Philippines	1.4	1.2	1.5	1.3	1.5	1.6	1.8	2.6	2.6	2.2	1.9
Iran	0.8	1.0	0.9	1.0	1.2	1.5	1.5	1.6	1.5	1.2	1.2
Nigeria	1.3	1.9	1.9	1.4	1.4	1.6	1.5	1.8	1.8	1.8	1.9
Saudi Arabia	1.0	1.1	0.9	1.2	1.5	1.4	1.0	1.0	1.2	1.1	1.1
EU(27)	1.3	1.3	1.3	1.1	1.1	1.1	1.3	1.6	1.4	1.2	1.4
Iraq	1.0	1.2	0.7	0.9	0.8	1.3	0.6	1.0	1.1	1.1	1.2
Bangladesh	0.7	0.2	1.0	0.9	0.7	0.5	0.8	2.0	0.6	0.1	1.4
Indonesia	1.5	3.5	2.8	0.7	0.5	0.5	2.0	0.4	0.3	1.2	1.8
Other	13.3	14.7	15.5	16.7	17.4	17.0	17.7	17.4	16.7	18.0	18.1
World	**22.2**	**26.0**	**26.4**	**25.0**	**26.1**	**26.5**	**28.2**	**29.4**	**27.2**	**27.9**	**30.0**

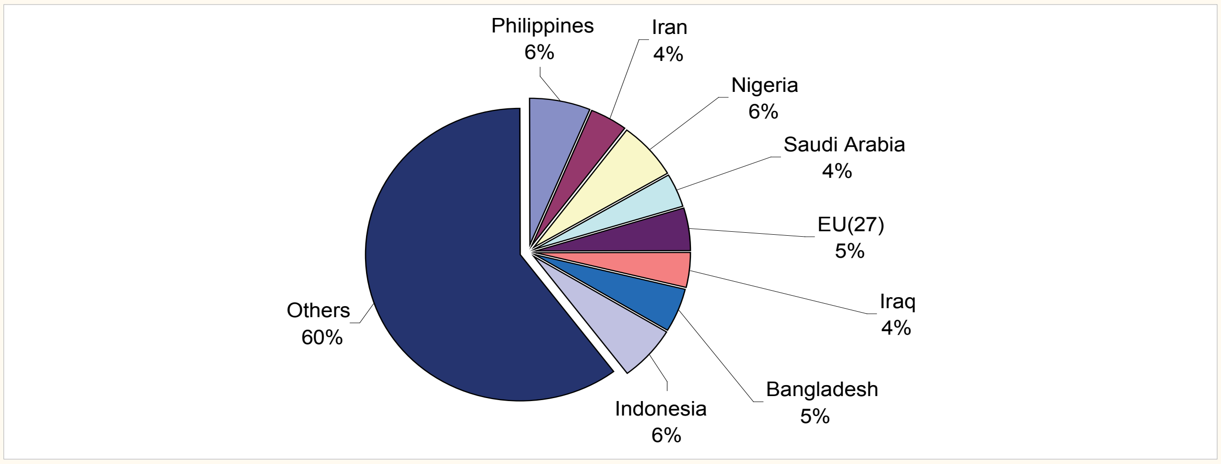
Source: USDA 2011 (*) Forecast.
Note: European Countries were considered EU(15) until 2003/04, EU(25) until 2005/06 and EU(27) after 2006/07 period.

According to 2010/11 estimates Philippines and Nigeria are leader among importer countries. It is expected that import demand of Philippines, Nigeria and Indonesia will increase competition among rice exporter countries leading to a boom in the markets (Chart 111).

Bangladesh is expected to increase its import this year to 1.4 million to with the efforts of the government to increase reserves of the country. Bulog, state procurement agency of Indonesia, has performed significant procurements that will be delivered this year. In 2011, it is estimated that the import of the country will be increased by 0.6 million tons and reached to 1.8 million ton which is the highest level since 2007. Contrary to this Philippines government declared that they will be buying less from the world markets. Thus, it is foreseen that the import level will decrease 1.9 million ton representing 0.3 million ton compared to previous year.

Philippines, Nigeria and Indonesia are expected to 6 % share in world rice import in 2010/11 (Graphic 83).

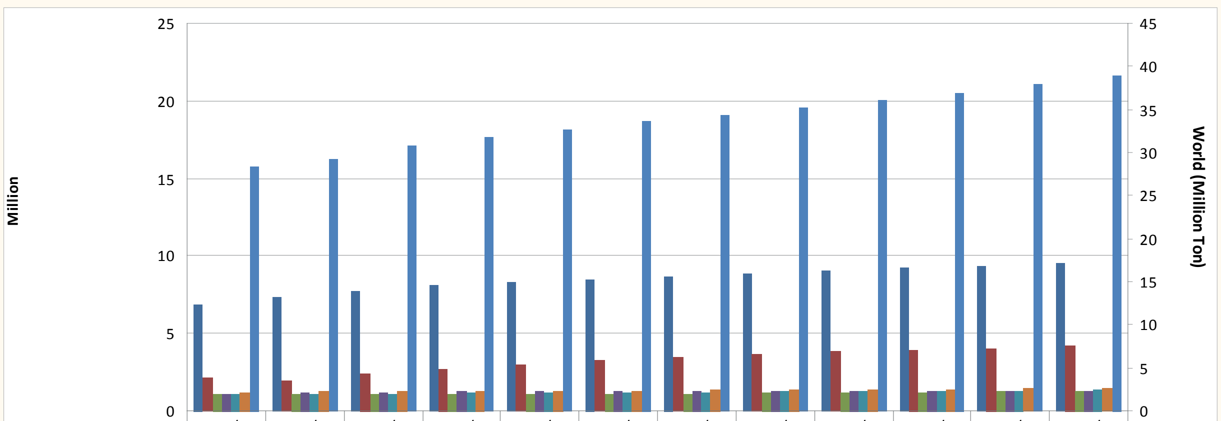
Graphic 83. Shares of Major Importer Countries in 2010/11 Rice Import (%)



Source: USDA 2011 (*) Forecast

It is foreseen that Sub- Saharan African countries will increase their rice import to 9.6 million tons in 2010/11 period compared to their 6.9 million tons import in 2009/10 season (Graphic 84).

Graphic 84. World Rice Import Projection (Million Ton)



	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21
Sub Saharan Africa	6.90	7.41	7.75	8.19	8.38	8.55	8.73	8.91	9.08	9.25	9.42	9.59
Philippines	2.20	2.00	2.50	2.70	3.00	3.30	3.50	3.70	3.85	3.97	4.08	4.22
S. Arabia	1.10	1.10	1.10	1.12	1.14	1.16	1.18	1.21	1.23	1.26	1.29	1.32
Iran	1.15	1.20	1.24	1.32	1.35	1.36	1.35	1.36	1.37	1.37	1.37	1.36
Iraq	1.10	1.15	1.17	1.20	1.23	1.25	1.27	1.29	1.32	1.34	1.36	1.37
EU	1.24	1.35	1.29	1.32	1.35	1.37	1.39	1.41	1.43	1.45	1.47	1.49
Others	15.86	16.27	17.15	17.69	18.22	18.73	19.17	19.59	20.04	20.59	21.13	21.65
World	29.54	30.47	32.20	33.54	34.66	35.72	36.60	37.47	38.33	39.22	40.12	41.00

Source: USDA Projection, February 2011.

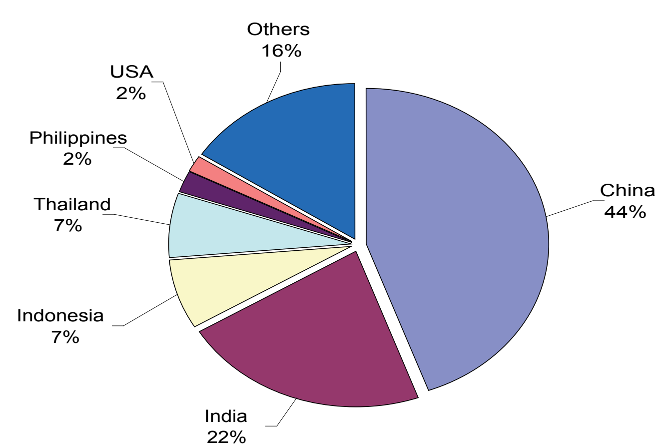
Chart 112. Rice Ending Stocks of Some Countries and of the World (Million Ton)											
Countries	**2000/01**	**2001/02**	**2002/03**	**2003/04**	**2004/05**	**2005/06**	**2006/07**	**2007/08**	**2008/09**	**2009/10**	**2010/11***
China	93.0	79.2	63.3	43.9	38.9	36.8	35.9	38.0	38.9	40.9	44.0
India	25.1	24.5	11.0	10.8	8.5	10.5	11.4	13.0	19.0	20.5	21.6
Indonesia	4.6	4.7	4.3	4.0	3.5	3.2	4.6	5.6	7.1	6.6	7.0
Thailand	2.2	3.1	3.3	1.7	2.3	3.6	2.5	2.7	4.8	6.4	6.8
Philippines	2.8	3.4	3.8	4.1	4.6	5.3	4.9	4.4	4.7	3.3	2.2
USA	0.9	1.2	0.8	0.8	1.2	1.3	1.2	0.9	1.0	1.2	1.6
Other	19.0	16.9	17.4	16.6	16.6	15.5	14.3	15.7	16.0	15.4	15.6
World	**146.7**	**132.9**	**103.2**	**81.1**	**73.4**	**76.2**	**74.8**	**80.3**	**91.5**	**94.3**	**98.8**
Source: USDA 2011 (*) forecast.											

Foreseen to 98.8 million tons in 2010/11, world year ending stock level is 4.5 million tons higher compared to previous year and it is highest stock rate since 2003/04 period. Increased production increases year ending stock of India to 21.6 million ton with a conservative estimate and the increases in Thailand, USA and Indonesia can easily balance the regression in stocks of Philippines.

Developing production of China may increase year ending stocks of the country to 44 million tons which corresponds to approximately 45 % of world total and it is expected that year ending stock of Indonesia may increase to 7 million tons level with a slight increase. Year ending stock of Philippines is foreseen to decrease 2.2 million tons which is lowest level of last ten years assuming significant regression in the imports (Chart 112).

It is foreseen that world rice stock will be comprised by China with 44 % share, India with 22 share (Graphic 85).

Graphic 85. Shares of Major Countries in 2010/11 Rice Stock (%)



Source: USDA 2011 (*) Forecast.

Chart 113. Rice Prices in the World Extended to Years (FOB $/Ton)										
Product	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**
Thailand 100 % B	188	193	199	326	327	300	-	679	565	506
USA Long Grain	291	208	270	402	334	399	459	763	577	-
Vietnam % 5 Broken	170	186	182	223	255	265	299	619	434	419
USD % 4 Broken -Gulf	-	-	-	-	316	398	429	765	545	514
India % 25 Broken	-	135	166	-	236	233	276	341	-	-
Pakistan 25 % broken	-	159	174	228	237	230	285	359	363	376
Source: IGC 2011										

Abundance of supply in major producer countries such as Thailand and USA and expectation of their customer for lower prices caused surplus supply caused the prices in 2010 decreasing compared to the previous period. Whereas the import volume of Philippines that is leading purchaser of Vietnamese rice has decreased; thus, the share of Vietnam in world export has shrank and the prices decreased. In second half of 2010, the flood disaster happened in Pakistan, one of the major exporter countries, has caused Pakistani rice increase its prices in the market (Chart 113).

3

PURCHASE AND SUPPORT POLICIES IN MAJOR CEREAL PRODUCING COUNTRIES IN THE WORLD

3. PURCHASE AND SUPPORT POLICIES IN MAJOR CEREAL PRODUCING COUNTRIES IN THE WORLD

3.1. Common Agricultural Policy (CAP) Implemented in European Union (EU) Countries

The principal organizations and Institutions that take part in the agricultural policies of the EU are the EU Council, the EU Commission, and Agricultural Committee.

EU Council; being most influential organ in legislation and decision making mechanism of the Community, the Council is composed of the Ministers of Foreign Affairs of member countries and other ministers may also be involved in line with the type of the topic to be handled and it is named according to the expertise of the ministers represented (such as Council of Ministers of Agriculture, Transportation, Economy and Financial Affairs, Industry, Ministry of Environment, etc). The Council analyses and decides on the drafts prepared and submitted by the Commission. The Council takes its decisions with simple majority, qualified majority or by consensus. Qualified majority is the most frequently used decision making method used especially in agriculture, transportation and environmental issues. The members' number of votes is determined according to physical (population, area) and economic size of the State for the Council decisions requiring majority of qualified votes. Weighted vote total in EU(27) is 345. At least 255 affirmative votes are required for positive decision.

Commission is an executive organ composed of 27 members (commisioners) from member countries assigned for 5 years period under the approval of EU Council. This body is the designer and coordinator of the community policies. The Commission prepares the proposals and submits to the Council. Being executive organ of the Union, the Commission is responsible for implementing EU Acquis Communitaire (directives, regulations and decisions).

Agriculture Committees are formed by management committees composed of one representative from each member country serving as consultancy and advice body for the Commission (for example, Seed Management Committee). Commission negotiates the draft with the relevant Committee to get opinion before enactment of a legislation.

3.1.1. Reform Process

Common agriculture policies applied in EU countries has evolved in particular processes in order to get its current version.

Agricultural policy primarily founded on high intervention prices created surplus stock in high quantities within the Community that were exported to the world markets through subvention of the excessive stocks and this situation challenged EU's agriculture reform. Single intervention price was determined in 1992 Mac Sharry Reform (180 €/ton) and respective price has been gradually decreased to 101.31 €/ton level in 10 years.

To compensate producers due to unjust treatment resulted from the price decrease with 1992 Reform, direct income support of 63 €/ton started in the Union.

In addition to 63 €/ton direct income support, additional supporting payments that were paid as 291 €/ha for durum wheat producers until 2005 was reduced to 285 €/ha after 2006. However, 40

€/ha quality premium was started to pay for the durum wheat producers who used certified seed. Reduction was made on paddy intervention procurement prices in 2003 within the framework of OTP Reform reducing it from 350 €/ton to 150 €/ton and compensatory direct income support of 177 €/ton was started in the same year.
Compensatory direct income supports determined for grains and paddy in EU are implemented within the framework of Regional Yield Plans determined by the member countries.
Each member country has organized regional plans reflecting the yield difference based on concrete criteria (soil and land structure, climatic conditions, irrigation - dry farming, cultivation methods, etc) subjected to the control and approval of the Commission. Reference yield in regional plans are calculated by taking average yield for five years in 1986 -1990 period. Generally, the number of reference regions created is less in northern countries where the climatic changes and yield difference are considerable lesser compared to the other member countries. For example, there is 1 reference region in Denmark, Austria and Luxembourg, 2 in Netherlands, 3 in Finland, 5 in Sweden, 7 in United Kindgom. In southern countries, on the other hand, the number of reference regions is high as the climate, soil structure and production methods differ in respective countries. For example, there are 256 reference regions in Italy and 107 reference regions in France. Total regional reference cultivation area is determined through calculating average cultivation areas of the farmers farming in respective areas in five years reference period (1986- 1990) in order to determine the cultivation areas to be paid compensatory direct income support. Thus, regional reference yield and maximum cultivation area to be covered under the payment is determined for the purposes of compensatory direct income support for each member country and price cap practice was introduced for the support areas and these areas were taken under the scope of blue box by World Trade Organization (WTO). According to current WTO Agriculture Agreement, there is no limitation in the direct payments to be provided within production limitation plans which are called as " blue box supports" by the member countries.
In the event maximum cultivation area is exceeded in a cultivation region according to regional plans of EU member countries, the direct income support amount to be paid for the farmers in respective region is deducted in proportion to excessive production in the region. Furthermore, farmers producing more than 92 tons should obey the "set- aside" obligation referred to not to make farming on particular size of arable areas calculated over the rates determined by the Commission in order to benefit from direct income support mechanism. Called "set- aside" and applied as 10 % of the arable lands of a farmer, this rate was nullified in 2008 due to the global drought experienced in 2007.
Regional yield plan of United Kingdom is described below to constitute an example in regard to compensatory direct income support payments applied.
7 reference yield regions were determined in United Kingdom Regional Plan as shown in chart below.

Chart 114. Reference Yield Regions in United Kingdom

Yield Regions	Reference yield (Ton/Hectare) (a)	Compensatory Payment (€/Ton) (b)	Compensatory Payment (€/Hektare) (a x b)
England	5.9	63	371.7
Scotland Non- Disadvantageous Region	5.6	63	352.8
Scotland Disadvantageous Region	5.2	63	327.6
Welsh Non- Disadvantageous Region	5.2	63	327.6
Welsh Disadvantageous Region	5.1	63	315.0
Northern Ireland Non- Disadvantageous Region	5.0	63	327.6
Northern Ireland Disadvantageous Region	4.4	63	277.2

Source: CAP Monitor (1999).

The areas defined as disadvantageous regions in the chart are highly sloppy areas having generally mountainous land structure.

Thus, for a farmer having 50 ha arable lands in England, the compensatory direct income support to be paid shall be 50 x 5.9 x 63.0 = € 18,585. Even if the respective farmer collects yield above (for example 6.3 tons) or below (for example 4.5 tons) the reference yield, the reference yield of the region is applicable for calculation of compensatory direct income support.

Compensatory direct income support in paddy production is applied only for traditional paddy producer countries in the region (Italy, Spain, France, Portugal, Greece, Bulgaria, Hungary and Romania). Payable yield and compensatory payment amounts are given in Chart 115:

Chart 115. Payable Yield and Compensatory Payment Amounts in Countries

Country	Reference yield (Ton/Hectare)	Compensatory Payment (€/Ton)
Italy	6.04	177
Spain	6.35	177
France	5.49	177
French Guiana	7.51	177
Portugal	6.05	177
Greece	7.48	177
Bulgaria	4.60	177
Hungary	3.10	177
Romania	1.68	177

Source: CAP Monitor (2009).

Thus, compensatory direct income payment to be made to an Italian paddy producer cultivating in 20 ha area will be 20 x 6.04 x 177 = € 21,381.

In year 2003, EU realized a new reform in Common Agriculture Policy terminating support payment mechanism in blue box practice proposed to bring a limitation under WTO advanced agricultural negotiations and granted a transition period for the member countries to shift into green box (production free- decouple) which is considered safe in terms of disruption to the trade and which does not include any limitation for the payments.

According to this new system called Single Farm Payment, reference direct income support per hectare was calculated through dividing average support amount paid to the farmers for the crops produced during three years reference period of 2000- 2002 (for example, 63 €/ton for the grains, 177 €/ton for the paddy, 63 €/ton for the oil seeds) to average cultivation area of respective 3 years. Thus, support amount to be paid to the farmer was calculated via multiplication of declared size of the lands with reference amount freeing the calculation from the production. The objective of this system is to ensure that the producer behaves according to the signals obtained from the market while making cultivation decisions. It is proposed to secure and maintain the stability in the market.

We can exemplify calculation of the support payment amount under Single Farm Payment: Assume that a British farmer in England Region of United Kingdom farmed on 42 ha area in 2000, 36 ha area in 2001 and 39 ha area in 2002. The direct income supports paid for respective years were 42 x 371.7 = € 15,611; 36 x 371.7 = € 13,381; 39 x 371.7 = € 14,496. Average of three years is

(€ 15,611 + € 13,381 + € 14,496)/3 = € 14,496. Average size of the lands cultivated by the farmer is (42 ha + 36 ha + 39 ha)/3 = 39 ha area. Considering that respective farmer did not cultivate anything else other than grain, director income support to be paid per hectare under Single Farm Payment will be 14,496/39 = 371.6 €/ha. If the respective farmer would have farmed oil seeds in addition to the grains within the same period, then, the 3 years average of direct income support amount paid for the grains and 3 years average of direct income support amount paid for the oil seeds would have been summed and divided to the average sum of lands allocated for both crops in order to calculate direct income support amount to be paid per hectare under the new system. Thus, the supports given separately for different crops in the past was converted into decoupled payment based on the land under Single Farm Payment.

EU member countries will have shifted from support system applied under regional plan to Single Farm Payment starting from 2012.

3.1.2. Current Situation (Intervention Purchasing)

3.1.2.1. Cereals

Within the scope of Council Directive 72/2009 of January 19, 2009 relating to amendments in

Common Agricultural Policy, intervention procurement can be applied for milling wheat up to 3 million tons based on 101.31 Euro/ton intervention price during the intervention period. The intervention purchasing exceeding 3 million tons shall be carried out via tendering. The intervention purchasing amounts are nullified in durum wheat, barley, corn, sorghum and the Commission shall determine the intervention procurement amount and price through tendering method if the circumstances require. The price determined via tendering shall never exceed the intervention price.

For the intervention purchasings by paying agencies, there is minimum purchasing limit applied as 80 tons for milling wheat, barley, corn and sorghum, 10 tons for durum wheat and 20 tons for the paddy.

The intervention agencies shall carry out intervention purchasing for grains in following dates: Starting from 2009/10 purchasing period for durum wheat; starting from 2010/11 purchasing period for milling wheat, barley, corn and sorghum from November 1 to May 31.

Intervention purchasing price for grains is 101.31 €/ton. Monthly price increase rate of 0.46 €/ton applied for the grain intervention purchasing price applied on November 1 – May 31 period was terminated for durum wheat starting from 2009/10 purchasing period. Such practice will be terminated in 2010/11 purchasing period for milling wheat, barley, corn and sorghum.

The payments are made within following 30- 35 days.

3.1.2.2. Paddy

Intervention purchasing for the paddy are performed on April 1- July 31 period in all producer member countries. Intervention procurement price for paddy is 150 €/ton. There is no monthly price increase practice for the paddy. The payments are made within following 32- 37 days. The intervention purchasing amounts are nullified for paddy and the Commission shall determinethe intervention purchasing amount and price through tendering method if the circumstances require. The price determined via tendering shall never exceed the intervention price.

3.1.3. Paying Agencies

The key role for implementing the EU's agricultural policies is played by the paying agencies. These agencies are responsible of performing the entire activities like intervention purchases, storing, domestic and foreign sales within the framework of the EU Common Market Organization. Since there is a very widespread and developed private sector warehousing within the Community, the paying agencies that fulfill the responsibility of intervention purchases do not own their warehouses and they store the goods by means of the contracted private warehouses. Such warehouses are continuously inspected by the paying agencies.
The financing of the Member States' intervention purchases is made by European Agricultural Guarantee Fund (EAGF). Minimum quantity and quality factors, price scales, intervention purchase periods, etc. to be applied by the paying agencies that fulfill the responsibility of intervention purchases for product procurement have been determined by the Community regulations.
The paying agencies are responsible for implementing the payments (direct payments, export refunds, intervention purchases) funded by EAGF.
There are 82 accredited paying agencies in the EU Paying agencies that include the intervention units in the EU and prices and direct payments under EU-CAP for selected products are given below (Table 6, Chart 116).

