

THE CAUSES OF THE FOOD PRICE CRISIS: COTTON

SUMMARY OF WORLD COTTON MARKET DEVELOPMENTS

World production has kept pace with the increasing world consumption, thus limiting any sustained price increase. Area has been stagnant, but production has increased due to the stronger yields, which have resulted in an acceleration of production growth since 2002.

The most important change of recent years has been the continuing shift of consumption to Asia, which has also brought changes in trade patterns. Despite the strong decline in US production, the even stronger decline in US domestic use led to increased US exports to China. EU imports have also declined, reflecting the decline of the EU textile industry. On the other hand, India has increased production even faster than its cotton use, thanks to strong productivity gains. Brazil is also emerging as an exporter, replacing some of the decline in drought-stricken Australia, while Africa seems to be missing the opportunities of higher Asian demand.

MAIN WORLD MARKET TRENDS

Production

- Production saw a steep increase from 2003, which reflects mostly the increase in yields (due to GMO varieties) in the main key players (China, US and India). Overall area has been rather stagnant, with declines in the developed world compensated by increases in developing countries.

Consumption

- Cotton continues to lose share to synthetic fibres, but has managed to participate in the strong demand growth of textiles since 2003. Annual growth in consumption has been 3.4%, mainly driven by the leading textile producers (China, India and Pakistan). Since the 2000s that Chinese consumption is increasing at a faster pace than production, while consumption in the US and the EU is strongly shrinking, reflecting the delocalisation of their textile industry.

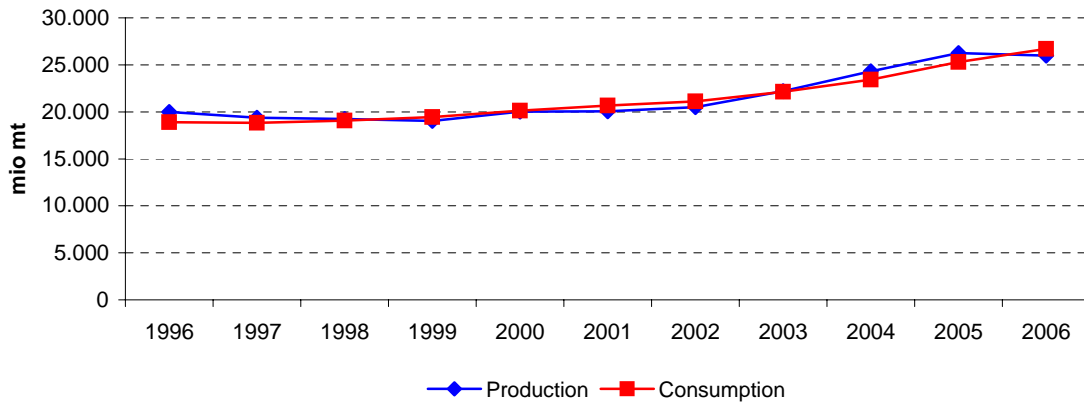
Trade

- World trade has expanded following the expiry of multi-fibre agreement (2005), mainly through the shift of a (recently declining) US production from domestic use to exports to China. Brazil and India have shifted from net importers to net exporters, while Australian exports are at lower levels than the 90s and Africa rather stagnant.

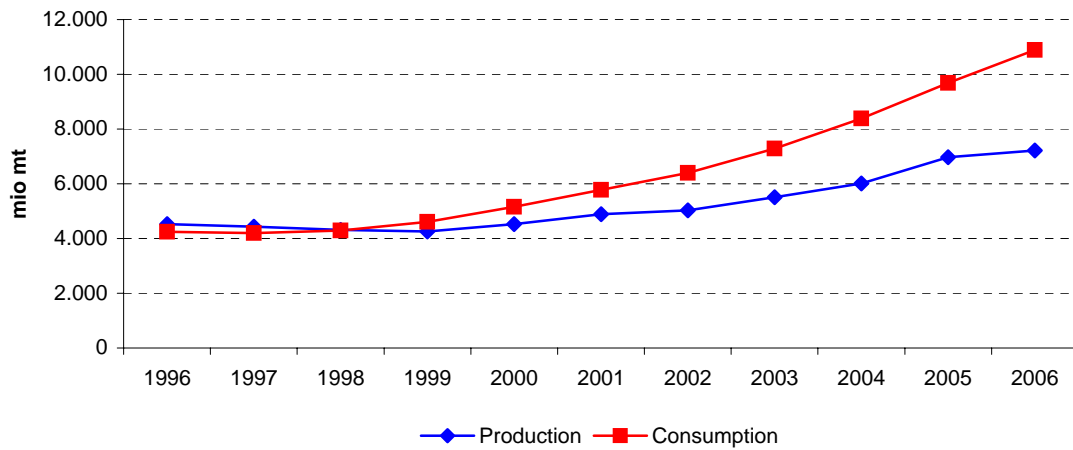
Ending stocks / Prices

- The main factor in the variability of cotton prices is the varying gap between the increasing export surplus of the US production and import deficit in China, which affects disproportionately world price developments.

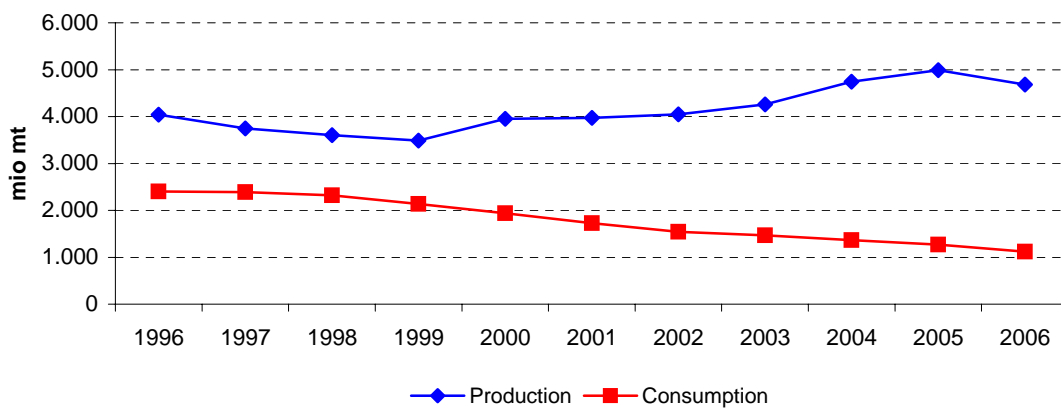
World cotton - 3 year moving average 1995-2007



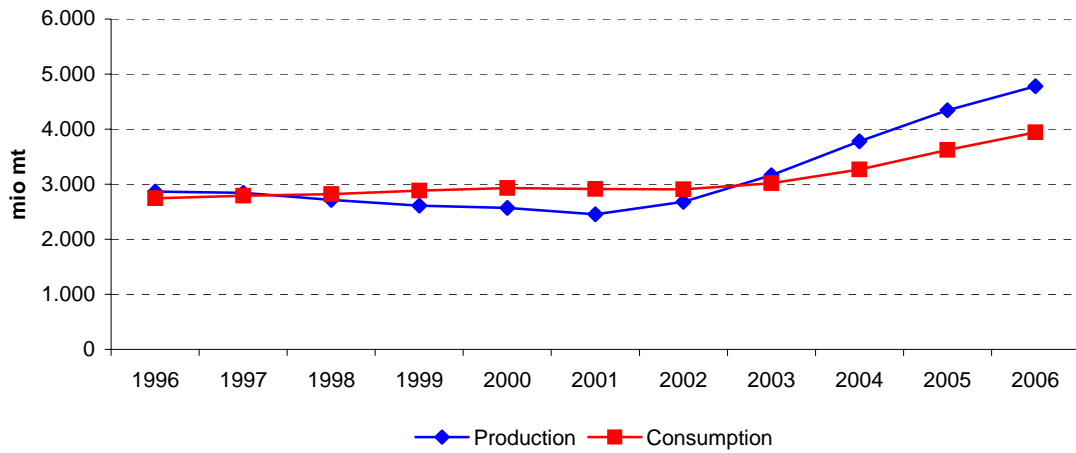
China cotton - 3 year moving average 1995-2007