Table 6. Paying Agencies Having Intervention Units in EU(27) Countries

Country	Paying Agency
Germany	Federal Agency for Agriculture and Food (BLE)
France	French National Agriculture and Sea Paying Agency (FranceAgriMer)
Italy	Ente Nazionale Rısı (ENR)
Netherlands	National Service for the Implement on of Regulations (NSIR)
Belgium	Belgian Office of Intervention and Refunds (BIRB)
United Kingdom	Rural Payment Agency (RPA)
Ireland	Department of Agriculture, Food and Rural Development
Denmark	The Danish Food Industry Agency
Portugal	National Institute for Intervention and Cropland Guarantee (INGA)
Spain	Spanish Fund of Agrarian Guarantee (FEGA)
Greece	Payment and Control Agency for Guidance and Guarantee Community Aid (OPEKEPE)
Sweden	The Swedish Board of Agriculture (JORDBRUKSVERKET)
Finland	Ministry of Agriculture and Forestry (MMMFI)
Austria	Agrarmarkt Austrıa (Market Organization and Intervention Agency)
Poland	Agencja Rynku Rolnego- Agricultural Market Agency (ARR)
Hungary	Agricultural and Rural Development Agency (ARDA)
Luxembourg	Ministre De L'agriculture,De La Viticulture
Czech Republic	State Agricultural Intervention Fund (SZIF)
Estonia	The Estonian Agricultural Registers and Information Board (ARIB)
Lithuanian	Lithuanian Agricultural and Food Market Regulatıon Agency (NMA)
Latvia	The Rural Support Service (RSS)
Malta	Rural Affairs and Paying Agency
Slovenia	Agency of The Republic of Slovenia for Agricultural Markets and Rural Development (AAMRD)
Slovakia	Agricultural Paying Agency (APA)
Southern Greek Cyprus	Cyprus Agricultural Payments Organization (CAPO)
Romania	Agentia De Plati Si Interventie Pentru Agricultura (APIA)
Bulgaria	Ministry of Agriculture and Food Supply (Mzgar)

Source: TGB

Chart 116. Prices and Direct Income Payments in EU Common Agriculture Policy for Selected Crops

Grains: Wheat, barley, corn, sorghum	1999	2000	2001–2002	2003–2004	2005–2009	2010
Intervention Price (€/Ton)	119.90	110.25	101.31	101.31	101.31	101.31
Monthly Increase (€/Ton)	1.00	0.92	0.46	0.46	0.46	- (*)
Direct Support (€/Ton)	54.34	58.67	63.00	63.00	63.00	63.00
Paddy						
Intervention Price (€/Ton)	298.35	298.35	150.00	150.00	150.00	150.00
Direct Support (€/Ton)	52.65	52.65	177.00	177.00	177.00	177.00
Oil Seeds						
Direct Support (€/Ton)	94.24	81.74	72.37	63.00	63.00	63.00
Protein Crops						
Direct Support (€/Ha)	78.49	72.50	72.50	55.57	55.57	55.57
Potato Starch						
Base Price (€/Ton)	209.78	194.05	178.31	178.31	178.31	178.31
Direct Support (€/Ton)	86.94	98.74	110.54	110.54	66.32	66.32
Hazelnut						
Direct Support (€/Ha)	-	-	-	120.75	120.75	120.75
Fodder Crops						
Direct Support (€/Ton)	54.34	58.67	63.00	63.00	63.00	63.00
Set- Aside						
Direct Support (€/Ton)	54.34	58.67	63.00	63.00	63.00	63.00

Source: EU Documents
(*) Monthly price increase practice was eliminated starting from 2010/11 period

3.1.4. Comparison of Producer Revenues in EU and in Turkey

Chart 117. Supports Applied in EU and Turkey for Wheat Producers (2010)

	TURKEY			EU
Intervention Price	0.550 TL/Kg	=	550.0 TL/Ton	101.31 €/Ton
Direct Payment	-	=	-	63.00 €/Ton
Grain Support Premium	0.050 TL/Kg	=	50 TL/Ton	
Certified Seed Support*	5 TL/Da	=	18 TL/Ton	
Diesel oil Support*	3.25 TL/Da	=	11 TL/Ton	
Fertiliser*	4.25 TL/Da	=	15 TL/Ton	
Soil Analysis	2.5 TL/Da		9 TL/Ton	
Value of 1 Ton Wheat			653 TL/Ton	
		=	340 €/Ton**	164.31 €/Ton
Income from 1 Ha	avarege wheat yield 2,9 tons per ha*** 2.9 x 340 = 986 €//Ha			Avarege wheat yield 5,4 tons per ha*** 5.4 x 164.31 = 887 €/Ha
Gross Revenue of an Average Wheat Holding	Average holding size 6,1 ha 6.1 x 986 €//Ha = 6,015 € = 11,549 TL			Average holding size 12.6 ha 12.6 x 887 = 11,176 € =21,458 TL
Product Cost	Unit Cost: 437 TL/Ton Average Holding Size Production : 6.1 x 2.9 = 17.7 ton 17.7 x 437 = 7,735 TL			Unit Cost: 113 € = 217 TL/Ton Average holding size : 12.6 x 5.4 = 68 ton 68 x 217 =14,756 TL
Net Income	11,549 – 7,735 = 3,814 TL			21,458– 14,756 = 6,702 TL

Source: TGB, EU Documents, IGC, TSA, TKIB, TEAE
(*) Yield has been considered 285 Kg/Da (~ 2,9 t/ha) while converting the unit from TL/ha to TL/tons.
(**) 1 € = 1,92 TL (1.06.2010 TR Turkish Central Bank (Foreign Exchange Buying Rate)
(***) Data from wheat production costs table prepared by TEAE for 2010.
(****) IGC March 2011

The table above gives comparison of prices and net revenue of Turkish and EU producers. Accordingly, even though support for each ton of wheat in our country is two times higher than EU, net income of EU producer [TL 6,702] is approximately 2 times higher than revenue of Turkish producer [TL 3,814]. This situation results from the yield rate and small size of average enterprise/ producer in our country.

3.2. Grain Support Policies in United States of America (USA)

The agricultural policies in USA are implemented through the Farm Bills that are enacted in every five years. In this regard 2008- 2012 Farm Bill is in force at the moment and by means of this farm bill the support prices, for which producers benefit, are indicated. These prices are; Loan price, target price, and fixed and compensatory direct payments prices.

In USA, there is no intervention purchasing system based on procurement price like it is in EU.

Loan price is the unit price for the loan with lower interest, from which farmers benefit, that is opened by Commodity Credit Corporation and received by farmers who deliver their products to the contracted warehouses of USDA against the warehouse receipts. 80 % of average previous 5 years market prices (excluding extreme years – lowest and highest years) is taken into consideration for determining respective unit price.

Commodity Credit Corporation (CCC) is a subsidiary of USDA founded in 1933 to stabilize, support and protect the producer incomes and prices. Meanwhile, the agency also assists development of new domestic and foreign markets and marketing the agricultural products of the country.

The target price is the price that is desired to be obtained by the producers by taking into account for sustaining the production and ensuring the required welfare.

3.2.1. Fixed Direct Income Payment (FDIP)

Fixed direct payment is a price support that is annually paid per ton for a product amount calculated via multiplying 83.3 % of total cultivated area with the yield that changes according to the crops (yield determined for the farm in 1995 program).

"Basic cultivation area" mentioned above refers to average cultivation area of four year during reference period 1998- 2001 for each crop in the enterprise.

3.2.2. Compensatory Direct Income Payment

Compensatory direct income payment is an additional amount payable where the difference between the target price and the total amount of the market price and direct payment ("Effective Price") is negative as disadvantageous for the producers.

The prices defined under 2008- 2012 Farming Bill are given in Chart 118 and 119 below.

Chart 118. Loan Unit Price and Target Price Applied in USA

Products	Loan Unit Price (USA $/Ton)		Target Price (USA $/Ton)	
	2008–2009	2010–2012	2008–2009	2010–2012
Wheat	101	108	144	153
Corn	77	77	104	104
Sorghum	77	77	101	104
Barley	85	85	103	121
Oat	92	92	99	123
Soybean	184	184	213	220
Other Oilseeds	205	205	223	280
Cotton	1.146	1.146	1.571	1.571
Paddy	143	143	231	231
Peanut	355	355	495	495

Source: USDA

Chart 119. Fixed Direct Income Payment in USA on Crop Basis	
Products	**2008 – 2012 (USA $/Ton)**
Wheat	19
Corn	11
Sorghum	14
Barley	11
Oat	1,6
Soybean	16
Other Oilseeds	18
Cotton	147
Paddy	52
Peanut	36
Source: USDA	

Thus, to give an example for income of an American wheat producer;

Example 1:

Fixed Direct Income Support; an American farmer producing wheat on 100 ha area will get 100 ha x % 83.3= 83.3 USD/ha as Fixed Direct Income Support. Assuming the wheat yield as 2.5 ton/ha, the production for payment of fixed direct income support will be 83.3 ha x 2.5 ton = 208 ton. As it can clearly be seen from the table, the Fixed Direct Income Support for wheat is 19 $/ton; thus; total Fixed Direct Income Support to be paid to the producer will be 19 x 208 = 3,952 $.

Market Income; assume that yield for respective crop was 2.8 ton/ha in 2009. Yield amount obtained from 100 ha area is 100 x 2.8 = 280 tons. According to data of US Department of Agriculture, average wheat market price was 209 $/ton in 2009/10. Then, income to be earned by farmer through trading its production in the market will be 280 x 209 = USD 58,520.

As the market price was above 144 $/ton which was the target price in the market, there is no need for compensatory additional payment under these circumstances.

To sum up, overall income to be earned by the producer from Direct Income Payment and market price will be:

3,952 + 58,520 = USD 62,472.

Example 2:

If the market price in Example 1 would have been under the Target Price, ie 120 $/ton; then

Market Income would have been: USD $120 x 280 ton = USD$ 33,600.

In such a case, following Compensatory Direct Income Payment will apply:

1. Payable product amount: 0,85 (*) x100 ha x 2.5t = 212.5 t
2. Unit Payment amount: = [144 $/t – (120 $/t +19 $/t] = 144 $/t – 139 $/t = 5 $/t
3. Compensatory payment amount = 5 $/t x 212.5 ton = 1062.5 $.

(*) represents 85 % of the production

Overall income that the farmer will earn: Fixed Direct Income Support + Market Price + Compensatory Income Support = $ 3,952+ $ 33,600 + $ 1,062.5 = $ 38,614.5

3.2.3. ACRE Program Alternative to Target Price Based Payment Program

Under US 2008 Agriculture Code, the producers may prefer “Average Crop Revenue Election” (ACRE) program based on income based compensatory payment as an alternative to compensatory direct income payment based on “Target Price”.

3.2.3.1. Beneficiary Producers

Only the farmers having basis area for the following crops may participate to ACRE program. Producers registered to DCP program may convert their registration to income based ACRE program before expiry of due registration date. As stipulated under 2008 Agriculture Code, producers having lands less than 10 acres (~4 ha)- excluding those having limited sources or those socially deprived- may not participate both in DCP and ACRE programs.

3.2.3.2. Program Crops

Following crops are included under ACRE program:

- Wheat, barley and oat
- Corn
- Millet
- Cotton
- Paddy (medium and long grain)
- Soybean
- Other oilseeds: Canola, linen, mustard, colza, safflower, sesame and sunflower
- Peanut
- Glumes: Green pea, lentil, chickpea

3.2.3.3. Registration to ACRE Program

Registrations to ACRE Program starts on 1 October and expires on 1 June.

3.2.3.4. Reporting Condition

Producers participated to ACRE program have to report their annual cultivation and production to Farming Services Agency of US Department of Agriculture (FSA). Otherwise, they shall be disqualified for the program.

3.2.3.5. Maximum Payment Amount

ACRE payment is limited with USD 65.000 per real person or legal entity.

3.2.3.6. Yields

Yield to be taken as basis for ACRE payments will be an “Olympic Average” based on a combination of producer’s yield and regional average yield in recent 5 years.

For calculation of Olympic average yield highest and lowest yield are excluded and average of remaining 3 years is taken into consideration. For example, for calculation of 2011 ACRE payments, best year (for example 2010) and worst year (for example 2008) are removed and average of remaining 3 years is calculated.

3.2.3.7. Limit Taking Basis Payment

ACRE payment is limited in a manner that the payment shall cover 83.3 % of the cultivation area of each crop cultivated and that it shall not exceed basic areas in the agriculture enterprise.

3.2.3.8. Payments

Producers participated in ACRE program may get Fixed Direct Income Support Payments and ACRE payments together.

a) Fixed Direct Income Payment (FDIP)

The payment is done based on “basic area” for the crop cultivated (average of areas cultivated in the farm in four years between 1998 -2001) and “program efficiency” (yield of the farm determined in 1995). However, only 80 % of FDIP and DIP is paid to the farmers registered to ACRE program.

b) ACRE Payments

ACRE payments are income based payments and ACRE payments for a crop may be done only if following two triggers have been met:

i) State Trigger: Actual State Revenue should be lower than State ACRE Guarantee

ii) Farm Trigger: Actual Farm Revenue of the registered producers in year of program should be lesser than Farm ACRE Guarantee.

For a crop to be payable under ACRE program, defined State and Farm triggers for the respective crop should be met.

ACRE State Trigger	**State ACRE Guarantee** (may vary at most 10 % from guarantee of previous year.) Calculation: 0,90 X 5 year State Average Yield (Olympic Average.) X ACRE Guarantee Price (Average of Market Price in last 2 years)	>	**Actual State Revenue** Calculation: Actual State Yield X ACRE (Average Market Price of the Year or 70 % of Loan Amount whichever is higher)
ACRE Farm Trigger	**Farm ACRE Guarantee** Calculation: 5 years Farm Average Yield (Olympic Average.) X ACRE Guarantee Price + Annual Production Insurance Paid by Producer	>	**Actual Farm Revenue** Calculation: Actual Farm Yield X ACRE Price (Average Market Price of the Year or 70 % of Loan Amount whichever is higher)

Calculation of ACRE Payment: If both triggers are met, payable ACRE amount can be calculated as follows.

ACRE Payment = Actual Cultivation Area X % 83,3 X (Farm "Olympic" Yield/State "Olympic" Yield *)

X	(multiplied with which ever is lesser)	{	(State ACRE guarantee – Actual State Revenue) (State ACRE guarantee X 25 %)

* Farm Yield Index Coefficient

Chart 120. 2009 ACRE Program Price List (USA $/Ton)

Product	Market Year	Date of declaring 2009/10 MYA price and 2009 ACRE price	Due Date for Payment	2007/08 MYA Price	2008/09 MYA Price	2009 ACRE Guarantee Price (1)	2009/10 MYA Price	70 % of Loan Unit Price (2)	2009 ACRE Price (3)
Wheat	1 Jun- 31 May	29 Jun 2010	1 Oct 2010	238	249	244	209	71	209
Barley	1 Jun- 31 May	29 Jun 2010	1 Oct 2010	160	140	150	110	60	110
Oat	1 Jun- 31 May	29 Jun 2010	1 Oct 2010	97	116	106	90	64	90
Peanut	1 Aug 31 May	31 Aug 2010	1 Oct 2010	452	507	481	507	249	507
Corn	1 Sep- 31 Aug	29 Sep 2010	1 Oct 2010	154	149	152	198	54	198
Millet	1 Sep- 31 Aug	29 Sep 2010	1 Oct 2010	150	118	134	198	54	198
Soybean	1 Sep- 31 Aug	29 Sep 2010	1 Oct 2010	371	366	369	426	129	426
Dry pea	1 Jul- 30 Jun	29 Sep 2010	1 Oct 2010	289	295	292	209	83	209
Lentil	1 Jul- 30 Jun	29 Sep 2010	1 Oct 2010	573	745	659	586	181	586
Cotton	1 Aug- 31 Jul	8 Oct 2010	1 Oct 2010	1,307	1,054	1,182	1,797	802	1,797
Small chickpea	1 Sep- 31 Aug	30 Nov 2010	1 Oct 2010	461	642	551	507	115	507
Large chickpea	1 Sep- 31 Aug	30 Nov 2010	1 Oct 2010	661	736	699	681	174	681
Sunflower	1 Sep- 31 Aug	30 Nov 2010	1 Oct 2010	478	481	479	487	144	487
Canola	1 Jul- 30 Jun	30 Nov 2010	1 Dec, 2009	403	412	408	435	144	435
Hashish Seed	1 Jul- 30 Jun	30 Nov 2010	1 Dec, 2009	478	467	472	446	144	446
Hashish Seed	1 Sep- 31 Aug	30 Nov 2010	1 Dec, 2009	617	966	791	496	144	496
Rapeseed	1 Jul- 30 Jun	30 Nov 2010	1 Dec, 2009	390	558	474	551	144	551
Safflower	1 Sep- 31 Aug	30 Nov 2010	1 Dec, 2009	410	547	478	441	144	441
Sesame	1 Sep- 31 Aug	30 Nov 2010	1 Dec, 2009	595	705	650	772	144	772
Paddy	1 Aug- 31 Jul	31 Jan 2011	1 Feb 2011	273	328	301	675	100	675

(1) Average MYA prices in 2007/08 and 2008/09
(2) 70 % of loan unit price for 2009 in Chart 118
(3) a) 2009/10 MYA Price or b) 70 % of 2009 Loan Price whichever is higher

Chart 121. 2009 ACRE Payment Sample for Wheat

State Trigger	**2009 ACRE Program Guarantee**	**1. Average State Yield in Last Five Year** (2004–2008 Olympic Yield)	**2.4 t/ha**
		2. 2009 ACRE Guarantee Price [(2007/8 PYO + 2008/09 PYO)/2]	**244 $/t**
		3. State ACRE Guarantee (EAG) **(0.9 X kısım 1 X kısım 2)**	**527 $/ha**
	Actual State Revenue	**4. 2009 Actual State Yield**	**2.3 t/ha**
		5. 2009/10 MYA Price	**209 $/t**
		6. 70 % of 2009 Credit Price	**71 $/t**
		7.ACRE Price whichever is higher in “Section 5” or “Section 6”	**209 $/t**
		8. Actual State Revenue (‘section 4’ x ‘section 7’)	**481 $/ha**
9. Is there ANY TRIGGER? ‘is Section 3 bigger than Section 8?			**Yes**
Farm Trigger	**Farm ACRE Guarantee**	**10. Average Farm Yield in Recent Five Years for 2009** (2004- 2008 Olympic Yield)	**2.6**
		11. Product Insurance Premium (paid by the producer per acre (~0.4ha))	**25**
		12. Farm ACRE Guarantee for 2009: (‘Section 10’ x ‘Section 2’)+ (‘Section 11’)	**659$/ha**
	Actual Farm Revenue	**13. 2009 Actual Farm Yield**	**2.4**
		14. 2009 Actual Farm Revenue (Section 13 x Section 7)	**502 $/ha**
15. Is there ANY TRIGGER? (Is Section 12 bigger than Section 14?)			Yes
ACRE PAYMENT	**If answers to Section 9 and Section 15 are both YES, you may proceed to ACRE payment calculation. If not, no ACRE payment shall be affected**		
	16. Enterprise Wheat Cultivation Area (Wheat basic area)		**50 ha**
	17. Area payable (section 16 * % 83.3)		**41.7 ha**
	18. Farm Yield Index Factor (‘Section 10’/‘Section 1’)		**1.0833**
	Unit Payment Amount	**19.EAG – FEG** (‘Section 3’) –(‘Section 8’)	**46 $/ha**
		20.EAG X %25 (‘Section 3’ x 0.25)	**132 $/ha**
		21. Area payable (section 19 or Section 20 whichever is lesser)	**46 $/ha**
	22. Total Payable Amount (‘Section 17’ X ‘section 18’ X ‘section 21’)		**2,078 $**

Chart 122. Comparison of Incomes from Price Based Program (DCP) and Income Based Program (ACRE) for Marketing Term 2009/2010

Wheat Sample

Basic Information	1. Basic area allocated for the product (average of 1998- 2001)		**50 ha**
	2. 1995 Program Efficiency of the Farm		**2.6 t/ha**
	3. Fixed Direct Income Payment		**19 $/t**
	4. Priced Based Compensatory Payment: Target Price - (2009/10 MYA Price + FDIP)		144- (209+19) = - 84 $/t **(zero)**
Payments in Price Based Direct Payment Program	**Fixed Direct Income Payment**	5. Calculation: 'Section 1'x 0.833' x 'Section 2' x 'Section 3'	**2,057 $**
	Compensatory Payment	6. If "Section 4" is bigger than zero, the calculation will be as follows: 'Section 1' x 'Section 2' x 'Section 4' x 0.85	**-**
	7. Total Payment		**2,057 $**
Payments in ACRE Program	**Fixed Direct Income Payment**	8. Calculation: 'Section 5' x 0.8	**1,646 $**
	ACRE Compensatory Payment	9. Chart 121, Section 22	**2,078 $**
	10. Total Payment		**3,724 $**

As seen from the Chart, support to be provided under ACRE is more advantageous that DCP program in the light of the data concerning 2009/10 market year.

4

TURKISH GRAIN BOARD

4. TURKISH GRAIN BOARD

4.1. Objectives, Tasks and Activities

As a result of the world-economic crisis between 1929 and 1930, the countries have included the agricultural products in the support schemes for preventing the risks. In this context, the USA enforced "Agricultural Marketing Law" in 1929 and Canada enforced "Canada Grain Law" in 1930. This task was entrusted with Ziraat Bank in our country in 1932 through the Law 2056. The task is to purchase wheat where necessary with a certain base price. Turkish Grain Board was entrusted with the task of supporting the producer through both the law dated 13.7.1938 and numbered 3491 for its first establishment and decree law 233 enacted on 8.6.1984.

Turkish Grain Board, founded in 1938, is a limited liability and autonomous state economic enterprise running on state capital in accordance with the provisions under Decree Law 233 of 08/06/1984 on State Economic Enterprises.

TGB Articles of Association enacted through publishing at Official Journal Issue 18602 dated 11/12/1984 constitutes the legal basis for Turkish Grain Board (TGB).

In Article 4 to TGB's Main Status, the purposes and fields of activity of the organization are defined as follows:

"Preventing the decrease of domestic grain prices below the normal level for producers and the abnormal increase thereof against consumers; taking measure to regulate the market of such products and, where necessary, performing any duties to be entrusted through a Cabinet Decree regarding the products other than grains; running the state monopoly for opium and narcotic substances; trading these products; building-up and maintaining the required stocks". In addition, subparagraph 19 was annexed to Article 4 as per long-term warehouse renting. By this subparagraph, the following provision is enacted: "For the purpose of regulating the market of products falling within the scope of its sphere of duties, long term renting of the warehouses built and/or to be built by other persons and organizations for ensuring the safeguard of these products in closed warehouses and furnishing the guarantee of renting for the warehouses to be built for this purpose".