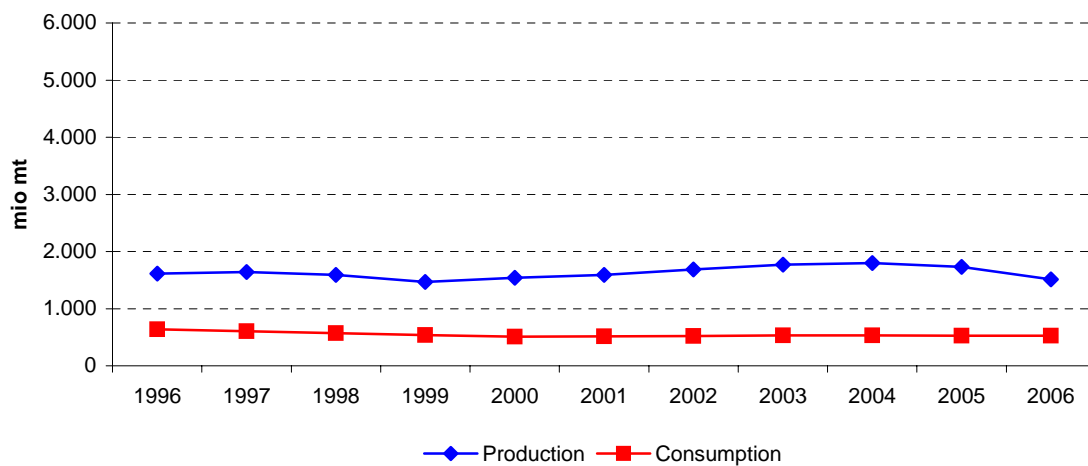
US cotton - 3 year moving average 1995-2007



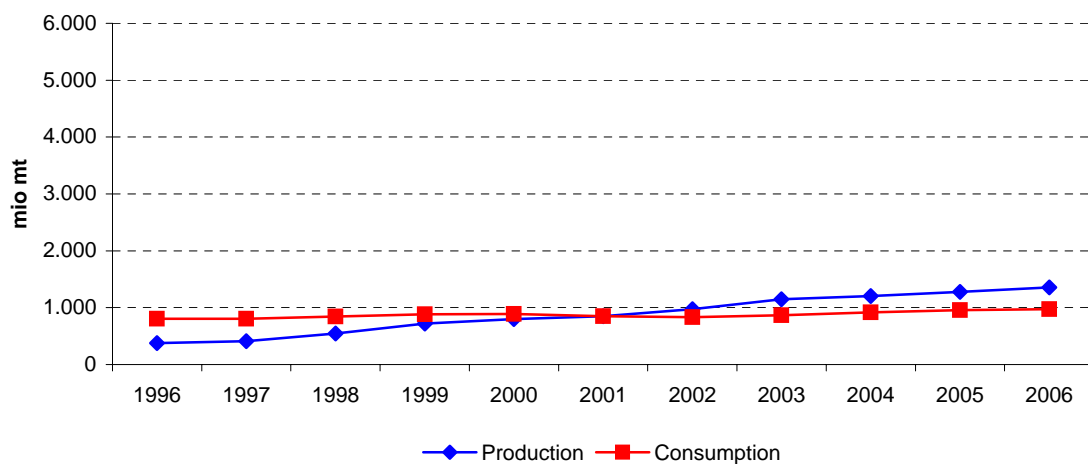
India cotton - 3 year moving average 1995-2007



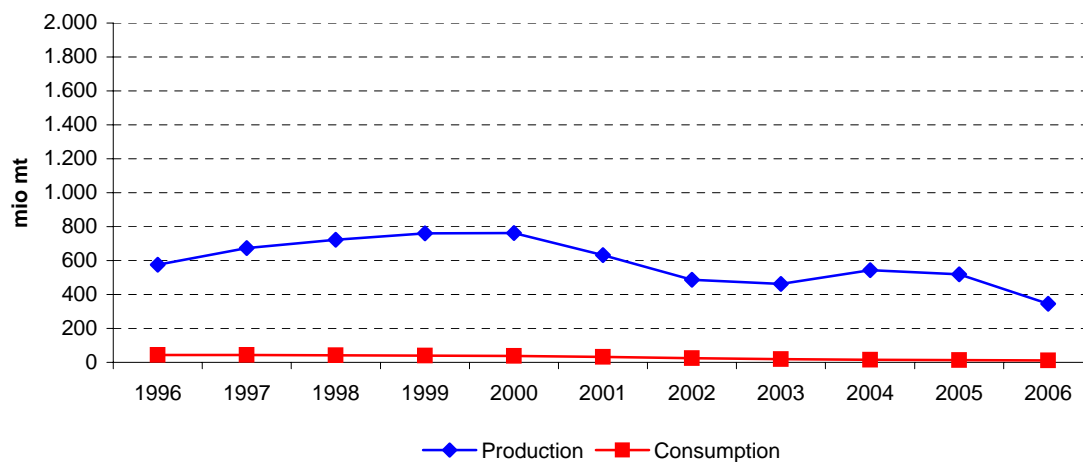
Africa cotton - 3 year moving average 1995-2007