Turkish Grain Board is subjected to Decree Law No 233 together with its amendments and appendixes, Decree Law No 3346 on State Economic Enterprises and Regulation on Inspecting the Funds by Turkish Grand National Assembly, Decree Law No 72 on Prime Ministry Higher Inspection Board reserving the provisions and articles in its Articles of Association and the Board is not subjected to General Accounting Law, provisions of State Procurement Authority and Court of Auditors. Turkish Grain Board is subjected to inspection of Higher Inspection Council of Prime Ministry. Headquartered in Ankara, Turkish Grain Board (TGB) is a subsidiary organization of Ministry of Agriculture and Rural Affairs.

4.2. Procurement Policies Applied by TGB

During the period between 1938 and 1988, a basic purchase price was annually announced for each product and the payments were made in cash on the basis of these prices.

In the purchase season of 1988/89, support purchase price was announced in lieu of basic purchase price and TGB was authorized in the same decree to determine the minimum purchase price. The provision for 50% of the commodity prices to be paid in cash and remaining 50% to be paid within two months was laid down.

In the purchase season of 1990/91, TGB was empowered to announce the support purchase price and to add 4 TL/Kg to these prices per week, and to establish a minimum purchase price.

In the purchase season of 1991/92, the prices were announced in the form of Basic Support Price and Support Premium for Producers. The quantity of products received from producers was limited (50 tons). TGB was empowered to add 4 TL/Kg to the prices per week, and to establish a minimum purchase price. Half of the Basic Support Price and Support Premium for Producers were decided to be paid in cash.

In the purchase season of 1993/94, Support Purchase Prices were announced as being valid until July 18th. Besides, it was decided to authorize TGB to carry out Public Warehousing activities and it was established by a decree that TGB's grain sales price would be at least 15% more than purchase price.

In the purchase season of 1994/95, Support Purchase Price was announced as being composed of Basic Support Price and Support Premium for Producers. It was decided to make an additional payment of 100 TL/Kg for the announced price in September, October, and November. Public Warehousing activities were continued during this period too and it was established by a decree that TGB's grain sales price would be at least 20% more than purchase price.

TGB started carrying out intervention procurements instead of supporting procurements since 2002.

In the purchase seasons of 2002/2003, 2003/2004, and 2004/2005, Public Warehousing activities were continued, TGB announced the purchase price and purchase prices were gradually determined by TGB. It was decided that the payment of products would be made in cash by 50% and the remaining 50% in 30 days at the latest.

Purchase prices were gradually determined by TGB during the purchase season of 2005/2006. The part of product price up to 10 tons was paid in cash and the balance was settled in 30 days. For the first time in 2005, Ministry of Agriculture and Rural Affairs initiated premium payment application in grain purchases. The premium payment practice continued regularly after respective year.

In the purchase seasons of 2006/2007 and 2007/2008, Public Warehousing activities and premium payments were maintained.

In the purchase season of 2006/2007, half of the product prices were paid within 15 days following the delivery date and the balance was paid within the following 15 days.

In the purchase season of 2007/2008, all of the product prices were paid within 7 days following the date of delivery.

Intervention purchase price was not announced in the purchase season of 2008/2009; thus, the prices of wheat under warehouse receipts were paid in cash and paddy and corn prices within 25 days from the delivery date.

Moreover, in the Cabinet Decrees it was established that sales prices would be determined monthly by TGB for the year 2002 with an increase of minimum 40% by June 2002 period purchase prices, minimum 30% more for the year 2003, and minimum 20% more for the year 2004. In 2005, sales prices were independently determined by TGB.

In 2009/2010 procurement period, procurement model harmonized with EU standards was initiated for the grains and paddy procurements through amendments in regulations of respective crops. TSE wheat standard was also update within the framework of these regulations.

- Quality issues were promoted through carrying out chemical analyses on some procurement points in addition to physical analysis.
- The tradesmen and companies started procurement on November in addition to the producers as it is practised in EU member countries.
- Sales, stocks, distribution- collection and analysis values of the Board were transferred to automation system.
- The producers had the opportunity for inquiring information on the product prices on the website and the product prices were deposited directly to the bank accounts of the producers withtin 30 days via the correspondent banks.
- The obligation for obtaining Farmer's Certificate from Chamber of Agriculture or Provincial/ Sup-provincial Agriculture Directorates starting to use on-line Farmer Registration System (FRS) information.

In 2010/11 Purchase period;

Purchase policies, intervention purchase and sale prices were announced in 02 June 2010.

- Gradual purchase price was announced starting from September
- Purchase has been done up to the amount referred in FRC (Farmer Registration Certificate).

The payments have been transferred in 1 month to the producer's bank accounts (those having a bank card have received payment 10 days earlier).

- Practicing fiduciary purchase to TGB warehouse and fiduciary purchase in place has continued.
- 30 % advance payments has been made upon request to the producers whom deposited their product.
- No warehouse rent fee has been collected in deposit purchases (1 June- 15 September)
- In the event that those receiving loans from the banks within framework of the loaning system based on voucher receipt do not sell their products to TGB, then 25 % of the loan interest was paid by TGB.
- TGB has carried out purchases in 347 points.
- No procurement has been done from the merchants and companies as no demand has been received (15 September- 31 December 2010)
- Import before export was closed under DIR.

Grain production in our country, intervention procurement of TGB and rate of procurement to the overall production is summarized in Chart 123 and the procurement amounts of TGB from 1938 on product basis are given in Chart 124.

Chart 123. Wheat, Barley and Corn Production in Turkey, Procurement Amount of TGB and Rate of Procurement to Total Production

Years	Wheat			Barley			Corn		
	Yield (Thousand Ton)	TGB Procurement (Thousand Ton)	Rate of Procurement to the Production (%)	Yield (Thousand Ton)	TGB Procurement (Thousand Ton)	Rate of Procurement to the Production (%)	Yield (Thousand Ton)	TGB Procurement (Thousand Ton)	Rate of Procurement to the Production (%)
1938	4,279	122	3	2,387	0	0	599	0	0
1939	4,192	194	5	2,275	0	0	636	0	0
1940	4,068	157	4	2,249	19	1	757	0	0
1941	3,483	491	14	1,758	137	8	647	0	0
1942	4,263	471	11	2,165	142	7	853	56	7
1943	3,510	368	10	1,665	224	13	874	38	4
1944	3,148	912	29	1,403	221	16	508	41	8
1945	2,189	390	18	934	77	8	295	31	11
1946	3,618	588	16	1,654	225	14	595	11	2
1947	3,216	392	12	1,512	78	5	531	21	4
1948	4,867	569	12	2,167	76	4	696	5	1
1949	2,517	45	2	1,247	6	0	724	14	2
1950	3,872	321	8	2,047	140	7	628	19	3
1951	5,600	726	13	2,700	213	8	850	29	3
1952	6,447	1,230	19	3,189	171	5	837	66	8
1953	8,000	1,724	22	3,640	81	2	760	46	6
1954	4,900	514	10	2,400	63	3	914	33	4
1955	6,900	942	14	2,985	136	5	855	29	3
1956	6,400	430	7	2,900	43	1	858	1	0
1957	8,300	738	9	3,630	133	4	750	0	0
1958	8,550	865	10	3,600	185	5	900	1	0
1959	7,852	462	6	3,300	96	3	1,000	0	0
1960	8,450	390	5	3,700	104	3	1,090	0	0
1961	7,000	18	0	2,948	23	1	1,017	0	0
1962	8,450	487	6	3,500	93	3	800	0	0
1963	10,000	790	8	4,288	63	1	990	0	0
1964	8,300	373	4	3,200	6	0	1,000	0	0
1965	8,500	523	6	3,300	2	0	945	0	0
1966	9,600	793	8	3,800	27	1	1,000	0	0
1967	10,000	868	9	3,800	29	1	1,050	0	0
1968	9,520	505	5	3,560	11	0	1,000	0	0
1969	10,500	500	5	3,740	5	0	1,000	0	0
1970	10,000	805	8	3,250	8	0	1,040	1	0

(Cont'd)

Chart 123 (cont'd)									
Years	Wheat			Barley			Corn		
	Yield (Thousand Ton)	TGB Procurement (Thousand Ton)	Rate of Procurement to the Production (%)	Yield (Thousand Ton)	TGB Procurement (Thousand Ton)	Rate of Procurement to the Production (%)	Yield (Thousand Ton)	TGB Procurement (Thousand Ton)	Rate of Procurement to the Production (%)
1971	13,500	1,936	14	4,170	176	4	1,135	2	0
1972	12,200	1,400	11	3,725	32	1	1,030	0	0
1973	10,000	536	5	2,900	0	0	1,100	0	0
1974	11,000	794	7	3,330	22	1	1,200	0	0
1975	14,750	2,472	17	4,500	662	15	1,200	4	0
1976	16,500	3,128	19	4,900	398	8	1,310	0	0
1977	16,650	3,621	22	4,750	204	4	1,265	0	0
1978	16,700	3,200	19	4,750	23	0	1,300	0	0
1979	17,500	1,644	9	5,240	104	2	1,350	7	1
1980	16,500	1,653	10	5,300	711	13	1,240	0	0
1981	17,000	1,050	6	5,900	762	13	1,200	0	0
1982	17,500	2,523	14	6,400	933	15	1,360	18	1
1983	16,400	2,218	14	5,425	38	1	1,480	9	1
1984	17,200	1,923	11	6,500	170	3	1,500	2	0
1985	17,000	1,708	10	6,500	548	8	1,900	36	2
1986	19,000	2,967	16	7,000	791	11	2,300	98	4
1987	18,900	3,644	19	6,900	617	9	2,400	40	2
1988	20,500	2,804	14	7,500	714	10	2,000	43	2
1989	16,200	572	4	4,500	16	0	2,000	157	8
1990	20,000	5,159	26	7,300	814	11	2,100	131	6
1991	20,400	4,435	22	7,800	1,115	14	2,180	187	9
1992	19,300	2,453	13	6,900	569	8	2,225	395	18
1993	21,000	2,671	13	7,500	1,058	14	2,500	484	19
1994	17,500	1,355	8	7,000	1,100	16	1,850	0	0
1995	18,000	41	0	7,500	74	1	1,900	49	3
1996	18,500	632	3	8,000	623	8	2,000	240	12
1997	18,650	3,435	18	8,200	1,841	22	2,080	454	22
1998	21,000	5,212	25	9,000	1,914	21	2,300	696	30
1999	18,000	4,208	23	7,700	819	11	2,297	382	17
2000	21,000	2,959	14	8,000	509	6	2,300	29	1
2001	19,000	1,459	8	7,500	952	13	2,200	0	0
2002	19,500	333	2	8,300	380	5	2,100	79	4
2003	19,000	545	3	8,100	27	0	2,800	381	14
2004	21,000	2,023	10	9,000	3	0	3,000	474	16
2005	21,500	4,171	19	9,500	796	8	4,200	661	16
2006	20,010	1,457	7	9,551	725	8	3,811	0	0
2007	17,340	122	1	7,415	3	0	3,535	0	0
2008	17,782	40	0	5,900	0	0	4,274	832	19
2009	20,600	3,770	18	7,300	1,273	17	4,250	183	4
2010	19,660	980	5	7,200	917	13	4,310	83,5	2

Source: TSA, TGB 2011

It is seen that purchase of TGB changes in 2- 25 % of the production in line with changes in wheat production. Highest purchase in recent years was in 2005 and TGB purchases annually average 2 -3 million tons wheat (Chart 123 and 124).

Corn production has increased in recent years and TGB's purchase changes in 1- 30 % of the production (Chart 124).

Chart 124. Quantities Procured by TGB (Thousand Ton)

Year	Wheat	Barley	Rye	Oat	Corn	Paddy	Total	Year	Wheat	Barley	Rye	Oat	Corn	Paddy	Total
1938	122	0	0	0	0	0	122	1974	794	22	1	0	0	1	818
1939	194	0	0	0	0	0	194	1975	2,472	662	93	9	4	6	3,247
1940	157	19	4	23	0	0	203	1976	3,128	398	61	6	0	1	3,595
1941	491	137	24	48	0	0	701	1977	3,621	204	32	1	0	0	3,857
1942	471	142	18	40	56	4	731	1978	3,200	23	9	0	0	1	3,233
1943	368	224	42	59	38	11	742	1979	1,644	104	12	0	7	79	1,847
1944	912	221	67	64	41	7	1,313	1980	1,653	711	11	1	0	3	2,380
1945	390	77	36	19	31	4	557	1981	1,050	762	21	0	0	7	1,841
1946	588	225	87	31	11	3	945	1982	2,523	933	26	0	18	18	3,518
1947	392	78	56	3	21	0	550	1983	2,218	38	3	0	9	4	2,272
1948	569	76	57	8	5	0	715	1984	1,923	170	15	0	2	0	2,110
1949	45	6	0	0	14	0	66	1985	1,708	548	10	3	36	21	2,326
1950	321	140	60	16	19	0	555	1986	2,967	791	60	4	98	12	3,932
1951	726	213	125	18	29	0	1,112	1987	3,644	617	23	2	40	3	4,329
1952	1,230	171	95	6	66	0	1,569	1988	2,804	714	30	2	43	0	3,593
1953	1,724	81	54	9	46	0	1,913	1989	572	16	11	0	157	23	780
1954	514	63	22	23	33	0	655	1990	5,159	814	56	10	131	51	6,222
1955	942	136	54	10	29	0	1,172	1991	4,435	1,115	117	11	187	7	5,873
1956	430	43	19	29	1	0	522	1992	2,453	569	50	2	395	18	3,486
1957	738	133	71	15	0	0	958	1993	2,671	1,058	57	1	484	16	4,286
1958	865	185	116	26	1	0	1,194	1994	1,355	1,100	28	1	0	0	2,484
1959	462	96	49	11	0	0	618	1995	41	74	2	0	49	55	221
1960	390	104	68	20	0	0	582	1996	632	623	26	0	240	31	1,552
1961	18	23	2	10	0	0	53	1997	3,435	1,841	66	6	454	56	5,857
1962	487	93	56	3	0	0	640	1998	5,212	1,914	119	19	696	71	8,031
1963	790	63	206	4	0	0	1,063	1999	4,208	819	73	14	382	47	5,542
1964	373	6	96	6	0	0	481	2000	2,959	509	20	2	29	41	3,559
1965	523	2	47	0	0	0	572	2001	1,459	952	14	0	0	19	2,444
1966	793	27	77	0	0	0	897	2002	333	380	20	2	79	59	872
1967	868	29	60	0	0	1	958	2003	545	27	4	2	381	130	1,090
1968	505	11	23	2	0	2	543	2004	2,023	3	2	0.4	474	15	2,517
1969	500	5	16	0	0	3	525	2005	4,171	796	11	5	661	12	5,656
1970	805	8	24	1	1	35	874	2006	1,457	725	6	2	0	87	2,277
1971	1,936	176	60	2	2	22	2,198	2007	122	3	0	0	0	33	158
1972	1,400	32	0		0	0	0	2008	40	0	0	0	832	1	873
1973	536	0	2	0	0	0	538	2009	3,770	1,273	48	4	183	11	5,290
								2010	980	917	15	0.4	83	-	1,996

Source: TSA, TGB

4.3. Quantity and Sales of TGB for Domestic Market

Prices and quantities of sales of TGB to the domestic market are given in the charts below year by year since foundation of Turkish Grain Board (TGB) (Chart 125, 126).

Differing from year to year, TGB sells annually more than 1 million tons wheat, 200 hundred thousand tons barley, 20 thousand tons corn, 18 thousand tons rice. In 2010, TGB has sold 1,537,904 tons wheat comprising 273,406 tons durum wheat and 1,239,475 tons milling wheat, 211,016 tons barley, 98,700 ton corn, 13,052 tons rice.

Chart 125. Domestic Sales Prices of TGB Extended to Years (TL/Ton)

Year	Wheat	Corn	Rice	Year	Wheat	Corn	Rice
1938	4.75- 7	-	-	1974	125- 128	-	-
1939	5- 10.50	-	-	1975	125- 240	-	-
1940	5- 10.50	-	-	1976	240	-	-
1941	8.25- 15.25	-	-	1977	240- 260	-	-
1942	26- 45	-	-	1978	260	-	-
1943	26- 27	-	-	1979	295	-	-
1944	26- 28	22	80- 95	1980	430- 450	-	-
1945	27- 70	22	95	1981	1,075- 1,125	-	-
1946	28- 78	22	95	1982	2,000	-	-
1947	24- 78	22	95- 100	1983	23- 29	24- 25	100- 120
1948	24	22	-	1984	29- 51	38- 48	120- 200
1949	27.8	23	99.24	1985	53- 70	58- 69	200
1950	30.8	24	-	1986	71- 87	67- 78	200- 330
1951	30.8	20	125	1987	86- 128	78- 122	390- 400
1952	30.8	20	125	1988	127- 194	122- 186	400- 800
1953	36	20	-	1989	270- 382,50	191- 315,5	900- 1,750
1954	36	20	-	1990	387- 648	319- 546	1,400- 1,750
1955	35	20	-	1991	648- 960	546- 906	1,535- 2,700
1956	35	20	-	1992	1,410- 1,583	1,311- 1,484	2,700- 4,000
1957	35	32	-	1993	1,583- 2,773	1,484- 2,015	4,000- 8,100
1958	41- 51	32- 46	175- 240	1994	3,840- 5,740	3,075- 3,816	9,500- 20,000
1959	46	42- 46	175- 240	1995	6,300- 13,200	5,600- 10,500	20,000,
1960	60	38	176	1996	13,200- 22,500	13,000- 21,400	54,000- 74,000
1961	58	48	220	1997	22,500- 46,350	19,500- 37,600	74,000- 165,000
1962	73	-	-	1998	49,350- 64,000	42,600- 56,000	165,000- 215,000
1963	73- 75	-	-	1999	67,000- 97,000	57,500- 85,000	240,000- 360,000
1964	75- 80	-	-	2000	98,000- 132,700	86,000,00- 110,300	360,000- 395,000
1965	80- 81	-	-	2001	133,700- 230,000	111,300- 212,000	560,000- 870,000
1966	81- 87	-	-	2002	240,000- 322,000	212,000- 306,000	870,000- 1,070,000
1967	87	-	255- 330	2003	330,000- 432,000	306,000- 403,000	1,150,000- 1,220,000
1968	87	-	255- 330	2004	432,000- 458,000	278,100- 314,300	1,300,000- 1,450,000
1969	87	-	-	2005	458,000- 390,000	290,000- 295,000	1,460,000- 1,470,000
1970	87	-	-	2006	390,000- 415,000	295,000- 310,000	1,470,000
1971	87- 92	-	-	2007	415- 480	-	1,470
1972	110- 113			2008	480- 505	435- 480	1,500- 1,800
1973	110- 113	-	-	2009	575- 585	500- 580	1,800- 2,000
				2010	585-685	580	2,000

Source: TGB 2011

Note: The prices are expressed as KRS/Kg in 1938- 1982 period, TL/Kg for 1983- 2006 period and TL/Ton in 2007- 2010 period. Wheat prices refer to Anatolian Hard Red Milling Wheat Price.

Chart 126. Domestic Sales Quantities of TGB Extended to Years (Ton)									
Years	Wheat	Barley	Corn	Rice	Years	Wheat	Barley	Corn	Rice
1938	16,579	-	-	-	1974	1,629,229	53,288	-	34,375
1939	102,806	-	-	-	1975	1,159,474	9,560	3,444	40,385
1940	266,696	14,240	-	-	1976	1,361,487	172,665	305	33,034
1941	284,904	119,937	11,597	21	1977	1,922,251	263,323	-	59,354
1942	192,893	105,390	41,626	6,608	1978	2,738,140	237,832	-	39,130
1943	338,404	151,831	37,165	4,854	1979	2,334,616	50,192	-	25,694
1944	466,213	167,389	27,998	6,036	1980	1,726,236	129,726	2,168	34,652
1945	560,306	154,292	49,921	6,643	1981	1,146,141	206,713	3	41,186
1946	596,211	122,005	15,195	1,069	1982	1,600,576	291,552	24,875	18,164
1947	464,348	89,975	13,909	245	1983	2,100,353	641,167	48,657	22,785
1948	352,151	80,277	6,004	527	1984	2,282,903	377,081	102,343	47,904
1949	562,235	37,417	10,392	905	1985	2,420,082	435,754	140,331	21,348
1950	353,823	34,387	22,026	4,100	1986	1,967,705	401,966	156,938	26,719
1951	370,796	31,079	26,114	515	1987	2,735,128	1,050,231	200,307	24,161
1952	398,647	31,899	46,442	1	1988	3,016,322	624,227	183,890	40,420
1953	538,208	19,183	37,569	405	1989	2,917,512	562,389	473,528	42,900
1954	872,847	54,993	1,277	1,615	1990	1,292,759	130,597	549,702	43,444
1955	826,410	40,217	31,278	3,112	1991	2,574,691	175,138	290,087	53,754
1956	987,145	52,130	6,785	8,218	1992	3,099,526	528,486	251,130	13,930
1957	1,032,031	64,807	47,001	5,137	1993	1,091,304	160,950	290,114	19,590
1958	658,456	35,654	41,603	1,664	1994	1,349,068	275,240	376,105	15,006
1959	918,622	41,139	192	10,368	1995	1,194,259	499,806	6,132	211
1960	854,966	36,333	25,564	9,982	1996	102,032	69,508	73,995	15,391
1961	966,148	27,182	8,596	9,329	1997	929,520	440,899	162,752	34,653
1962	1,207,936	28,579	1,021	1,080	1998	2,073,331	749,927	481,751	29,543
1963	922,005	29,434	24,424	-	1999	2,280,331	733,399	629,400	41,001
1964	784,641	25,476	7,749	-	2000	2,311,296	695,290	502,139	19,902
1965	905,692	20,663	2,413	-	2001	2,039,061	224,138	26,603	24,908
1966	926,494	7,769	5,398	5,195	2002	1,278,984	164,367	10	27,994
1967	977,095	9,607	-	5,430	2003	604,459	280,185	80,763	17,789
1968	989,225	20,622	-	10,135	2004	1,021,609	281,003	362,133	14,122
1969	1,290,844	31,064	-	14,465	2005	2,999,464	1,998	207,359	8,000
1970	1,154,156	7,493	-	13,978	2006	3,014,347	221,920	541,623	3,415
1971	1,171,276	11,623	2,801	25,686	2007	1,003,077	383,429	290,109	5,868
1972	1,169,856	79,207	-	16,945	2008	535,417	2,739	350,854	30,311
1973	1,933,899	59,105	-	44,245	2009	731,527	12,061	528,883	23,399
					2010	1,537,904	211,016	98,700	13,012
Source: TGB 2011									

4.4. Legislation and Institutional Harmonization Activities Proposed for TGB on EU Harmonization Process

Turkish National Programme for the Adoption of the Acquis Communitaire' was published in the Official Gazette dated 24.07.2008 with issue number 25178.