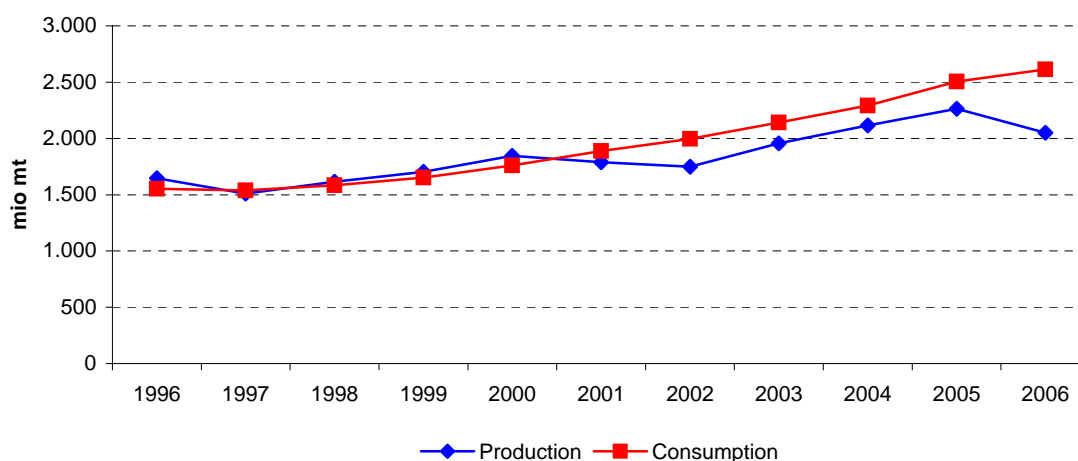
Brazil cotton - 3 year moving average 1995-2007



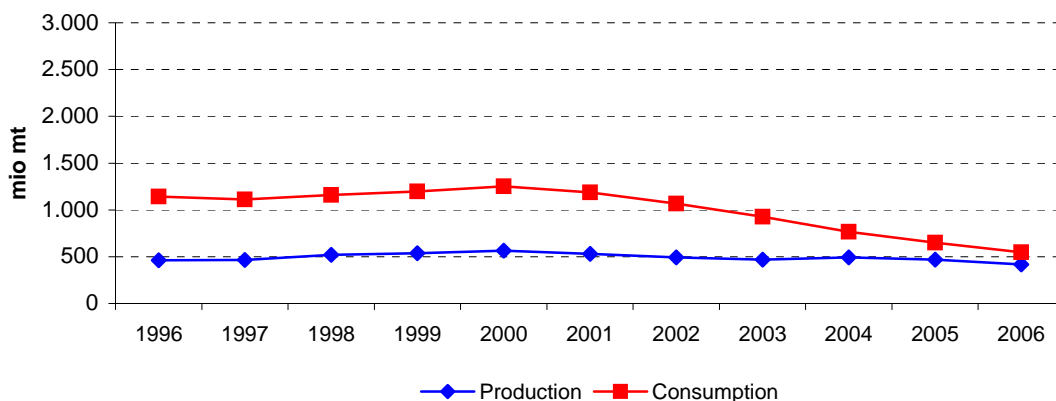
Australia cotton - 3 year moving average 1995-2007