In this National Programme, it has been envisaged that TGB shall

- prepare the regulations for cereals and paddy on the basis of the relevant EU legislation; and
- be transformed into an Intervention Agency for cereals and paddy or for all agricultural products.

Publication of the provision regarding the preparation of Regulations on the Cereals and Paddy Purchases and Sales by March 2008 as the measure No. 10.1 was included in the section of policy priorities and measures for "Improving the Competitive Strength" section under the title of Chapter 4, Development Axis to "2008 Program", which has been published in the Official Gazette dated 28.10.2007 and numbered 26684.

In this context, 'Implementation Regulation on the Purchase and Sales Principles for Cereals' and 'Implementation Regulation on the Paddy Purchase and Sales Principles for Paddy and Rice' were adopted by the Resolution of TGB Board of Directors on 21.02.2009 under the number 4/29–1 after having revised considering the recent adjustment in the EU legislation and for the purpose facilitating the application in transition periods. Respective regulations have been revised for the requirements in accordance with recent regulations in EU legislation and for facilitating the practice in transition periods and approved by the Decision 4/29-1 of Board of Directors dated 21.2.2009. Regulations harmonized with EU legislation have been actually put into practice since purchase campaign of 2009/10.

In 2008 and 2009 progress report of EU Commission for Turkey, it has been reported that the regulations prepared by TGB for harmonization to the EU constitute a progress in terms of common market organization. Besides, under the title of "Market liberalization and price reforms in agricultural sector" to III. Economic Criteria section of Turkish National Programme for the Adoption of Acquis Communitaire as published through the Official Gazette dated 31.12.2008 with issue number 27097, "... Cereals and Paddy Implementing Regulations were accepted in 2008 for ensuring more effective operation of market and for harmonization to the EU in cereals sector." comment was made regarding the harmonization regulations prepared by TGB. In development report dated 14.10.2009, it was stated that development concerning common market regulations remained limited with the regulations concerning procurement/sales of grains and paddy and TGB will approximate Turkish legislation with EU legislation via this measure.

During the historical process, the Intervention Agencies of the European Union have become Paying Agencies. Ministry of Agriculture and Rural Affairs has notified its consent to transforming TGB into a paying agency to act similar with the paying agencies of the EU after having been restructured for the purpose of regulating the market of the entire agricultural products as being responsible of intervention purchases and export refunds in the form of Agricultural Products Market Paying Agency as regards the institutional structuring for Common Market Organization (CMO) through its letter served to the General Secretariat for the EU Affairs on 19.06.2006 under the number 2276 within the framework of its 2006 National Plan preparatory Works.

On the other hand, by the decision on Higher Planning Council dated 17.08.2006 and numbered 2006/T-27, the Main Status of TGB has been amended to include the following phrase: "performing any duties to be entrusted through the Cabinet Decision regarding the agricultural products other than grains, where necessary. This modification has provided a legal ground for the restructuring of TGB as an organization that regulates agricultural products market.

Furthermore, legislating "The Law on Agricultural Products Market Paying Agency (TPA)" is included in the 2008-12 Action Plan of our Ministry in connection with our Organization that will last for 24 months and that covers 2009-10 period. To carry out the studies on said matter, a Commission was formed from the units of TGB and respective Commission prepared on 26.05.2009 "Draft Law on Establishing TGB Paying Agency through Restructuring Turkish Grain Board" together with the justifications and reasoning of the articles, general objectives and Regulatory Impact Analysis (RIA) and the Commission continues its technical studies nowadays. Furthermore, Working Group for TGB Payment Agency Draft Law composed of representatives of Law Consultancy, Department of Foreign Affairs and European Union Coordination, Directorate General of Organization and Supporting (TEDGEM), Directorate General of Agricultural Production and Development (TUGEM), Agriculture and Rural Development Supporting Authority (TKDK), Directorate General of Fish and Meat (EBK) and Turkish Grain Board continues its studies under the coordination of Strategy Development of the Ministry.

5

GENERAL EVALUATION OF 2010/ 2011 GRAIN SEASON

GENERAL EVALUATION OF 2010/ 2011 GRAIN SEASON

5. GENERAL EVALUATION OF 2010/2011 GRAIN SEASON

5.1. Assessment of Turkish Market

Production volumes of grains published by TSA in 2010 has decreased by 2.5 % and become 32.6 million tons.

Chart 127 below gives cultivation area, production and yield forecasts for the grains covered under activity field of the Board.

Chart 127. Table of Grain Cultivation Areas, Production Amounts and Yield in Turkey

Years	Product	Cultivation Area (Thousand Ha)	Production (Thousand Ton)	Yield (Ton/Ha)
2007	Wheat	8,098	17,234	2.13
	Barley	3,428	7,307	2.13
	Rye	133	241	1.81
	Oat	94	189	2.00
	Corn	518	3,535	6.83
	Paddy	94	648	6.32
	Total	12,364	29,153	
2008	Wheat	8,090	17,782	2.22
	Barley	3,276	5,900	1.80
	Rye	126	254	1.92
	Oat	91	207	2.18
	Corn	595	4,274	7.20
	Paddy	100	753	7
	Total	12,278	29,170	
2009	Wheat	8,100	20,600	2.57
	Barley	3,010	7,300	2.43
	Rye	138	343	2.48
	Oat	93	218	2.35
	Corn	592	4,250	7.18
	Paddy	97	750	7.75
	Total		33,461	
2010	Wheat	8,094	19,660	2.43
	Barley	3,033	7,240	2.39
	Rye	141	366	2.59
	Oat	88	204	2.31
	Corn	594	4,310	7.26
	Paddy	112	860	8.69
	Total	12,052	32,640	

Source: TSA 2011
(*) TSA data has not been published yet.

Production in 2010 has decreased by 4.5 % for the wheat, by 0.8 % for the barley but increased by 1.41 % for the corn and 14.67 % for the paddy compared to the figures of previous year (Chart 127).

Chart 128. Grain Product Consumption and Sufficiency Levels

Species	2005/06		2006/07		2007/08		2008/09		2009/2010	
	Consumption (Thousand Ton)	Sufficiency (%)	Consumption (Thousand Ton)	Sufficiency (%)	Consumption (Thousand Ton)	Sufficiency (%)	Consumption (Thousand Ton)	Sufficiency (%)	Consumption (Thousand Ton)	Sufficiency (%)
Wheat	16,846	120.6	18,943	99.8	16,882	96.5	17,781	94.5	16,961	114.8
Barley	8,199	108.9	8,915	100.7	7,058	97.3	5,676	98.1	5,622	122.1
Oat	-	-	-	-	203	92.5	202	96.3	291	116.6
Rye	-	-	-	-	252	94.1	246	99.1	215	100.9
Corn	4,374	93.2	4,272	86.5	4,211	81.4	5,190	79.9	5,154	80.0
Rice	559	63.8	580	71.3	637	60.5	591	75.7	589	75.6
Total	29,977		32,710		29,242		29,686		28,832	

Source: TSA 2011

Sufficiency level of paddy has increased as there is continuous and regular increase in Turkey's paddy production (Chart 128). Severe losses were recorded in 2007 due to the drought experienced and the deficit amounts were compensated through imports. The production amount and yield increased in 2008 and 2009 thanks to the improvement on climatic conditions; however, wheat import volume remained high as successful performance in finished product exports increased the imports carried out under Inward Processing Regime (IPR). Furthermore, some amount of barley was imported due to decrease in production volume.

As seen in Chart 129, rice import in 2010 has decreased compared to the figures of 2008- 2009. Wheat import volume has decreased in 2010 compared to 2009 and the export has increased during the same period.

Chart 129. Grain Product Import and Export Figures of Turkey

Product	Import (Ton)			Export (Ton)		
	2008	2009	2010	2008	2009	2010
Wheat	3,708,003	3,379,928	2,554,189	8,003	301,485	1,156,696
Barley	253,014	91,609	57,076	0	192,373	475,791
Rye	15,561	2,393	0	0	0	1
Oat	4,606	6,166	0	0	1	0
Corn	1,151,407	484,374	450,760	15,056	323,128	10,655
Rice	179,603	154,387	125,643	4,058	14,083	51,050

Source: TSA 2011

As it can be seen from the table below, customs taxes that are reduced by Undersecretariat for Foreign Trade in periods where the domestic production cannot meet the local demand have been lifted for wheat and oat until 1 May 2011 considering their sufficiency level in 2010 and customs taxes have been increased to the highest level (130 %) committed to WTO for barley, corn and rye. Customs taxes rates applied for the rice also kept the highest level undertaken to UFT.

Chart 130. Customs Rates Applied for Grain Products

Customs Tax (%)	Wheat		Barley			Corn	Rye	Oat	Rice	Cargo	Paddy
	Milling	Durum Wheat	White	For Malting	Other						
	0*	0*	130	130	130	130	130	0*	45	36	34

Source: Official Journal

Note: With an adjustment in customs tariffs on 28.11.2007, Customs Tax for oat (60 %), milling wheat and rye (130 %) was decreased to 8 % and the tax rate was nullified on 23.02.2008. The customs tax was started to apply as 50 % as of 15.05.2008.

Customs tax which was nullified for barley on 28.11.2007 started to apply as 50 % as of 15.05.2008.

Customs tax which was as 35 % on 08.04.2008 was reduced to 20 % but increased to 50 % on 31.07.2008 and finally respective customs tax increased to 130 % on 12.11.2008.

Starting from 01.01.2009, customs tax for Wheat, Barley, Rye and Oat was applied as 80 %.

The customs tax which was 80 % before was increased to 130 % on 15.05.2009.

Customs tax applied for Wheat and Oat has been 0 % as of 25.02.2011.

(*) Applicable customs tax will be 130 % starting from 01.05.2011 (inclusive)

Considering average commodity exchange prices in 2009, it is seen that the prices remained below the prices realized in previous year due to the increase in production and quality problems on the grains. Such situation caused record breaking procurements on TGB side that performed 5,285,274 tons.

Average commodity exchange prices for 2008- 2010 period are given in Chart 131 below on monthly basis.

Chart 131. Average Prices on Commodity Exchanges in 2008- 2010 on Monthly Basis														
Years	Product	Code	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2008 (TL/TON)	AHR Wheat	1221	536	574	631	615	595	565	548	552	552	559	550	546
	Durum Wheat	1121	678	694	783	751	731	703	733	698	696	650	570	562
	Barley	2111	502	492	478	488	509	486	486	475	463	479	469	475
	Rye	2211	456	612	604	491	-	452	437	429	407	413	380	407
	Oat	2311	695	801	784	670	-	700	520	508	494	511	506	510
	Corn	2410	420	427	437	481	485	485	-	392	388	387	366	366
	Rice (Baldo)	3671	1,820	1,880	1,960	3,180	3,650	3,490	3,460	3,520	2,950	2,570	2,600	2,580
	Rice (Osmancık)	3651	1,300	1,380	1,490	2,300	2,610	2,470	2,00	2,450	2,090	1,670	1,700	1,720
2009 (TL/TON)	AHR Wheat	1221	559	560	549	518	521	527	471	481	519	543	555	564
	Durum Wheat	1121	611	605	589	527	531	498	416	435	448	425	410	430
	Barley	2111	470	454	444	414	382	336	335	336	345	364	359	357
	Rye	2211	417	430	418	389	388	386	306	296	318	348	344	346
	Oat	2311	511	539	512	444	411	351	300	320	345	381	414	430
	Corn	2410	394	435	442	456	453	461	501	456	409	413	414	413
	Rice (Baldo)	3671	2,535	2,653	2,972	2,955	2,993	3,080	3,210	3,228	3,070	2,945	2,988	2,80
	Rice (Osmancık)	3651	1,733	1,828	2,146	2,128	2,170	2,252	2,373	2,420	2,223	2,040	2,038	2,044
2010 (TL/TON)	AHR Wheat	1221	568	565	562	555	552	590	567	611	648	664	679	699
	Durum Wheat	1121	494	515	477	468	474	538	523	576	604	601	611	611
	Barley	2111	367	368	354	358	374	381	387	428	464	475	474	486
	Rye	2211	378	405	358	362	452	325	372	404	430	456	472	482
	Oat	2311	423	422	422	385	383	400	429	511	555	612	789	811
	Corn	2410	430	462	462	454	456	456	474	467	476	491	481	484
	Rice (Baldo)	3671	3,070	3,140	3,118	3,023	2,948	2,936	2,883	2,904	2,868	2,835	2,760	2,778
	Rice (Osmancık)	3651	2,093	2,118	2,134	2,065	1,990	1,970	1,945	1,930	1,913	1,955	1,860	1,860

Source: Eskişehir, Konya and Polatlı Commodity Exchanges for AHR Wheat prices,
Çorum and Konya Commodity Exchanges for Durum Wheat prices,
Eskişehir, Konya, Polatlı, Çorum Commodity Exchanges for Barley prices,
Eskişehir, Konya, Polatlı, Commodity Exchanges for Rye prices,
Adana Commodity Exchanges for the Corn prices,
Average price of TGB Branches for rice prices

As seen in Chart 131, the fluctuations experienced in world grain markets in 2010 have also affected domestic markets and caused the prices going up compared to previous years.

Chart 132. Volume of Anatolian Red Hard and White Hard Wheat Traded in Commodity Exchanges on Monthly Basis in 2002- 2010 Period (Ton)

MONTHS	Anatolian Hard Red Milling Wheat (Eskişehir - Konya - Polatlı)									Anatolian Semi - Hard Red Milling Wheat (Eskişehir - Konya - Polatlı - Bandırma)								
	2002	2003	2004	2005	2006	2007	2008	2009	2010	2002	2003	2004	2005	2006	2007	2008	2009	2010
January	1,683	6,958	28,170	9,324	1,806	4,406	4,349	5,556	6,712	367	4,165	11,125	2,391	617	1,009	1,664	2,171	2,226
February	2,022	2,682	18,359	12,207	7,859	6,728	4,494	5,466	7,979	616	1,931	6,809	2,924	1,410	1,831	1,952	2,039	3,913
March	4,161	4,562	24,046	13,766	11,469	6,755	6,011	7,111	7,111	1,050	3,680	11,456	4,587	3,480	8,567	3,809	2,958	4,026
April	2,741	4,938	17,773	10,783	5,745	3,824	3,019	8,810	5,121	969	3,545	6,672	3,644	1,528	9,222	2,050	4,949	2,324
May	2,892	2,865	13,988	11,263	4,204	963	496	2,154	1,121	1,381	2,878	6,127	2,606	1,075	314	789	1,662	890
June	1,089	1,942	10,392	5,341	2,374	2,915	1,437	1,995	3,674	397	1,785	3,702	3,088	3,200	3,043	1,269	1,651	4,731
July	21,920	36,369	102,008	77,373	77,847	34,057	29,153	38,683	40,228	14,112	20,316	36,615	15,484	22,034	15,031	13,528	33,473	13,320
August	23,621	40,553	80,320	54,309	33,526	21,609	17,267	28,277	27,456	11,521	15,582	17,869	12,631	14,045	9,112	8,221	18,661	5,901
September	11,045	49,197	59,071	28,022	23,157	14,627	12,102	15,992	19,893	5,344	21,035	13,328	5,514	7,497	5,439	3,809	5,563	3,553
October	8,136	45,201	36,382	15,626	15,240	11,587	9,072	13,785	14,384	3,452	13,595	7,133	3,159	4,657	5,063	3,721	5,566	2,518
November	8,097	27,135	20,267	14,132	9,584	8,640	6,472	11,029	7,655	2,788	9,549	5,021	2,659	4,632	2,945	1,973	4,079	1,610
December	5,094	48,166	31,924	13,700	9,078	4,378	3,945	9,953	8,750	1,943	9,818	6,450	2,862	2,396	1,490	1,556	4,363	2,120
Total	**92,501**	**270,568**	**442,700**	**265,844**	**201,888**	**120,489**	**97,817**	**148,811**	**150,084**	**107,879**	**132,307**	**61,548**	**66,571**	**63,066**	**44,341**	**87,135**	**33,181**	**47,132**

Chart 132 shows trade volumes of Anatolian hard red and semi- hard red milling wheat traded in Eskişehir, Konya, Polatlı and Bandırma Mercantile Exchanges. In 2010, Anatolian hard red milling wheat has created 150.084 tons trade volume in 2010 while semi hard white milling wheat has created 47.132 tons trade volume in the same period.

Chart 133. Volume of Anatolian Red Semi Hard and Durum Wheat Traded in Commodity Exchanges on Monthly Basis in 2002- 2010 Period (Ton)

Months	Anatolian Semi - Hard Red Milling Wheat (Polatlı- Edirne- Konya- Çorum)									Durum Wheat (Konya- Çorum)								
	2002	2003	2004	2005	2006	2007	2008	2009	2010	2002	2003	2004	2005	2006	2007	2008	2009	2010
January	49	1,499	326	456	96	595	712	1,570	2,760	5,318	940	22,010	632	52	87	419	1,409	3,271
February	238	260	575	1,182	144	467	877	1,368	4,433	4,015	191	3,249	559	194	2,227	407	1,017	5,085
March	731	962	483	10,770	295	366	666	2,029	4,503	1,885	1,011	14,645	667	354	530	1,366	1,864	3,253
April	637	708	529	804	234	119	533	3,257	2,305	3,925	708	16,472	446	312	416	513	2,101	1,424
May	883	418	592	520	230	36	159	294	694	5,007	4,774	15,777	263	205	17	100	601	75
June	1,169	911	973	1,992	1,597	2,485	2,014	5,355	3,801	68	7,926	24,788	476	170	168	92	620	504
July	11,577	4,193	15,317	34,698	7,635	6,029	5,374	19,867	30,063	5,818	22,120	50,178	6,842	5,187	5,803	16,183	23,608	3,396
August	6,109	2,840	14,415	15,929	3,168	3,337	3,469	7,579	15,123	5,839	14,932	13,495	3,623	2,555	2,547	5,017	14,975	3,378
September	4,214	1,892	2,371	2,757	2,015	3,213	4,019	4,060	7,281	1,750	20,258	9,517	2,229	1,113	1,950	2,772	5,211	2,837
October	3,007	1,150	1,723	1,319	1,304	2,513	2,942	6,878	5,374	1,070	8,038	3,601	698	343	1,300	2,283	3,091	1,675
November	3,100	1,360	1,793	1,247	1,637	1,913	2,689	5,608	4,736	998	7,625	3,431	454	472	764	1,281	2,452	663
December	1,467	1,444	1,232	691	1,051	874	1,584	4,881	7,179	822	6,191	9,250	383	381	646	538	2,474	1,705
Total	**17,637**	**40,329**	**72,365**	**19,406**	**21,947**	**25,038**	**62,746**	**36,515**	**88,252**	**94,714**	**193,783**	**17,272**	**11,338**	**16,455**	**30,971**	**59,423**	**59,423**	**27,266**

Source: Created with daily prices received from Eskişehir, Konya, Polatlı, Edirne and Çorum Commodity Exchanges

Chart 133 shows trade volumes of Semi Hard Red and Durum Wheat traded in Edirne, Konya, Polatlı and Çorum Mercantile Exchanges. In 2010, Semi hard red milling wheat has created 88.252 tons trade volume in while durum wheat has created 27.266 tons trade volume in the same period.

Chart 134. Volume of Barley and Rye Traded in Commodity Exchanges on Monthly Basis in 2002- 2010 Period (Ton)

Months	Barley (Eskişehir- Konya- Polatlı- Çorum)									Rye (Eskişehir- Konya- Polatlı)								
	2002	2003	2004	2005	2006	2007	2008	2009	2010	2002	2003	2004	2005	2006	2007	2008	2009	2010
January	480	4,823	4,525	2,611	833	4,161	850	2,041	2,985	37	109	61	35	5	60	25	16	16
February	697	1,379	2,702	2,425	1,822	21,733	720	1,830	4,272	42	20	127	47	73	31	8	18	118
March	1,61	3,597	4,138	3,917	4,432	20,304	1,521	2,602	4,770	24	74	172	93	25	17	32	40	271
April	499	2,325	2,073	2,955	1,977	14,599	1,018	3,176	2,500	49	76	32	126	15	37	12	51	30
May	261	1,243	1,435	2,694	1,595	321	200	1,477	458	17	23	25	15	15	7	0	20	148
June	1,093	5,679	4,293	4,390	13,416	4,831	5,478	9,147	15,429	5	4	1	153	37	40	49	18	30
July	20,838	18,799	33,742	36,853	20,850	11,384	20,338	43,496	20,318	605	660	696	995	629	370	692	2,570	1,114
August	9,162	7,484	10,038	15,155	6,537	4,702	5,879	18,518	6,645	365	194	406	660	270	117	163	704	230
September	5,717	8,588	5,473	6,147	3,286	2,385	3,037	6,162	4,961	223	176	160	131	67	44	83	277	107
October	3,772	8,483	4,476	3,857	2,198	2,514	3,766	5,956	3,067	188	169	99	79	50	49	62	303	139
November	3,753	5,400	3,641	4,175	3,009	2,230	2,382	5,154	2,256	105	139	67	51	108	20	221	186	12
December	2,343	9,282	5,824	3,676	2,330	1,300	1,891	3,951	2,091	90	177	86	64	178	54	41	37	78
Total	**49,776**	**77,082**	**82,360**	**88,854**	**62,283**	**90,464**	**47,080**	**103,510**	**69,752**	**1,750**	**1,821**	**1,932**	**2,449**	**1,472**	**846**	**1,388**	**4,240**	**2,293**

Chart 134 shows trade volumes of barley and rye traded in Eskişehir, Konya, Polatlı and Çorum Mercantile Exchanges. In 2010, barley has created 69,752 tons trade volume in while rye has created 2,293 tons trade volume in the same period.

Chart 135. Volume of Oat and Corn Traded in Commodity Exchanges on Monthly Basis in 2002- 2010 Period (Ton)

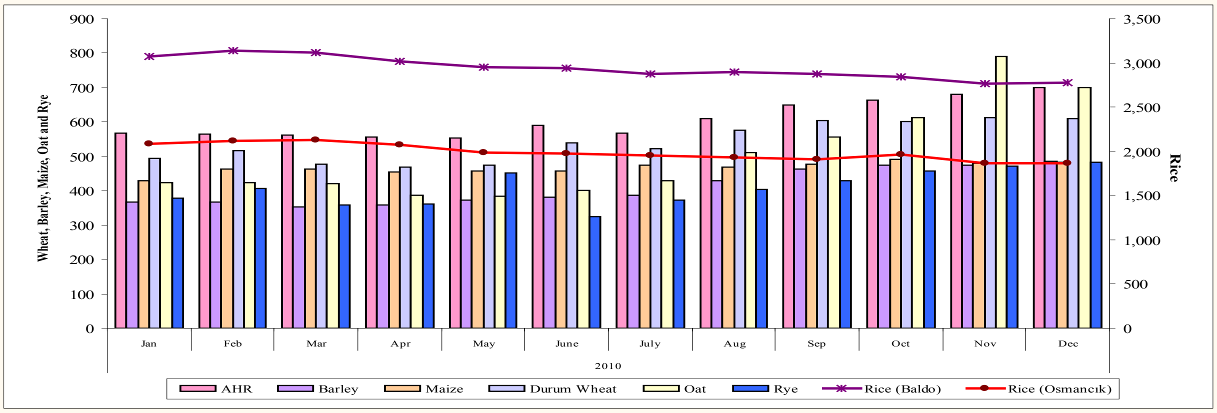
Months	Oat (Eskişehir- Konya- Polatlı)									Corn (Adana)								
	2002	2003	2004	2005	2006	2007	2008	2009	2010	2002	2003	2004	2005	2006	2007	2008	2009	2010
January	26	158	58	156	57	156	67	61	169	43,967	66,558	80,548	19,918	27,119	25,318	10,854	2,920	12,252
February	18	40	108	361	144	224	56	163	308	27,201	42,326	37,475	19,857	19,386	45,200	8,770	3,737	34,718
March	70	456	335	330	913	239	105	376	361	14,033	49,074	30,560	60,774	57,994	49,695	2,891	7,303	33,175
April	12	351	1,163	129	197	38	19	189	120	17,047	31,228	19,924	11,794	16,187	41,610	11,092	4,741	21,983
May	1	105	48	33	152	8	0	59	39	16,981	8,568	23,400	26,146	13,948	7,864	3,180	0	39,177
June	0	44	1	20	57	0	2	32	8	12,218	7,328	8,887	7,418	5,278	4,126	7	0	38,111
July	193	348	382	382	530	370	484	517	224	9,920	8,330	6,788	4,891	3,535	1,721	0	0	39,953
August	395	320	933	1,211	580	627	464	512	315	18,692	6,668	2,585	36,085	30,417	20,867	2,698	421	54,265
September	243	202	381	435	197	119	259	262	223	239,648	211,862	247,403	303,989	95,097	257,811	147,067	23,302	100,822
October	132	227	162	291	168	82	209	308	116	199,097	186,706	93,889	188,524	109,314	74,053	35,766	57,650	100,977
November	217	73	225	397	126	30	82	132	79	99,646	149,075	114,120	75,313	78,560	68,662	11,697	10,412	41,978
December	63	180	144	298	55	10	89	79	205	65,219	99,087	18,372	29,938	88,635	28,439	88,354	16,058	58,936
Total	**1,370**	**2,504**	**3,940**	**4,041**	**3,176**	**1,903**	**1,836**	**2,690**	**2,167**	**763,669**	**866,810**	**683,951**	**784,647**	**545,470**	**625,366**	**322,376**	**126,544**	**576,347**

Source: Created with daily prices received from Adana, Eskişehir, Konya, Polatlı and Çorum Commodity Exchanges

Chart 135 shows trade volumes of oat and corn traded in Eskişehir, Konya, Polatlı and Adana Mercantile Exchanges. In 2010, oat has created 2,167 tons trade volume in while corn has created 576,347 tons trade volume in the same period.

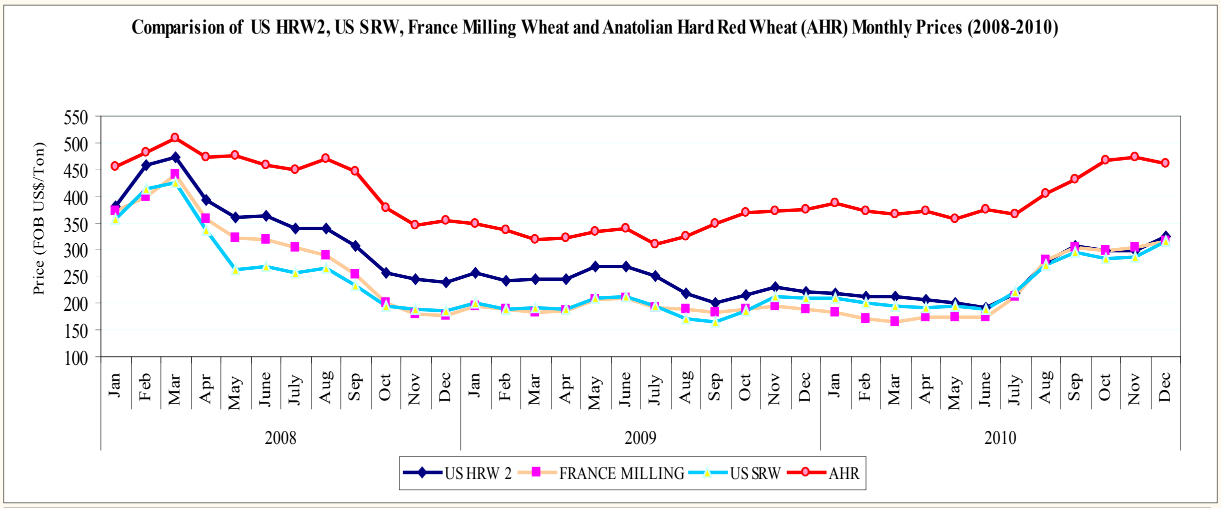
According to the data given above, trade volumes in Eskişehir, Konya, Polatlı and Adana Mercantile Exchanges have increased compared to previous year excluding durum wheat, barley and rye.

Graphic 86. Average Monthly Prices in Mercantile Exchange in 2010 Period



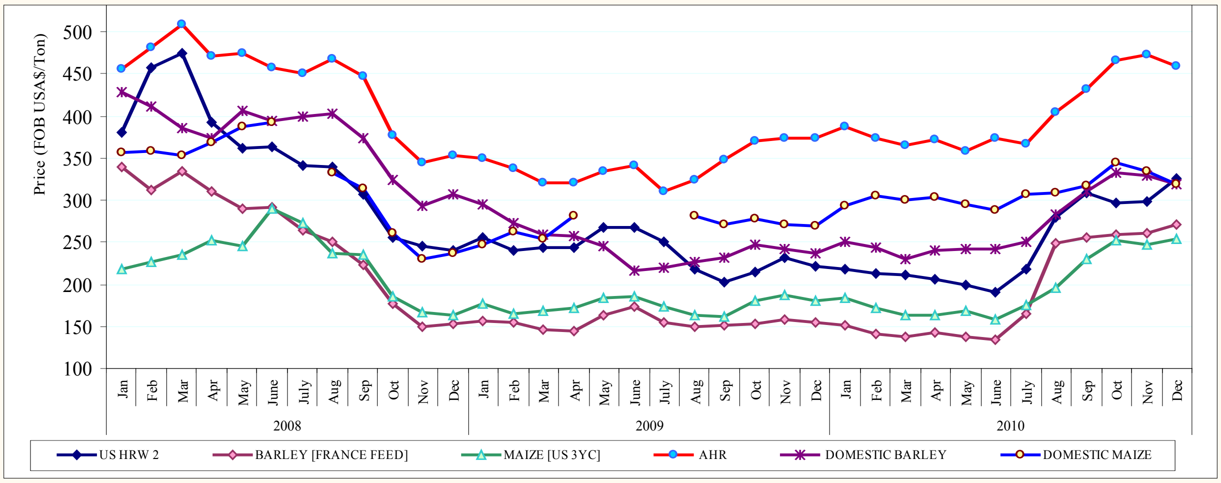
Source: Domestic mercantile exchange

Graphic 87. Comparison of Domestic and International Wheat Prices on Monthly Basis



Source: Reuters and domestic mercantile exchange

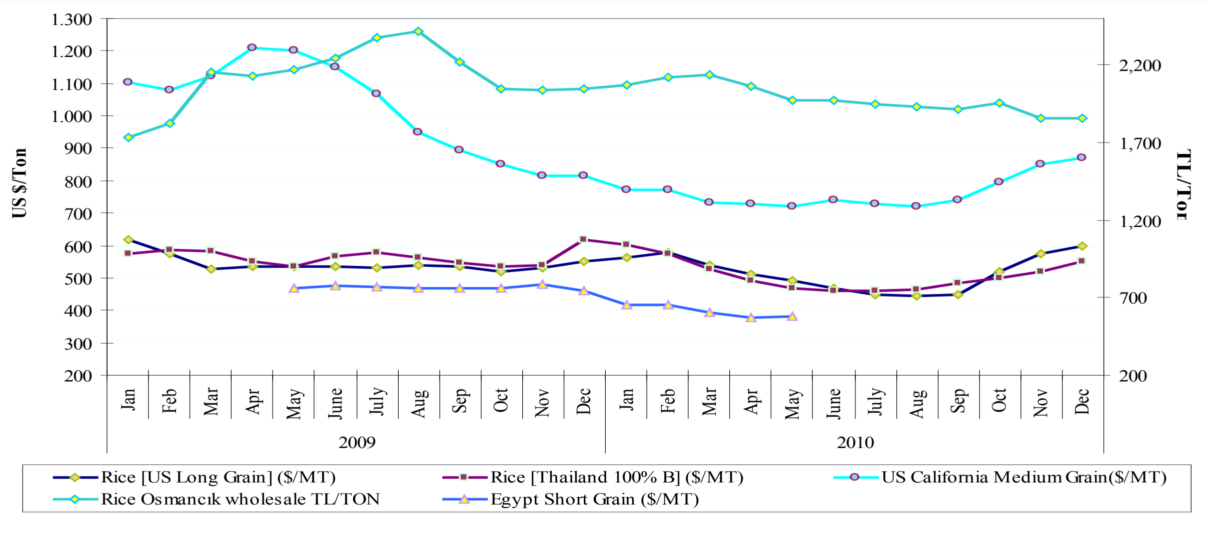
Graphic 88. Comparison of Domestic and International Wheat, Barley and Corn Prices on Monthly Basis



Source: Reuters and domestic mercantile exchange

Graphics giving monthly breakdown of the prices show that the prices decreased in 2009 compared to the level of previous years but started to increase again as of July 2010 (Graphics 86 87 and 88).

Graphic 89. Comparison of Domestic and International Rice Prices on Monthly Basis



Source: Reuters, IGC and domestic mercantile exchange

Rice prices in 2010 has been more stable than the situation in 2009 (Graphic 89).

5.1.1. 2010/2011 Season for TGB Activities

5.1.1.1. Intervention Procurement Activities

Grain purchases were made on the basis of 2009/15095 numbered Decree Law on the Purchase and Sale of Grains published in the Official Journal dated 20.06.2009 and numbered 27264. Purchases in 2010 has been performed according to the provisions of the Decree enacted in 2009.

Wheat, barley, rye and oat procurements started under the letter of commitment issued on 17th May 2010 and the intervention procurement prices were announced on 2nd June 2010.

Corn procurement prices were announced on 25 August 2010 and cash and consignee procurements started.

In 2010/11 season, TGB has conducted all preparations for pre-harvest purchase policies; however, no prevention purchase price has been announced for the paddy as the market prices have met the expectations of the producers.

However, TGB started to make purchases with letter o commitment on 6 th September 2010 in order to meet warehousing needs of the producers and industrialists and 3,363 tons paddy has been purchased. Consignee purchase instruction has been given on 12 November 2010 based on intervention purchase prices of 2008/2009 (870 TL/ton for Osmancık, 960 TL/ton for Long Grain, 790 TL/ton for medium grain and 720 TL/ton for short grain) to enable the producers getting loans against the receipt.

Chart 136. Intervention Procurement Prices for 2010 (TL/Ton)					
Species		Intervention Purchase Price			
		June July August	September	October	November
Durum Wheat	Durum Wheat	575	585	595	605
	Low Quality Durum Wheat	470	480	490	500
Milling Wheat Varieties	Anatolian White Hard Wheat	550	560	570	580
	Anatolian Hard Red	550	560	570	580
	Anatolian Semi- Hard White	520	530	540	550
	Semi Hard Red	520	530	540	550
	Other Red And White	490	500	510	520
	Wheat For Feed	440	450	460	470
Barley, Rye, Triticale, Oat		415	425	435	445
Minimum Purchase (Barley- Rye- Triticale And Oat)		350	360	370	380
Corn*		490	-	-	-
Paddy**		-	-	-	-

Source: TGB
(*) Gradual pricing was not applied
(**) Intervention procurement price was not announced.

The Ministry started premium payment for grain production since year 2005. Chart 137 presents premium amounts in recent four years and highest Premium 100TL/ton has been paid for paddy in 2010.

Chart 137. Premium Amounts Paid by the Ministry for Grains				
Species	Premium amount (TL/Ton)			
	2007	2008	2009	2010
Wheat	45	45	50	50
Barley, Rye, Oat	35	36	40	40
Corn	20	36	45	40
Paddy	90	90	100	100

Source: Minister of Agriculture and Rural Affairs, 2011

To balance the product quantity supplied to the market by the producers lacking sufficient financial power and storage capacity, Turkish Grain Board carried out record breaking intervention procurement in total 352 stations included 28 branches, 118 agencies, 73 teams with facilities and 133 temporary workplaces considering the organization structure and regional supply conditions.

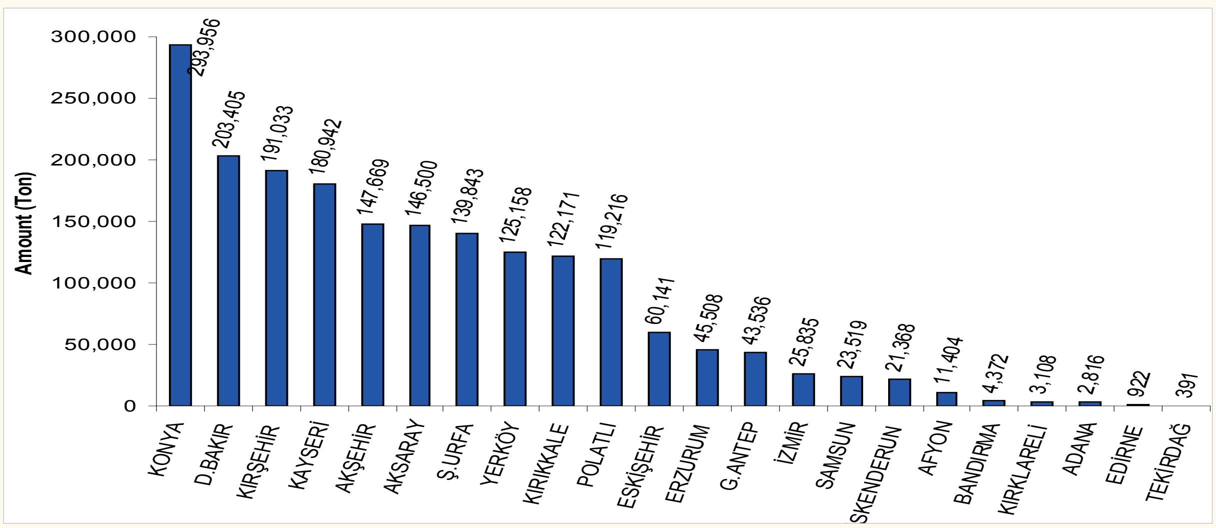
Chart 138 shows advance purchase amounts performed in 2010/11 season by 7 April 2011.

Chart 138. Advance Procurement Volumes in 2010/2011 Period

Product	Quantity (Ton)
Durum Wheat	339,061
Milling Wheat	641,172
Total Wheat	980,232
Barley	916,526
Rye	15,438
Triticale	222
Oat	394
Corn	83,491
Total Grain	1,996,304

Source: TGB 2011

Graphic 90. Advance Procurement Quantities Realized by TGB Branches in 2010



Source: TGB 2011

As seen in Graphic 90, Branch Directorates of Central Anatolia and South East Anatolia regions have performed intensive purchases in 2010 and minimum purchase has been done from the enterprises in Thrace Region.

TGB started procurements on commodity exchanges having proper infrastructure starting from 2002. Even though the procurements were made based on the physical analysis results only, chemical analyses were included to the procurement and pricing system in 2009. Some commodity exchanges could not meet the laboratory conditions; therefore, the procurements that started in 23 commodity exchanges continued in 20 commodity exchanges. In 2010, 123,535 ton has been purchased in 21 mercantile exchanges.

The commodity exchanges and procurement amounts are given in Table 139 below.

Chart 139. Supplier Commodity Exchanges and Quantities Procured in Different Years									
Mercantile Exchanges		**2002**	**2003**	**2004**	**2005**	**2006**	**2007**	**2009**	**2010**
1	Polatlı	1,800	2,805	7,344	43,900	4,192	0	22,394	2,275
2	Karaman	2,442	26,319	43,605	25,913	10,786		21,800	9,830
3	Konya	392	7,880	28,148	49,646	8,281	4	670	24,404
4	Edirne	0	93	34,539	51,643	1,230	3,941	13,183	76
5	Çorlu		0	22,378	16,291	494	5	794	-
6	Bandırma		91	583	12,363	0	0	165	0
7	Ankara		2,687	22,137	56,783	19,248	0	0	10,845
8	Erzurum		0	2,299	3,866	143	373	4,055	0
9	Kırklareli			16,241	22,650	847	321	28,603	563
10	Tekirdağ			17,623	29,942	340	77	17,666	59
11	Malkara			29,527	34,576	678	79	212	51
12	Balıkesir			0	1,271				-
13	Biga			4,104	12,756	10	0		-
14	Eskişehir			6,221	27,960	2,075	59	29,822	2,892
15	Haymana			1,410	24,000	3,295	0	31,987	3,766
16	Yozgat			11,201	9,933				-
17	Yerköy			32,047	150,741	15,540	3,970	57,566	14,150
18	Sivas			11,718	0	0	746		-
19	Uzunköprü			17,905	38,084	5,545	4,487		-
20	Karacabey			3,082	7,315	9	31	849	7
21	Gaziantep			20	14,438				-
22	Ş.Urfa			5,209	19,474				-
23	Diyarbakır			25,594	52,418	42,817	512		-
24	Çanakkale			4,897	3,345				-
25	Keşan			10,554	14,724	358	1,039		28
26	Çorum				0	217	0		-
27	Hayrabolu				42,845	610	90	149	27
28	İpsala				9,266	225	361		-
29	Sungurlu				22,154			0	-
30	Ereğli				14,108	6,555	0	10,043	4,265
31	Boğazlıyan					25,145	1,281	37,188	18,469
32	Babaeski							9,854	8
33	Gelibolu							21,140	1,139
34	Karapınar							60,000	30,681
	Total	**4,634**	**39,875**	**358,386**	**812,405**	**148,640**	**17,376**	**368,140**	**123,535**
Note: No purchase was done in mercantile exchanges as there was no advance purchase in 2008.									

5.1.1.2. Consignee Procurements

Consignee procurements have been conducted from all segments in wheat and barley in 17 May-15 September 2010 period.

Consignee procurements have been conducted from all segments in paddy in 12 November – 31 December 2010 period.

5.1.1.2.1. General Principles for Consignee Procurement

- Products under trusteeship shall be stored by 28 April 2011 at latest.
- Paddy which purchased as consignee shall be removed from the warehouses as of 31 May 2011.
- The deficiencies in return of consignee products are met from the stocks. However, in the event that the enterprise does not have stock of same group to meet the missing in return of the product, TGB board pays the monetary value of the missing part to the producers based on current purchase prices of TGB.
- Total consignee procurement amount for 2010 is 438,657 tons.
- TL 67.609 loan has been lent against 204 thousand tons in consignee purchases.
- TL 4.073 loan has been lent for12 thousand ton in place consignee purchase.

5.1.1.2.2. Principles for Consignee Procurements from Producers (Having FRSC)

- Wheat, barley and corn were purchased as consignee .
- In the event that the quantity defined in FRS certificate is removed from the warehouse, no warehouse fee is charged; however, 0.05 TL/ton/Day warehouse fee is collected from the producers having FRS certificate for the grain and corns.
- No product return was done within two months period after receiving consignee products.
- 30 % advance payment was made upon request with the condition that the producer would not remove the product from the warehouses in 2 months.
- In the event that those receiving loans from the banks within framework of the loaning system based on voucher receipt do not sell their products to TGB, then 25 % of the loan interest was paid by TGB.

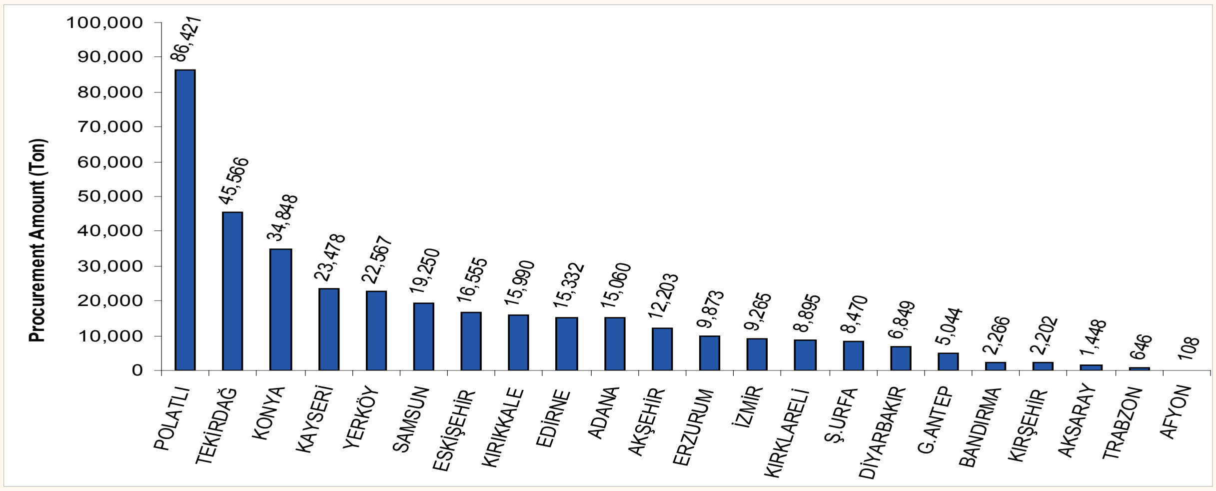
Chart 140. Quantities of Products Taken in Fiduciary Transaction, Procured and Returned in 2010/2011 Period

Product	Consignee Quantity	Purchased Quantity (Ton)	Returned Quantity (Ton)	Ending Stocks (Ton)
Durum Wheat	35,844	17,870	906	23,877
Milling Wheat	271,997	128,720	1,273	219,935
Total Wheat	307,841	146,590	2,179	243,812
Barley	54,495	21,508	628	48,195
Corn	72,991	35,587	525	50,197
Paddy	3,330	0	303	3,026
Overall Total	**438,657**	**203,685**	**3,635**	**345,230**

Source: TGB/April 2011

As seen in Chart 140, 203.685 tons of total 438.657 tons consignee purchase has been converted into real sales and 3.635 tons has been returned in 2010/11 purchase period.

Graphic 91. Fiduciary Procurement Quantities Realized by the Branches of TGB in 2010



Source: TGB 2011

In 2010/11 period, Polatlı Branch Directorate has become leading office in consignee purchases with 86,421 tons consignee purchase (Graphic 91).

5.1.1.2.3. Principles for Consignee Procurements from Tradesmen and Industrialists (without FRS Certificates)

- Minimum 10 ton wheat and barley were taken with consignee procurement process in enterprises determined by Branch Directorates.
- 0.05 TL/ton/day warehouse rent was collected in case of withdrawing the product. Wheat and barley under deposit has not been converted into advance purchase before 28 April 2011 and this date was 31 May 2011 for the corn. 0.3 TL/ton/day/vat warehousing fee has been collected subjecting the product to advance purchase transaction for the cases when the product is not withdrawn until a particular due date.
- No product return was done within two months period after receiving consignee products.
- In the event that those receiving loans from the banks within framework of the loaning system based on voucher receipt do not sell their products to TGB, then 25 % of the loan interest was paid by TGB.

5.2. Warehousing Activity:

Approximately 30- 35 million tons grain is produced in our country every year and 20- 23 million tons of this production is supplied to the market while remaining part is used for the local consumption. Considering that there is 12.5 million storage capacity in our country (8.4 million ton in private sector, 4.1 million ton in TGB), it can be concluded that the country has warehousing deficit for 10 million tons. Intensive supply to the market by the producers in 2-3 months harvesting period due to financing and warehousing deficits create the market balance against the producers.
In order to meet this requirement, Turkish Grain Board started Long Term Renting Guaranteed Warehousing Construction Project for 1,800 thousand tons capacity and the constructions started for initial 130 thousand tons upon concluding agreements. The places where the warehouses were determined according to basin based production, changes expected in GAP project production amounts and regional warehousing deficits.
The warehouse types used by TGB are as follows
The warehouse types used by TGB are as follows: Silo (concrete, steel), Mechanized Horizontal Warehouse, Machined Concrete Granary and Semi Mechanical Warehouse, Reinforced

Concrete Granary and Flat Warehouse, Stone, Wooden, and Steel Granaries (French, British, Quanset, Butler), and Horizontal Warehouse, Wooden Hangar, Haystack, Bag Pool, and Modern Open Bulk Storing Units (MOBSU's) manufactured by MKE-Mechanical and Chemical Industry Corporation.

Wheat, barley, rye, oats, and corn (on the condition that the moisture is below 14%) are primarily kept in reinforced concrete and steel silos in bulk. In horizontal warehouses, wheat, barley, rye, oats, corn, and in Modern Open Bulk Storing Units, wheat, barley, rye, and oats are stored in bulk. In steel, horizontal warehouses, rice is kept in bag or in bulk and pulses are kept in bags. In the cases where the storage facilities of TGB are insufficient, grains can be stored in Modern Open Bulk Storing Units as polyethylene and soil covered bulks.

In the cases where the storage facilities of TGB are insufficient, grains can be stored in Modern Open Bulk Storing Units as polyethylene and soil covered bulks.

TGB has a total useable storage capacity of 4,038,100 tons which is broken down as follows: 528,000 tons Port Silo and Horizontal Warehouse, 1,293,500 tons Inland Silo, 1,571,600 tons Horizontal Warehouse, and 645,000 tons MOBSU.

Chart 141. Warehouse Groups, Branches and their Capacities (Ton)

Branches	Port Silo and Horizontal Warehouse	Inland Silos	Horizontal Depots	MOBSUs	Total Usable Warehousing Area
Adana	0	64,000	194,000	45,000	303,000
Afyon	40,000	15,000	48,500	0	103,500
Akçakoca	0	30,400	10,000	0	40,400
Aksaray	0	24,000	70,500	7,500	102,000
Akşehir	0	30,500	64,000	10,000	104,500
Bandırma	20,000	24,500	53,500	30,000	128,000
Derince	95,000	0	0	0	95,000
Diyarbakır	0	112,000	117,000	10,000	239,000
Edirne	0	2,000	105,000	90,000	197,000
Erzurum	0	66,000	53,400	0	119,400
Eskişehir	0	40,000	44,200	0	84,200
Gaziantep	0	51,400	40,000	5,000	96,400
İskenderun	60,000	26,800	4,000	25,000	115,800
İzmir	72,000	50,000	70,900	0	192,900
Kayseri	0	124,200	45,000	12,500	181,700
Kırıkkale	0	50,000	42,000	25,000	117,000
Kırklareli	0	32,300	39,600	60,000	131,900
Kırşehir	0	41,300	35,000	60,000	136,300
Konya	0	147,900	139,000	50,000	336,900
Mersin	100,000	0	43,000	0	143,000
Polatlı	0	168,400	20,500	45,000	233,900
Samsun	39,000	30,600	27,000	0	96,600
Şanlıurfa	0	74,400	132,500	0	206,900
Tekirdağ	72,000	4,000	130,500	115,000	321,500
Trabzon	30,000	0	0	0	30,000
Yerköy	0	83,800	42,500	55,000	181,300
Total	**528,000**	**1,293,500**	**1,571,600**	**645,000**	**4,038,100**

Source: TGB 2011

5.3. Licensed Warehousing

As is known, our Organization makes its warehouses available to the producers that want to keep their products in them, helps to benefit from the good use of their products, and enables them to sell their products by means of warehouse receipts issued for the goods placed in the warehouses under the provisions of the Law 2699 on Public Warehouses since 1993.

However, as required by the provision of “where the organizations that have obtained license and authorization for Public Warehousing under the “Law 2699 on Public Warehouses” which was announced through the Official Journal dated 17.02.2005 and numbered 25730 and included temporary article 2 on the Law 5300 on Agricultural Products Licensed Warehousing, and that are engaged in the services of storing the agricultural products falling within the scope of this Law fail to adapt the provisions of this Law within five years at the latest from the entry into force date of this Law, the license granted to them shall be deemed to have been cancelled without the need for a new decision”. However, TGB maintains its public store activities upon consent of Ministry of Industry and Trade.

Furthermore, Articles of Association of TGB - TUCCE Agricultural Products Licensed Warehousing Industry and Trade Incorporated Company founded by Turkish Grain Board, Turkish Union of Chambers and Exchanges, Special Administration of Ordu Governorship, Umumi Mağazalar Türk Incorporated Company and Customs and Tourism Enterprises Incorporated Company was published in Trade Registration Journal Issue No 7510 dated 26.02.2010.

Supported with non-monetary capital by Turkish Grain Board and cash capital contribution of other shareholders, the total paid capital of the company is 51 million TL. Shares and share values of the shareholders are as follows:

TGB	: 24,480,000.- TL (% 48)
TUCCE	: 24,990,000.- TL (% 49)
Ordu Govern. Prov. Spec. Admin.	: 1,020,000.- TL (% 2)
UMAT Incorporated Company	: 255,000.- TL (% 0.5)
Customs and Tourism Enterprises Incorporated Company	: 255,000.- TL (% 0.5)

The procedures for obtaining operating certificate from Ministry of Industry and Trade are in progress to start licensed warehousing operations.

Within the framework of the provisions of Law 5300 on Agricultural Products Licensed Warehousing, Articles of Association for TGB - TUCCE Agricultural Products Licensed Warehousing Industry and Trade Incorporated Company was signed among the shareholders and submitted to Ministry of Industry and Trade for registration. Turkish Grain Board registered following warehouses as capital in kind for the respective company:

Chart 142. Warehouses Registered as Capital in Kind by Turkish Grain Board

Place	Type of Warehose	Capacity (Ton)	Value (TL)
Şanlıurfa	Steel Silo	9,600	9,366,728,00
Sivas	Steel Silo	7,200	3,982,541,00
Aydın	Steel Silo	10,000	6,292,605,23
Çorum	Steel Silo	9,600	4,838,125,77
Total		**36,400**	**24,480,000,00**

Source: TGB 2010

5.4. Stocks for State of Emergency and War Case

Pursuant to Decree Law No 2006/10506 published in Official Journal on 10.06.2006, TGB is responsible for storing a particular amount of its stocks as state of emergency and war case stocks.

5.5. Sales

TGB offers the purchased products for domestic sale at the prices determined in such a manner that does not disturb the market balances. In parallel with the sales in production, the products not receiving demand from domestic market are exported considering its stock cost, storage conditions and developments in the market.

The sales prices determined together with procurement prices for 2009/10 period are given together with procurement prices. TGB's domestic sales prices are given in Chart 143 on monthly basis in 2008-2010 period.

Chart 143. Domestic Sales Prices of TGB on Monthly Basis in 2008- 2010 Period

Year	Product Type	Code	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2008 (TL/Ton)	AHR Wheat	1221	480 490	490	505	505	505	-	-	-	-	-	-	-
	Durum Wheat	1121	-	-	510 690	690	-	-	-	-	-	-	-	-
	Barley	2111	360	-	-	-	-	-	-	-	-	-	-	-
	Rye	2211	340	-	-	-	-	-	-	-	-	-	-	-
	Oat	2311	-	-	-	-	-	-	-	-	-	-	-	-
	Corn	2441	435	435 445	445	455	465 480	480	480	-	-	-	-	-
	Rice (Osmancık)	3651	1.470	1.470	1.500	1.500	1.500	1.500	1.500	1.500	1.500	1.500	1.500	1.500
2009 (TL/Ton)	AHR Wheat	1221	-	560	560	560	560	560	560	-	-	-	575	585
	Durum Wheat	1121	-	640	640	640	640	640	640	-	-	-	600	610
	Barley	2111	-	-	-	-	-	-	-	-	-	-	440	450
	Rye	2211	-	-	-	-	-	-	-	-	-	440	450	450
	Oat	2311	-	-	-	-	-	-	-	-	-	440	450	450
	Corn	2441	-	500	530	530	530	530	530	530	-	-	-	580
	Rice (Osmancık)	3651	1.800	1.800	1.800	1.800	1.800	1.800	2.000	2.000	2.000	2.000	2.000	2.000
2010 (TL/Ton)	AHR Wheat	1221	585	585	585	595	595	-	-	-	635	635	645	655
	Durum Wheat	1121	610	610	610	620	620	-	-	-	665	665	675	685
	Barley	2111	450	450	450	450	450	-	-	-	-	-	485	495
	Rye	2211	450	450	450	450	450	-	-	-	-	-	485	495
	Oat	2311	450	450	450	450	450	-	-	-	-	-	550	550
	Corn	2441	580	580	580	580	580	-	-	-	-	-	-	-
	Rice (Osmancık)	3651	2.000	2.000	2.000	2.000	2.000	2.000	2.000	2.000	2.000	2.000	2.000	2.000

Source: TGB 2011

5.6. Import and Export

To establish market stability desired by the producer, industrialist and consumer, TGB carries out import activities in case of insufficient production and speculative price increases or carries out export when the supply increases in a manner to have negative impact on the prices and when there is a need to open to external markets for financing.

Chart 144. Import and Export Quantities Realized by TGB

Year	Subject	Product Species	Quantity (Ton)	Amount ($)
2008	Import	Milling Wheat	628,578	292,538,243
2008	Import	Corn	540,443	175,073,009
2008	Import	Rice	31,000	32,511,000
2008	Import	Durum Wheat	45,000	27,136,250
2008	Import	Barley for Feed	64,249	20,228,602
2008	Import	Shelled Red Lentil	40,153	58,298,168
2008	Import	Peeled Red Lentil	10,678	20,496,566
2008	Import	Soft Wheat	50,000	15,417,500
2008	Import	TOTAL	1,410,101	641,699,39
2008	Export	Corn	2,300	872,643
2008	Export	Barley for Feed*	29,433	10,676,232
2008	Export	Total	31,733	11,548,875
2009	Import	Milling Wheat	126,498	44,501,465
2009	Import	Durum Wheat	49,999	25,915,887
2009	Import	Rice	19,750	18,620,500
2009	Import	Total	196,247	89,037,852
2009	Export	Corn	311,393	54,002,978
2009	Export	White Barley for Feed	286,177	38,675,934
2009	Export	Red Milling Wheat	97,882	14,611,759
2009	Export	White Milling Wheat	67,950	10,777,648
2009	Export	Durum Wheat	51,680	12,381,954
2009	Export	Total	815,082	130,450,273
2010	Import	Rice	20,000	14,850,000
2010	Import	Total	20,000	14,850,000
2010	Export	Durum Wheat	337,161	59,852,717
2010	Export	Red Milling Wheat	445,791	72,004,566
2010	Export	White Milling Wheat	330,913	55,909,097
2010	Export	White Barley for Feed	499,770	74,706,852
2010	Export	White Wheat for Feed Production	75,507	11,676,001
2010	Export	Total	1,689,142	274,149,233

Source: TGB 2011.
(*) 30.000 tons of 65.000 tons feed barley purchased with import tender organized on 02.07.2008 was sent to Northern Cyprus Turkish Republic.

As shown in Chart 144 above, supply deficit created in 2007/08 – 2008/09 period due to the drought was compensated via import operations. As 2009/10 season failed to meet the market requirements in term of quality in grains, surplus stocks which did not receive demand were exported considering storage and financing costs.

5.7. World Evaluation

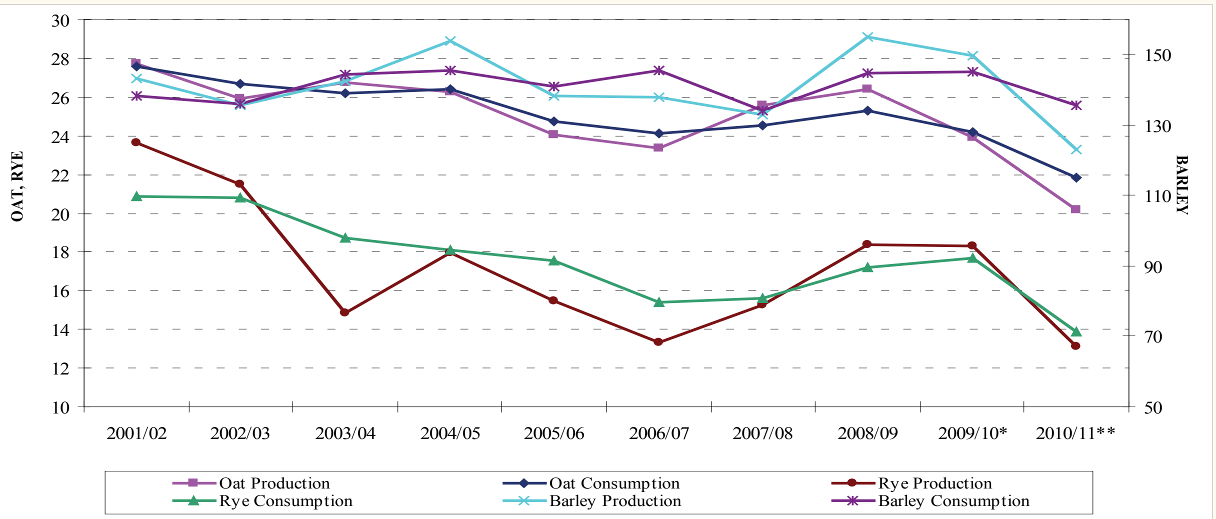
Chart 145. World Grain Equilibrium Table (Million Ton)

	Total Grain								Estimate	Forecast
	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11
Opening Stocks	408	401	345	284	334	322	283	296	371	402
Production	1,493	1,452	1,481	1,647	1,606	1,588	1,697	1,802	1,792	1,726
Import	213	212	208	212	215	222	239	249	240	243
Total Availability	1,901	1,853	1,827	1,931	1,940	1,911	1,980	2,098	2,163	2,129
Food	556	558	567	574	585	590	600	608	610	619
Industry	118	128	140	152	168	191	221	244	275	291
Feed	712	709	716	753	746	733	745	753	752	756
Other	114	113	120	117	119	113	118	122	124	122
Total Consumption	1,500	1,507	1,543	1,597	1,618	1,628	1,684	1,727	1,760	1,788
Export	213	212	208	212	215	222	239	249	240	243
Year Ending Stocks	401	345	284	334	322	283	296	371	402	341

Source: IGC March/2011 Report.

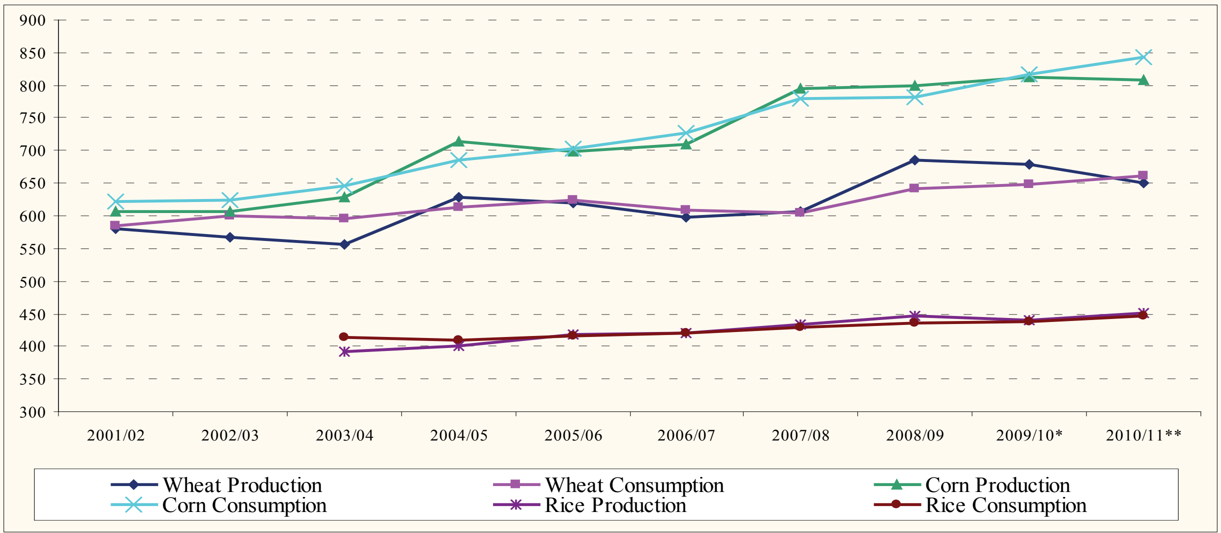
Thus, world grain production is foreseen to be 1,726 million tons in 2010/11 representing 66 million tons decrease compared to 2009/10 period. Respective amount is the third highest production level in last ten years. Adding 341 million ton transferred stock, 2,067 million ton supply is created.

Graphic 92. Production - Consumption of Barley, Rye, Oat in the World



Source: IGC March/2011 Report. (*) Estimate, (**) Forecast

Graphic 93. Production- Consumption of Wheat, Rice and Corn in the World



Source: IGC March/2011 Report. (*) Estimate, (**) Forecast

Maintaining its increasing tendency in 2010/11, the consumption is forecasted to be 1,788 million tons with additional 28 million tons compared to the figure of the last year. An increase of 10.5 % is expected considering 1,618 million ton which is average consumption quantity of recent ten years. Compared with 2009/10, consumption in form of food and feed has increased by 1.4 % and 0.5 % respectively while highest increase rate realized was in industrial with 5.8 % increase. Industrial use constitutes 16.3 % of total grain consumption.

It is foreseen that 2010/11 year ending stocks will be 341 million tons representing 61 million tons compared to previous and the breakdown of this decrease will be 34 million ton in corn, 12.6 million ton in wheat and 12.4 million ton in barley. This amount is 4 million ton above 337 million which is the average year ending stock amount of last 10 years and 58 million tons above of 2006/07 year ending stock of 283 million tons that was recorded as historical bottom point.

World grain trade is expected be 243 million ton increasing by 3 million tons in 2010/11 season due to the large scaled increases in previous two seasons. This expectation is 20 million ton above 223 million tons which is the average of last ten years (Chart 145, Graphic 92, 93).

5.7.1. Option Transactions and Option Exchanges

Futures agreement is a legally binding agreement concluded between the parties to purchase or sell merchandise in the future on a price agreed by the parties when the actual trade is carried out. Foreign exchange rates, treasury values and interests, goods, energy products and minerals are transacted in futures (derivative) markets.

Agricultural products are included within the goods. Among them, wheat, corn and paddy are directly involved within the activity field of the Board. Soybean indirectly relates to the Board due to its relationship with the corn prices.

Chicago Mercantile Exchange is one of the largest exchanges in terms its transaction volume and product diversity. As other commodity exchanges in USA such as Minneapolis and Kansas generally transact wheat mostly, they do not have product diversity as large as of Chicago Mercantile Exchange. Therefore, the data received from Chicago Mercantile Exchange was collected in Table 146 to illustrate share of the products transacted in the exchanges and agricultural goods among overall transactions.

Table 146 shows total contract numbers of the goods transacted in Chicago Mercantile Exchange, share/quantity of the agricultural goods among respective goods and the products falling under the activity field of the Board. Analyzing the Table, it is observed that share of agricultural merchandises differ in 6- 10 % range amount all transactions. Transaction volume of the agricultural products increases especially during crisis period and speculative procurements starts. The contract number of agricultural merchandises increased to 23 million during June 2008 where the impacts of the global economic crisis were heavily felt in the world. Respective figure was recorded as 13 million contracts as of end of December 2009. Respective figure was recorded as 18 million contracts as of end of December 2010.

The share of wheat among agricultural merchandises transacted in Chicago Mercantile Exchanges differs in 8- 17 % range. The share of corn is higher compared to the wheat. The share of the corn was 44 % on April 2007; however this figure decreased to 28 % as of December 2009. The share of soybean is continually increasing. While it was recorded around 18 % on April 2007, it increased to 31 % by the end of December. The share of paddy amount agricultural merchandises is 1- 2.5 % and it increased to 5 % as of December 2009. It mainly resulted from the procurements of Philippines and start of import activities of India after a very long time. Shares of grains traded in Chicago Mercantile Exchange has been 9.7 % wheat, 32.2 % corn, 27.7 soybean and 0.3 % paddy.

Chart 146. Share of Agricultural Goods and Products in Trading Volume of Chicago Mercantile Exchange

Months	Total Trade Volume Of Chicago Mercantile Exchange (Number Of Contracts	Agricultural Goods Trade Volume (Number Of Contracts)	Wheat Trade Volume Of Chicago Mercantile Exchange (Number Of Contracts)	Corn Trade Volume Of Chicago Mercantile Exchange (Number Of Contracts)	Soybean Trade Volume Of Chicago Mercantile Exchange (Number Of Contracts)	Paddy Trade Volume Of Chicago Mercantile Exchange (Number Of Contracts)	Share Of Agricultural Goods In Total Trade (%)	Share Of Wheat In Trade Volume Of Agricultural Goods (%)	Share Of Corn In Trade Volume Of Agricultural Goods (%)	Share Of Soybean In Trade Volume Of Agricultural Goods (%)	Share Of Paddy In Trade Volume Of Agricultural Goods (%)
January 08	301,412,020	17,949,332	2,232,030	6,013,822	4,545,940	28,131	6.0	12.4	33.5	25.3	1.3
February 08	265,438,447	19,834,183	3,034,117	7,275,211	4,804,102	59,366	7.5	15.3	36.7	24.2	2.0
March 08	271,917,918	16,966,292	1,772,006	5,860,150	4,168,288	33,874	6.2	10.4	34.5	24.6	1.9
April 08	226,941,994	19,870,087	1,913,040	8,225,167	4,638,963	68,594	8.8	9.6	41.4	23.3	3.6
May 08	225,197,624	15,118,295	1,408,250	6,430,657	2,873,962	41,226	6.7	9.3	42.5	19.0	2.9
June 08	260,443,829	22,666,988	2,585,141	10,262,115	4,488,923	31,864	8.7	11.4	45.3	19.8	1.2
July 08	247,594,779	18,561,321	1,589,328	7,512,556	3,895,215	19,551	7.5	8.6	40.5	21.0	1.2
August 08	196,256,345	17,243,021	2,459,322	7,038,695	3,233,873	24,318	8.8	14.3	40.8	18.8	1.0
September 08	289,906,446	15,203,885	1,556,516	5,235,168	3,464,741	20,563	5.2	10.2	34.4	22.8	1.3
October 08	250,266,872	17,674,162	1,545,525	6,931,053	4,640,043	30,589	7.1	8.7	39.2	26.3	2.0
November 08	168,495,529	13,711,118	1,835,306	5,655,739	2,275,222	13,892	8.1	13.4	41.2	16.6	0.8
December 08	150,307,971	12,620,737	1,142,196	4,509,367	3,150,759	17,278	8.4	9.1	35.7	25.0	1.5
January 09	153,793,752	13,046,536	1,277,693	4,131,739	3,487,446	16,425	8.5	9.8	31.7	26.7	1.3
February 09	169,090,010	14,925,875	1,785,819	5,542,429	3,482,300	19,984	8.8	12.0	37.1	23.3	1.1
March 09	201,245,000	13,602,577	1,526,570	4,808,238	3,241,998	15,753	6.8	11.2	35.3	23.8	1.0
April 09	160,250,499	16,780,823	2,089,524	5,770,381	4,484,670	19,778	10.5	12.5	34.4	26.7	0.9
May 09	180,404,813	14,566,114	1,627,000	5,190,288	3,477,044	15,500	8.1	11.2	35.6	23.9	1.0
June 09	181,215,644	16,228,257	2,331,050	5,805,603	3,637,493	16,157	9.0	14.4	35.8	22.4	0.7
July 09	177,573,489	16,392,554	1,568,981	6,172,144	3,787,722	17,524	9.2	9.6	37.7	23.1	1.1
August 09	179,582,881	15,357,922	2,215,282	5,565,627	3,248,299	31,861	8.6	14.4	36.2	21.2	1.4
September 09	184,457,609	13,326,417	1,301,197	4,477,982	3,201,635	18,451	7.2	9.8	33.6	24.0	1.4
October 09	194,533,368	17,160,376	1,810,590	6,054,677	4,875,702	36,761	8.8	10.6	35.3	28.4	2.0
November 09	178,506,542	17,168,944	2,265,560	6,629,599	3,476,372	30,542	9.6	13.2	38.6	20.2	1.3
December 09	164,661,600	13,391,135	1,049,626	3,802,543	4,118,948	50,512	8.1	7.8	28.4	30.8	4.8
January 10	213,319,891	14,541,230	1,619,313	5,102,448	3,396,119	24,911	6.8	11.1	35.1	23.4	0.2
February 10	238,124,074	17,266,971	2,182,871	6,168,843	3,990,744	45,153	7.3	12.6	35.7	23.1	0.3
March 10	253,556,581	15,766,954	1,540,501	5,128,779	3,634,045	30,862	6.2	9.8	32.5	23.0	0.2
April 10	262,916,826	19,584,445	2,306,707	7,640,893	4,210,246	43,324	7.4	11.8	39.0	21.5	0.2
May 10	335,566,032	14,497,423	1,624,763	5,364,935	2,735,729	21,755	4.3	11.2	37.0	18.9	0.2
June 10	267,859,889	20,314,833	2,894,689	7,866,822	3,616,648	44,729	7.6	14.2	38.7	17.8	0.2
July 10	227,605,529	17,919,490	2,939,065	6,408,508	3,265,548	32,523	7.9	16.4	35.8	18.2	0.2
August 10	258,083,526	21,066,197	3,965,425	8,943,290	2,986,094	55,030	8.2	18.8	42.5	14.2	0.3
September 10	254,097,244	20,867,255	1,839,043	9,867,492	3,543,747	30,667	8.2	8.8	47.3	17.0	0.1
October 10	240,493,733	23,251,374	2,013,390	10,284,112	5,731,432	69,987	9.7	8.7	44.2	24.6	0.3
November 10	297,231,885	26,401,349	2,895,722	11,997,432	4,817,605	39,315	8.9	11.0	45.4	18.2	0.1
December 10	231,634,667	18,250,304	1,764,721	5,878,126	5,052,348	48,785	7.9	9.7	32.2	27.7	0.3

Source: Chicago Mercantile Exchange, 2011

Chart 147. Monthly Trading Volume of Corn, Soybean and Paddy in Chicago Mercantile Exchange

Months	Chicago Mercantile Exchange- Corn				Chicago Mercantile Exchange- Soybean				Chicago Mercantile Exchange- Paddy			
	Transaction Volume (contract)	Transaction Volume (Million Ton)	Transaction Volume Million $)	Av. Price ($/Ton)	Transaction Volume (contract)	Transaction Volume (Million Ton)	Transaction Volume (Million $)	Av. Price ($/Ton)	Transaction Volume (contract)	Transaction Volume (Million Ton)	Transaction Volume (Million $)	Av. Price ($/Ton)
January 08	6,013,822	764	147,039	193	4,545,940	618	285,549	462	28,131	3	886	315
February 08	7,275,211	924	187,702	203	4,804,102	653	332,014	508	59,366	6	2,119	357
March 08	5,860,150	744	160,569	216	4,168,288	567	280,990	496	33,874	3	1,379	407
April 08	8,225,167	1,045	243,878	233	4,638,963	631	304,606	483	68,594	7	3,327	485
May 08	6,430,657	817	192,278	235	2,873,962	391	191,153	489	41,226	4	1,881	456
June 08	10,262,115	1,303	358,664	275	4,488,923	610	337,374	553	31,864	3	1,385	435
July 08	7,512,556	954	241,155	253	3,895,215	530	293,531	554	19,551	2	795	407
August 08	7,038,695	894	193,214	216	3,233,873	440	207,173	471	24,318	2	912	375
September 08	5,235,168	665	141,351	213	3,464,741	471	206,207	438	20,563	2	868	422
October 08	6,931,053	880	143,127	163	4,640,043	631	213,784	339	30,589	3	1,078	352
November 08	5,655,739	718	105,763	147	2,275,222	309	101,872	329	13,892	1	438	315
December 08	4,509,367	573	81,620	143	3,150,759	429	136,665	319	17,278	2	556	322
January 09	4,131,739	525	80,776	154	3,487,446	474	173,053	365	16,425	2	492	299
February 09	5,542,429	704	100,319	143	3,482,300	474	161,660	341	19,984	2	543	272
March 09	4,808,238	611	90,636	148	3,241,998	441	147,103	334	15,753	2	424	269
April 09	5,770,381	733	111,658	152	4,484,670	610	228,363	374	19,778	2	562	284
May 09	5,190,288	659	108,478	165	3,477,044	473	199,642	422	15,500	2	419	270
June 09	5,805,603	737	119,596	162	3,637,493	495	220,124	445	16,157	2	444	275
July 09	6,172,144	784	102,458	131	3,787,722	515	204,988	398	17,524	2	506	289
August 09	5,565,627	707	90,999	129	3,248,299	442	180,665	409	31,861	3	945	297
September 09	4,477,982	569	72,798	128	3,201,635	435	151,962	349	18,451	2	546	296
October 09	6,054,677	769	112,272	146	4,875,702	663	231,420	349	36,761	4	1,110	302
November 09	6,629,599	842	128,827	153	3,476,372	473	176,349	373	30,542	3	1,014	332
December 09	3,802,543	483	75,823	157	4,118,948	560	212,307	379	50,512	5	1,697	336
January 10	5,102,448	648	98,503	152	3,396,119	462	162,117	351	24,911	2	780	313
February 10	6,168,843	783	111,255	142	3,990,744	543	186,703	344	45,153	5	1,382	306
March 10	5,128,779	651	93,149	143	3,634,045	494	172,486	349	30,862	3	873	283
April 10	7,640,893	970	134,892	139	4,210,246	573	204,988	358	43,324	4	1,209	279
May 10	5,364,935	681	97,438	143	2,735,729	372	129,477	348	21,755	2	566	260
June 10	7,866,822	999	134,884	135	3,616,648	492	171,169	348	44,729	4	1,047	234
July 10	6,408,508	814	117,205	144	3,265,548	444	164,766	371	32,523	3	709	218
August 10	8,943,290	1,136	182,874	161	2,986,094	406	153,509	378	55,030	6	1,321	240
September 10	9,867,492	1,253	239,369	191	3,543,747	482	194,226	403	30,667	3	810	264
October 10	10,284,112	1,306	280,823	215	5,731,432	779	332,836	427	69,987	7	2,100	300
November 10	11,997,432	1,524	330,655	217	4,817,605	655	301,389	460	39,315	4	1,215	309
December 10	5,878,126	747	172,456	231	5,052,348	687	332,566	484	48,785	5	1,493	306

Source: Chicago Mercantile Exchange, 2011

Chart 148. Monthly Trading Volumes and Prices of Wheat in USA Commodity Exchanges

Months	Chicago Mercantile Exchange				Kansas Mercantile Exchange				Minneapolis Mercantile Exchange				Total		
	Transaction Volume (contract)	Transaction Volume (Million Ton)	Transaction Volume (Million $)	Av. Price ($/Ton)	Transaction Volume (contract)	Transaction Volume (Million Ton)	Transaction Volume (Million $)	Av. Price ($/Ton)	Transaction Volume (contract)	Transaction Volume (Million Ton)	Transaction Volume (Million $)	Av. Price ($/Ton)	Transaction Volume (contract)	Transaction Volume (Million Ton)	Transaction Volume (Million $)
January 08	2,232,030	304	103,513	341	352,893	48	16,894	352	198,770	27	11,435	423	2,783,693	379	131,841
February 08	3,034,117	413	160,930	390	455,112	62	25,439	411	190,327	26	16,851	651	3,679,556	500	203,219
March 08	1,772,006	241	100,494	417	260,411	35	15,760	445	105,250	14	7,901	552	2,137,667	291	124,155
April 08	1,913,040	260	85,077	327	349,357	48	16,487	347	94,452	13	5,780	450	2,356,849	321	107,344
May 08	1,408,250	192	55,924	292	255,653	35	11,161	321	75,032	10	4,388	430	1,738,935	236	71,473
June 08	2,585,141	352	109,341	311	501,737	68	22,177	325	104,200	14	5,824	411	3,191,078	434	137,342
July 08	1,589,328	216	66,358	307	307,779	42	13,269	317	89,568	12	4,190	344	1,986,675	270	83,817
August 08	2,459,322	334	100,675	301	448,373	61	19,086	313	154,331	21	7,262	346	3,062,026	416	127,023
September 08	1,556,516	212	57,155	270	289,720	39	11,269	286	111,381	15	4,620	305	1,957,617	266	73,044
October 08	1,545,525	210	43,930	209	279,507	38	8,591	226	125,420	17	4,264	250	1,950,452	265	56,785
November 08	1,835,306	250	48,922	196	279,779	38	7,952	209	85,216	12	2,677	231	2,200,301	299	59,552
December 08	1,142,196	155	30,602	197	185,603	25	5,175	205	75,055	10	2,297	225	1,402,854	191	38,073
January 09	1,277,693	174	37,534	216	198,126	27	6,090	226	75,401	10	2,471	241	1,551,220	211	46,094
February 09	1,785,819	243	47,603	196	300,103	41	8,530	209	82,641	11	2,630	234	2,168,563	295	58,763
March 09	1,526,570	208	39,654	191	287,958	39	8,224	210	77,108	10	2,412	230	1,891,636	257	50,290
April 09	2,089,524	284	54,846	193	315,866	43	9,064	211	116,179	16	3,792	240	2,521,569	343	67,702
May 09	1,627,000	221	47,573	215	242,335	33	7,712	234	91034	12	3,268	264	1,960,369	267	58,554
June 09	2,331,050	317	67,526	213	444,503	60	14,267	236	135,126	18	4,833	263	2,910,679	396	86,626
July 09	1,568,981	213	40,329	189	307,177	42	8,522	204	86,007	12	2,608	223	1,962,165	267	51,460
August 09	2,215,282	301	53,929	179	348,081	47	8,994	190	118,252	16	3,297	205	2,681,615	365	66,220
September 09	1,301,197	177	29,199	165	326,798	44	7,733	174	123,826	17	2,981	177	1,751,821	238	39,913
October 09	1,810,590	246	45,062	183	378,113	51	9,822	191	113,094	15	2,799	182	2,301,797	313	57,683
November 09	2,265,560	308	59,775	194	409,277	56	10,965	197	150,604	20	4,117	201	2,825,441	384	74,857
December 09	1,049,626	143	27,551	193	210,323	29	5,578	195	62,689	9	1,705	200	1,322,638	180	34,833
January 10	1,619,313	220	41,182	187	285,597	39	7,458	192	101,141	14	2,861	208	2,006,051	273	51,501
February 10	2,182,871	297	53,140	179	375,311	51	9,392	184	108,381	15	2,742	186	2,666,563	363	65,273
March 10	1,540,501	210	37,292	178	282,298	38	6,949	181	92,397	13	2,312	184	1,915,196	260	46,554
April 10	2,306,707	314	54,900	175	405,268	55	9,976	181	118,290	16	3,008	187	2,830,265	385	67,884
May 10	1,624,763	221	39,111	177	308,268	42	7,672	183	84,161	11	2,175	190	2,017,192	274	48,958
June 10	2,894,689	394	64,957	165	620,982	84	14,695	174	211,841	29	5,474	190	3,727,512	507	85,126
July 10	2,939,065	400	80,742	202	650,626	88	18,759	212	170,679	23	5,223	225	3,760,370	511	104,724
August 10	3,965,425	539	133,746	248	765,357	104	27,063	260	206,447	28	7,328	261	4,937,229	671	168,137
September 10	1,839,043	250	65,529	262	470,522	64	17,022	266	142,804	19	5,302	273	2,452,369	334	87,852
October 10	2,013,390	274	69,003	252	449,747	61	16,392	268	149,923	20	5,526	271	2,613,060	355	90,921
November 10	2,895,722	394	97,667	248	624,481	85	23,016	271	182,719	25	6,859	276	3,702,922	504	127,541
December 10	1,764,721	240	66,961	279	459,417	62	18,994	304	153,714	21	6,522	312	2,377,852	323	92,477

Source: Chicago Mercantile Exchange, 2011

Chart 149. Annual Trading Volumes of Wheat in Commodity Exchanges

	Chicago Mercantile Exchange				Kansas Mercantile Exchange				Minneapolis Mercantile Exchange				TOTAL		
	Transaction Volume (number of contracts)	Trans-action Volume (Million Ton)	Trans-action Volume (Million $)	Average Price ($/Ton)	Transaction Volume (number of contracts)	Trans-action Volume (Million Ton)	Trans-action Volume (Million $)	Average Price ($/Ton)	Transaction Volume (number of contracts)	Trans-action Volume (Million Ton)	Trans-action Volume (Million $)	Average Price ($/Ton)	Transaction Volume (number of contracts)	Trans-action Volume (Million Ton)	Trans-action Volume (Million $)
2007	23,476,060	3,193	747,347	231	4,670,955	635	148,290	235	1,826,807	248	62,713	247	29,973,822	4,076	958,350
2008	23,072,777	3,138	962,920	297	3,965,924	539	173,259	313	1,409,002	192	77,490	385	28,447,703	3,869	1,213,670
2009	20,848,892	2,835	550,580	194	3,768,660	513	105,502	206	1,231,961	168	36,914	222	25,849,513	3,516	692,996
2010	27,586,210	3,752	804,229	213	5,697,874	775	177,387	223	1,722,497	234	55,331	230	35,006,581	4,761	1,036,948
2008-2009 % Change	-10	-10	-43	-35	-5	-5	-39	-34	-13	-13	-52	-42	-9	-9	-43
2009-2010 % Change	32	32	46	10	51	51	68	8	40	40	50	4	35	35	50

Source: Chicago Mercantile Exchange, 2011

Chart 150. Annual Trading Volumes of Corn in Chicago Commodity Exchange

Years	Transaction Volume (contract]	Transaction Volume (Million Ton)	Transaction Volume (Million $)	Average Price ($/Ton)
2007	59,712,137	7,584	1,107,866	147
2008	80,949,700	10,281	2,196,359	207
2009	63,951,250	8,122	1,194,640	147
2010	90,651,680	11,513	1,993,504	168
2008-09 % Change	-21	-21	-46	-29
2009-10 % Change	42	42	67	14

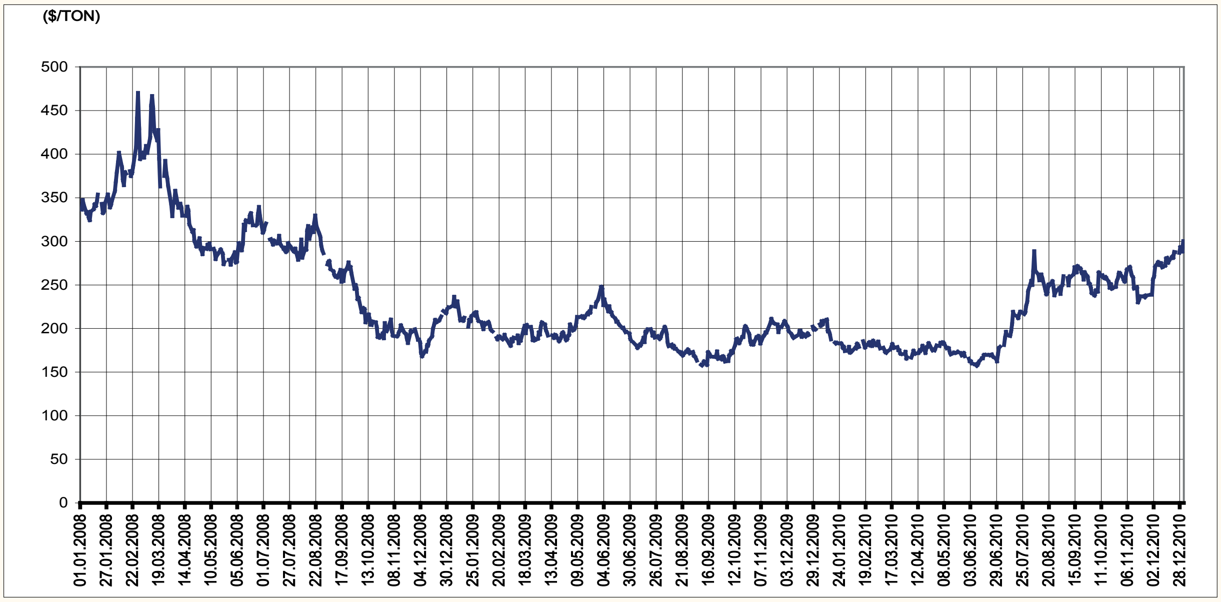
Source: Chicago Mercantile Exchange, 2011

Chart 151. Annual Trading Volumes of Paddy in Chicago Commodity Exchange				
Years	**Transaction Volume (contract)**	**Transaction Volume (Million Ton)**	**Transaction Volume (Million $)**	**Average Price ($/Ton)**
2007	343,117	34	6,847	246
2008	389,246	39	15,624	387
2009	289,248	29	8,703	293
2010	487,041	49	13,502	276
2008-09 % Change	-26	-26	-44	-24
2009-10 % Change	68	68	55	-6
Source: Chicago Mercantile Exchange, 2011				

Chart 152. Annual Trading Volume of Soybean in Chicago Mercantile Exchange				
Years	**Transaction Volume contract)**	**Transaction Volume (Million Ton)**	**Transaction Volume (Million $)**	**Average Price ($/Ton)**
2007	35,979,398	4,893	1,598,933	317
2008	46,180,031	6,280	2,890,918	453
2009	44,519,629	6,055	2,287,637	378
2010	46,980,305	6,389	2,506,232	385
2008-09 % Change	-4	-4	-21	-17
2009-10 % Change	6	6	10	2
Source: Chicago Mercantile Exchange, 2011				

5.7.1.1. Wheat

Graphic 94. Daily Option Prices of Wheat in Chicago Mercantile Exchange



Source: Chicago Mercantile Exchange, 2011

Futures/option prices given for the wheat represent option prices realized for the products transacted in Chicago (CME), Kansas (KCBT), Minneapolis (MGEX) Derivatives Markets in USA. Tables and charts concerning the prices were created through collecting daily day-end prices of closest term and monthly average of respective prices. Transaction volumes are calculated through summation of future transactions ad option contracts within the said month.

The graphic above provides 2007- 2009 daily closure figures for wheat in Chicago Mercantile Exchange. It is clearly seen that the prices fluctuated upward and downward in September 2007 – September 2008 period and reached its peak on February/March 2008.

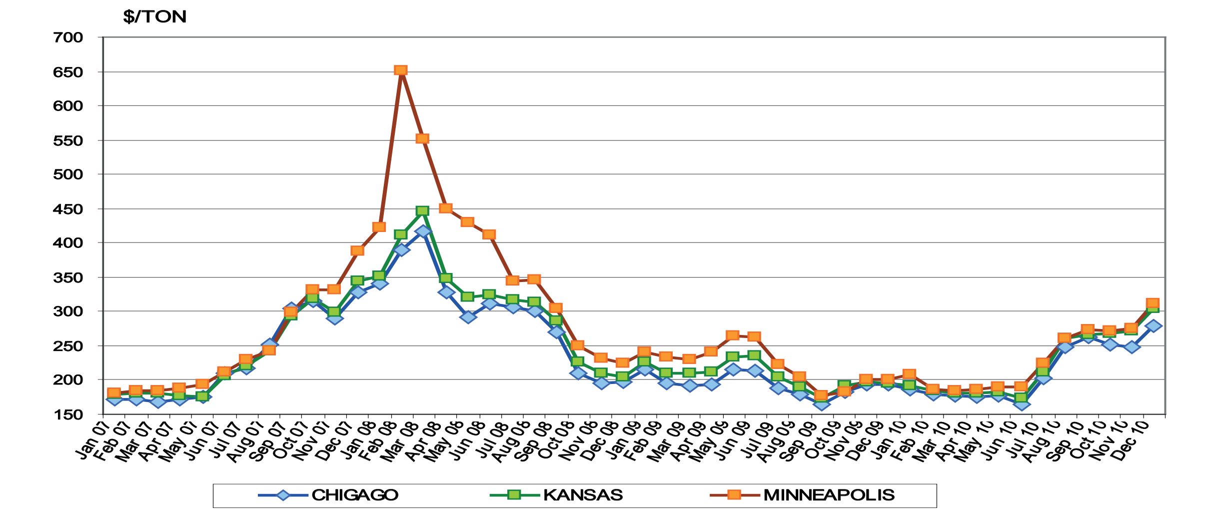
First rise of the prices happened in Summer 2007 and low yield amount in Northern Hemisphere on autumn resulting with the prices climbing up to 350 USD level. The prices started to decrease together with the expectations for a good yield in 2008. High demands towards USA stocks triggered the prices during rising period of the prices and shifting to Russian market for corn purchases especially towards the end of October in 2007 soothed the prices in USA commodity exchange prices.

However, the prices entered into a new rising trend as the US report published on December 2007 on cultivation areas, drought conditions in Australia accelarared the speculative procurements.

Even though February 2008 did not mean any change in terms of supply, the future/option prices were supported and reached to a historical figure due to export prohibitions applied resulting from the decrease in the stocks in spite of intentive demand for imports, increase in demand for grains used as raw material for biofuel together with the increase in oil prices, speculative increase of agricultural products especially in developing countries.

A general evaluation of 2008 shows that futures/option transactions increased due to global financial crisis, food crisis, oil crisis and other agricultural goods were also affected from this process. It is seen that Chicago Mercantile Exchange increased to 413 million ton on option/ futures transactions on February which is a record breaking figure in history of the exchange. This figure reduced to 233 million ton on February 2007. This outstanding increase of the prices and transaction volume triggered speculative prices in the market resulting with deepening of the impacts of the food crisis.

Graphic 95. Monthly Trading Prices of Wheat in USA Mercantile Exchanges

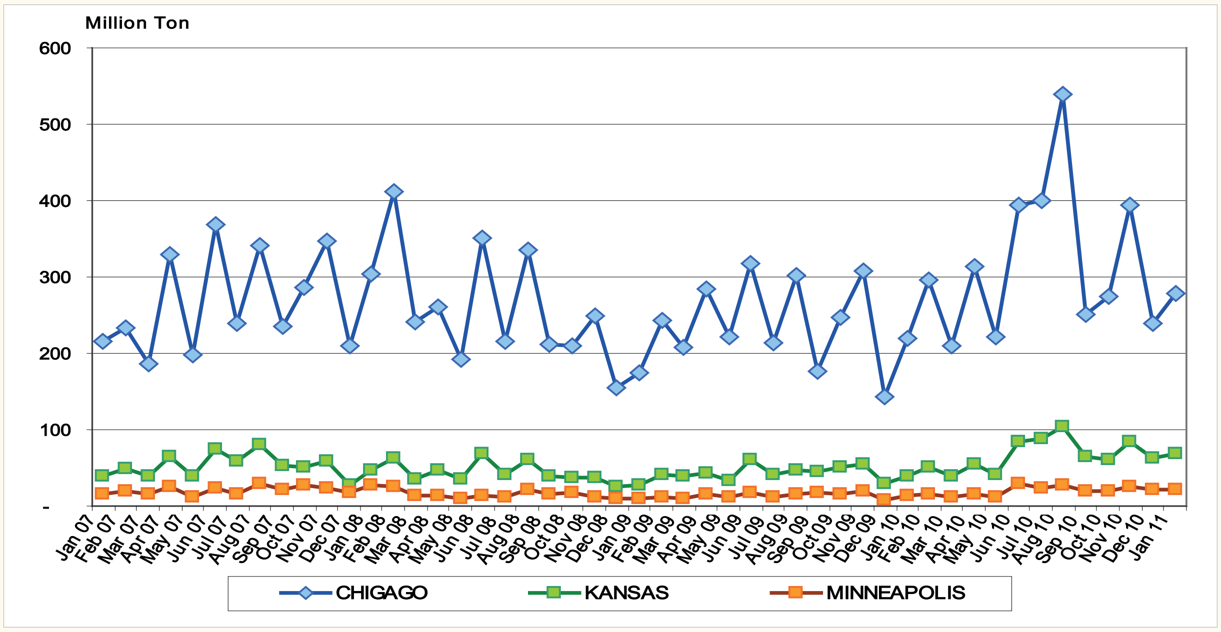


Source: Chicago Mercantile Exchange, 2011

In 2009, however, it is observed that the prices recessed below 200 USD due to the increase in production and stocks and removal of the prohibitions for the export. However, the delays in sowing spring time cultivation and unfavourable environmental conditions for maturation of the winter time crops resulted with triggering the prices late May and early June 2009. The prices started to recess with the start of the harvest around the globe.

Decrease in USD on September- November 2009 and increase in USA exports caused a considerable increase on prices. Upon record breaking increase on the net short positions at the beginning of September, the prices started to recesss and the number of the long positions started to increase especially after reducing in the USA currency. The number of short positions reduced from 69 thousand contracts to 15 thousand contracts in early September- early December period.

Graphic 96. Monthly Trading Volumes of Wheat in USA Commodity Exchanges



Source: Chicago Mercantile Exchange, 2011

Compared with 2008, it is observed that transaction volume reduced by 10 % in year 2009. The amount of transaction volume realized as 962 billion USD in 2008; however, transaction volume reduced to USD 550 billion upon decrease of the prices making 43 % decrease compared to previous year.

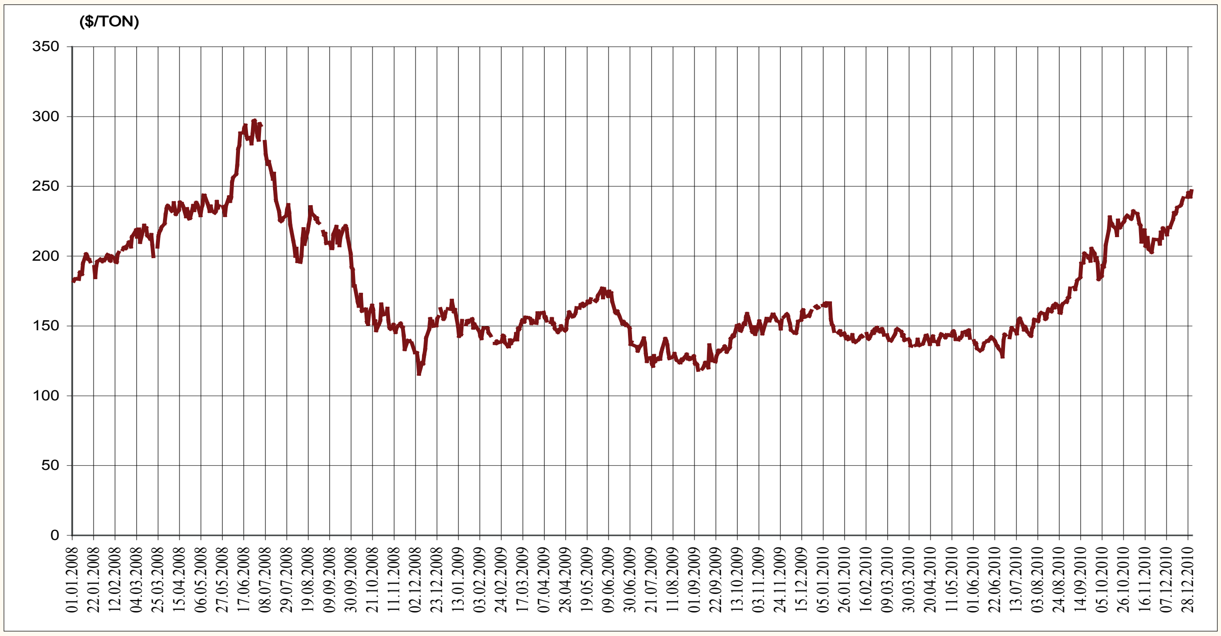
It is forecasted that the wheat prices will be decided by USA currency rates in 2010. Even though a decrease is expected, it is estimated that the prices will decrease below the prices of two years ago. The underlying reason is shown as availability of high amount of exportable stocks especially in Western Europe and Black Sea region.

Grain markets do not constitute any exemption in terms of fluctuation.

Fluctuation in raw oil trade has great impact on the grain market when simultaneous sales especially in food and energy markets create concern in China and world markets. There are many factors that contribute increase of prices in grain market; however, weather condition in March and April is expected to be decisive. It has been reported that an important increase in cultivation area and yield will be needed to prevent extreme shortness in the market one year more as ground breaking corn supply equivalent to 18 days for the end of 2010/11 period.

5.7.1.2. Corn

Graphic 97. Daily Option End Day Prices of Corn in Chicago Mercantile Exchange



Source: Chicago Mercantile Exchange, 2011

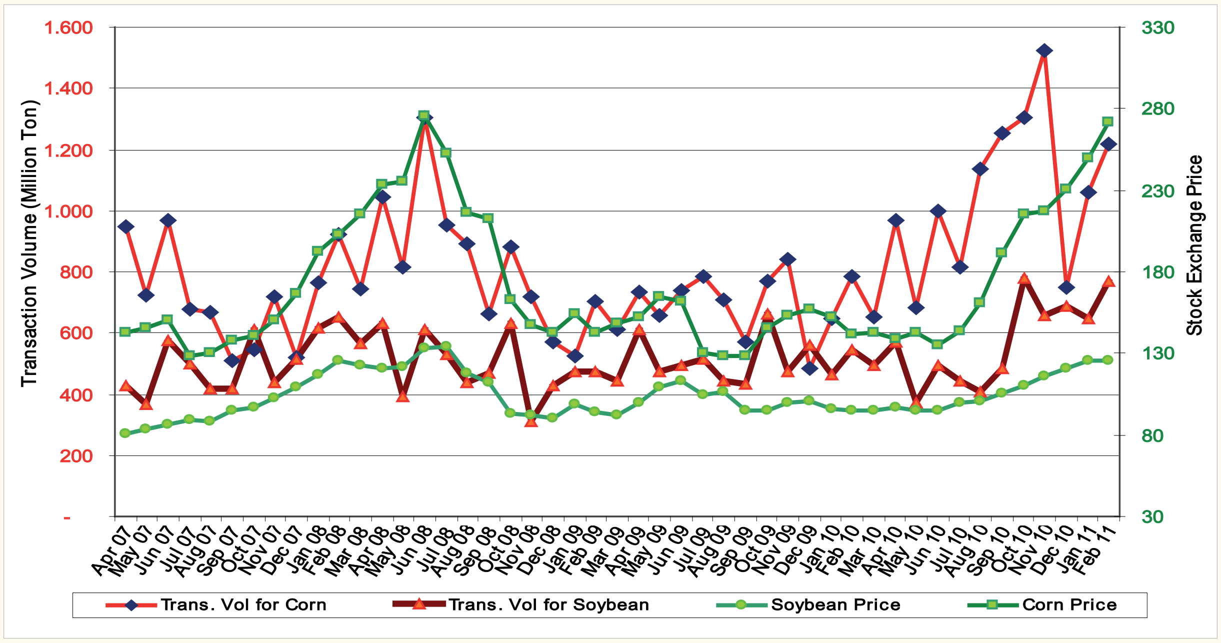
Option transactions of corn started to rise in CME on December 2007. Besides being affected from increasing price of the wheat, the demand increase for the corn also played in important role in respective increase. On the other hand, reports showing decrease in Argentina's yield and stock- supply and demand report of USDA dated January 11 created a negative aTGB sphere in the market feding the increase trend of the prices.

It is observed that option transactions of the corn maintained its increasing trend on February 2008. Besides being affected from the price increases in wheat and crude oil, the drought news and increase of demand for the corn increased speculative activities as well as increasing trend of the prices.

Corn price reached a historical figure on June 2008. The basic underlying reason for this is heavy torrent rains making the cultivation impossible and damages on developing crops in the fields. Demand increase forecasts placed in report of the USDA dated 10 June also contributed increase of the prices.

On the other hand, food crisis, speculative price increases of wheat and rice and of the crude oil determined the conditions of corn prices in 2008.

Graphic 98. Monthly Trading Volume and Price of Corn and Soybean in Chicago Mercantile Exchange



Source: Chicago Mercantile Exchange, 2011

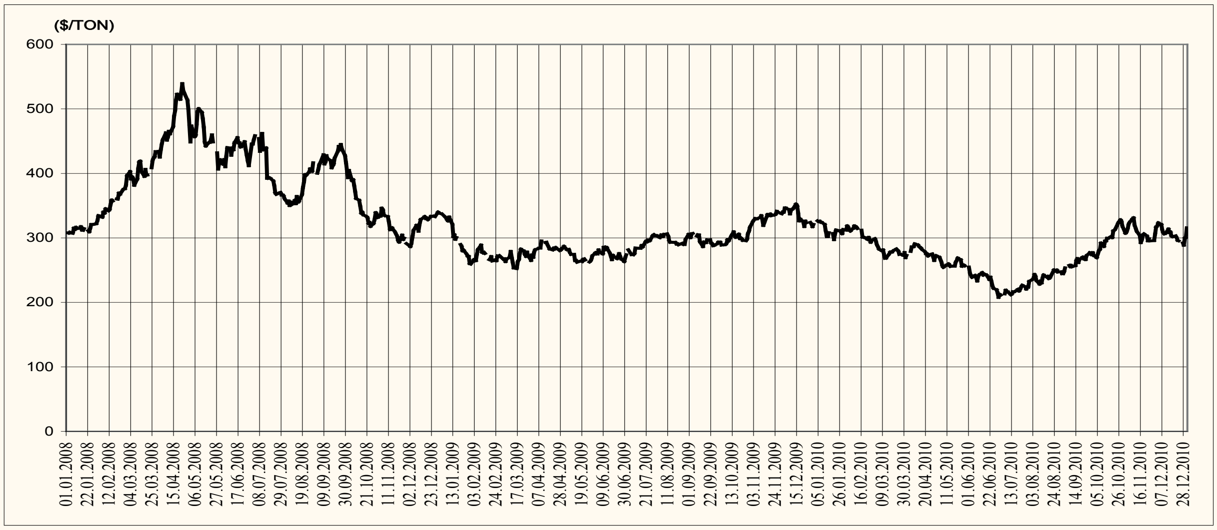
Even though the prices in 2009 realized considerably lower than 2008, there were fluctuations in particular time periods. Unfavourable weather conditions in Midwest on October 2009, decrease in USA currency and increase of crude oil prices caused the option transaction prices of the corn increasing. Due to unfavourable impacts of the rains on the harvest, the yield increase rate remained at lowest increase rate since 1985 causing start of an increase trend for the prices.

Recorded as 960 million ton in 2007, the corn transaction volume reached to 1.303 million ton in 2008 accelerating speculative purchases. The price leaped from USD 150 to USD 275 during respective period. Reduction and recession was observed in transaction volumes and prices due to soothing in the markets and removal of food crisis in 2009. Comparing 2008 and 2009, it is seen that there was 21 % transaction decrease in 2009.

First perspective for new sowing period of the corn has been provided in annual Perspective Forum of USA. The fact that USDA considered yield per hectare 10.1 ton and expected 2010/11 yield ending stock as 22 million tons has enabled stock/consumption rate becoming 6.4 %. However, if we keep the cultivation and consumption data unchanged and if we decrease the yield to 9.6 ton/ha which is the yield of last year, then year ending stocks will be only 2.5 million tons and stock/consumption rate will be 0.9 %. Considering simply average yield of recent 5 years, year ending stocks will be 5.6 million ton which is far below of 17.1 million ton stock level of last year. In other words, the market needs an important increase and high yield to prevent an extreme shortage. It must be reminded that stock/consumption rate of corn has decreased below 10 % only 3 times since year 1973.

5.7.1.3. Paddy

Graphic 99. Daily End Day Prices of Paddy in Chicago Mercantile Exchange

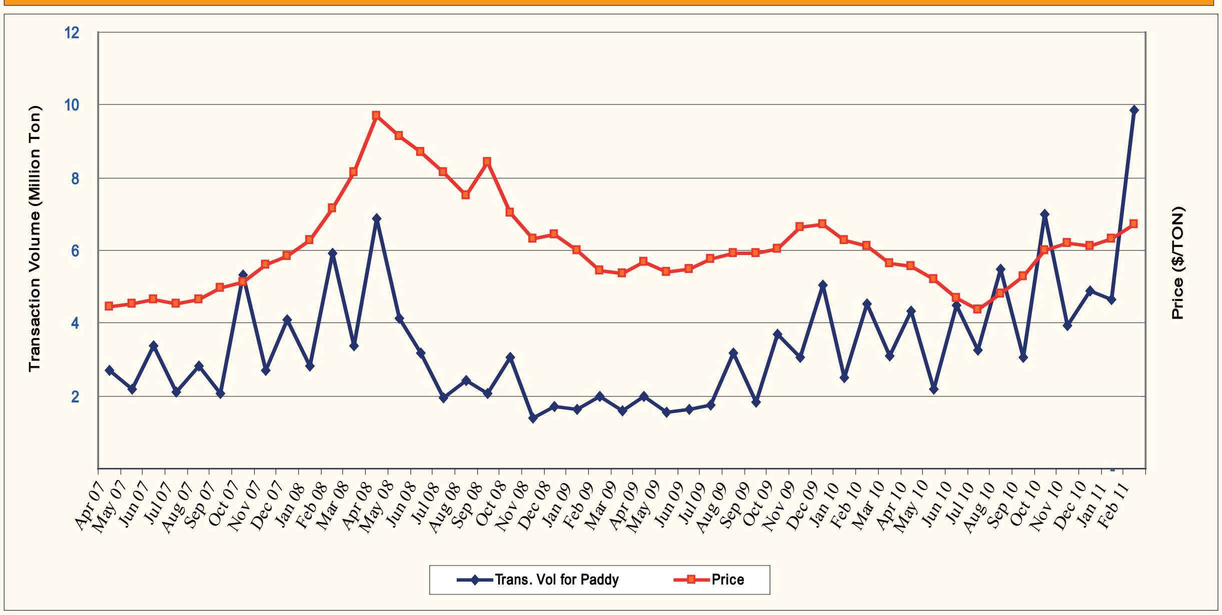


Source: Chicago Mercantile Exchange, 2011

Increases in option transactions in Chicago Mercantile Exchange especially on December 2007 and January 2008, intensive demands and low yield amounts on the producer side and price increases in other markets caused incredible increase in paddy prices.

Drought in paddy producing countries and export restrictions in Egypt and India caused record breaking prices in 2008. The prices returned to normal conditions upon removal export restrictions towards the end of 2008; however, the prices still remained above 2007 level.

Graphic 100. Monthly Trading Volume and Price of Paddy in Chicago Mercantile Exchange



Source: Chicago Mercantile Exchange, 2011

Transaction volume and prices reached at their peaks on April 2008 and paddy transaction volume which was 3 million tons on April 2007 reached to 7 million tons on April 2008. The prices increased from USD 222 to USD 485 during the same period.

A decrease was recorded in total transaction volume in 2009 following the decrease in prices. Being 39 million ton in 2008, the transaction volume was recorded as 29 million ton in 2009 experiencing 26% decrease compared to previous year. From the economic perspective, 44 % decrease was observed due to the decrease in prices. Transaction volume of the paddy recessed from USD 15.6 million to USD 8.7 million.

The reason for rice price increase experienced at the end of 2009 was the news about India's import demand after a long time. On the other hand, large procurements of Philippines and Vietnam created speculations of shrinkage in the stocks. As the countries did not wish to repeat the experience of previous year and the markets tended to make stocks. The price increase of rice towards the end of 2009 resulted from respective news.

6

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6. BIBLIOGRAPHY

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7. ANNEXES

7.1. Statement

Explanations of TSA on the definitions and concepts referred in tables are given below (TSA 2011).

Market Year: Refers to the period starting with harvest and/or release of a grain in the market and ending with the harvest period next year.

Domestic Use: refers to sum of food consumption, feed, seed, industrial use and marketing loss within the reference period.

Domestic Use = Seed + Feed + Industrial Use + Processed Part + Marketing Losses + Consumption (as Food)

Consumption (As Food): Refers to the quantity of the product supplied during reference period for human consumption within the country in any form (processed or unprocessed). For the calculation purposes, the consumption was obtained as a remainder value.

Utilization as Seed: Refers to raw material used to maintain the production cycle. Utilization as seed is forecasted through multiplying the cultivation area with the amount of seed sown per unit cultivation area.

Consumption As Feed: Refers to the quantities used as the raw material in feed production and/or directly used as feed. Quantities concerning consumption as feed are estimated based on the quantity information received from Ministry of Agriculture and Rural Affairs for three kinds of grains (barley, wheat and corn) used as raw materials for feed production.

Market Losses: Refers to the losses happened during handling, processing and storage after harvesting the crop. Market losses were generalized as a percentage for the whole country based on the losses and yield information received from Chambers of Trade in Ankara, Istanbul and Izmir which calculated respective quantities through researches.

Industrial Use: Refers to the quantities of the grain used in industry apart from food and feed purposes. The raw materials supplied to the food industry are considering under this title. Industrial use is not included in the tables as it is in negligible quantities for numerous products.

Stock Change: Refers to difference between the year end and new year starting stock values of the products. The stock change was used only for the calculations as it is difficult to estimate initial stock and year ending stock conditions of the products. Furthermore, stock values of the grains for which Turkish Grain Board and producer unions carry out supporting procurements were used as stock change.

Consumption Per Capita: Refers to the rate of consumption in a particular time to the population.

$$\text{Consumption Per Capita} = \frac{\text{Consumption}}{\text{Population}}$$

The calculation method provides an average value for consumption of a single person during the reference period. In reality, there are changes according to the age, gender, income level, consumption habits, and season. Furthermore, as the statistics of the product balance tables cannot go beyond the overall trade, information on retail consumption and special consumption can not be estimated correctly.

The population information in official statistics were taken into consideration for calculation of consumption per capita. Following dates were taken into consideration for population estimates based on the marketing and calendar year.

Balance tables for the marketing year: December 31

Balance tables for calendar year: June 30

Sufficiency Rate: Refers to the rate of sufficiency of the usable production in a particular location (local production) for local consumption or countrywide consumption (food, feed, industrial usage). Considering product balance tables, the sufficiency rate provides a percentage showing sufficiency of the usable yield amount for the domestic requirement.

$$\text{Sufficiency Rate} = \frac{\text{Usable Yield x 100}}{\text{Domestic Use}}$$

If the conclusion of the equation is lower that 100, it means that the domestic production cannot meet the domestic consumption needs and if the conclusion is higher than 100, it means that the domestic production exceeds the domestic needs which creates exportable or storable quantities.