Pakistan cotton - 3 year moving average 1995-2007



EU cotton - 3 year moving average 1995-2007



	High prices			Low prices				High prices				Very high prices		CHG (%)
	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	1995-07
World														
Area (mio Ha)	35.947	33.752	33.785	32.843	32.344	32.012	33.730	30.447	32.129	35.793	34.884	34.716	33.733	-0,5%
Yield (kg/ha)	565,82	580,10	592,93	565,21	591,91	605,96	637,33	632,15	645,96	742,87	734,55	765,58	763,43	2,5%
Production (mio mt)	20.340	19.579	20.032	18.563	19.145	19.398	21.497	19.247	20.754	26.590	25.624	26.578	25.753	2,0%
Ending Stocks (mio mt)	8.150	9.071	9.976	10.465	11.121	10.744	11.934	9.868	9.643	12.486	13.102	13.227	11.882	3,2%
Total Trade (mio mt)	7	9	26	-85	-131	-297	-170	-153	-205	-255	-366	-470	-763	:
Consumption (mio mt)	18.644	19.078	18.971	18.429	19.826	20.065	20.531	21.420	21.354	23.657	25.323	26.907	27.845	3,4%
Price (\$/mt)*	212,79	177,34	174,78	144,47	117,11	130,22	105,81	101,92	139,91	136,57	121,70	126,66	139,52	-3,5%
European Union														
Area (mio Ha)	472	497	497	510	555	511	515	447	458	467	444	385	377	-1,8%
Yield (kg/ha)	1.024,51	838,93	982,18	967,82	1.043,12	1.061,78	1.111,45	1.059,88	936,98	1.079,76	1.233,77	918,40	924,61	-0,9%
Production (mio mt)	484	417	488	494	579	543	572	474	429	504	548	354	349	-2,7%
Ending Stocks (mio mt)	288	256	285	278	379	334	406	347	224	262	265	185	147	-5,5%
Net Import (mio mt)	-666	-705	-699	-558	-771	-683	-719	-585	-347	-339	-90	-118	-109	-14,0%
Consumption (mio mt)	1.131	1.145	1.148	1.042	1.292	1.255	1.206	1.105	886	792	621	540	485	-6,8%
United States														
Area (mio Ha)	6.478	5.216	5.425	4.324	5.433	5.282	5.596	5.025	4.858	5.284	5.586	5.153	4.246	-3,5%
Yield (kg/ha)	601,63	790,71	754,18	700,88	679,96	708,43	789,92	745,63	818,21	958,02	931,19	912,19	976,22	4,1%
Production (mio mt)	3.897	4.124	4.092	3.030	3.694	3.742	4.420	3.747	3.975	5.062	5.201	4.700	4.145	0,5%
Ending Stocks (mio mt)	568	865	846	858	852	1.306	1.621	1.149	751	1.196	1.317	2.061	1.724	9,7%
Net Export (mio mt)	1.582	1.407	1.630	840	1.449	1.464	2.390	2.576	2.986	3.137	3.832	2.828	3.478	6,8%
Consumption (mio mt)	2.318	2.422	2.471	2.265	2.219	1.929	1.676	1.584	1.364	1.457	1.278	1.077	1.004	-6,7%

	High prices			Low prices				High prices				Very high prices		CHG (%)
	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	1995-07
China														
Area (mio Ha)	5.422	4.722	4.491	4.459	3.726	4.058	4.820	4.184	5.110	6.000	5.500	6.000	6.101	1,0%
Yield (kg/ha)	879,42	889,90	1.022,94	1.010,75	1.028,44	1.089,16	1.102,17	1.176,04	950,15	1.124,91	1.167,79	1.288,20	1.231,39	2,8%
Production (mio mt)	4.768	4.202	4.594	4.507	3.832	4.420	5.312	4.921	4.855	6.749	6.423	7.729	7.513	3,9%
Ending Stocks (mio mt)	3.190	3.833	4.650	5.015	4.872	4.304	4.125	3.266	3.257	3.280	4.422	4.074	3.380	0,5%
Net Import (mio mt)	-658	-784	-392	70	343	46	-23	-517	-1.885	-1.384	-4.191	-2.286	-3.008	13,5%
Consumption (mio mt)	4.224	4.344	4.169	4.071	4.638	5.117	5.715	6.510	6.967	8.382	9.798	10.886	11.976	9,1%
India														
Area (mio Ha)	9.063	9.122	8.904	9.287	8.791	8.576	8.730	7.667	7.630	8.786	8.873	9.166	9.500	0,4%
Yield (kg/ha)	318,31	332,20	301,67	302,03	301,66	277,51	306,76	301,01	399,49	470,84	467,45	517,83	572,96	5,0%
Production (mio mt)	2.885	3.030	2.686	2.805	2.652	2.380	2.678	2.308	3.048	4.137	4.148	4.746	5.443	5,4%
Ending Stocks (mio mt)	1.100	1.019	909	1.034	1.070	821	1.116	781	911	1.908	1.756	1.538	1.623	3,3%
Net Export (mio mt)	105	255	36	-68	-333	-321	-507	-253	-22	-82	664	958	1.180	22,3%
Consumption (mio mt)	2.608	2.857	2.760	2.748	2.950	2.949	2.890	2.896	2.939	3.222	3.636	4.006	4.178	4,0%
Pakistan														
Area (mio Ha)	3.048	3.148	2.960	2.923	2.983	2.928	3.116	2.794	2.989	3.192	3.101	3.250	3.250	0,5%
Yield (kg/ha)	585,75	506,48	527,77	469,27	640,55	623,06	578,97	621,22	571,44	759,72	713,70	663,22	549,34	-0,5%
Production (mio mt)	1.785	1.594	1.562	1.372	1.911	1.824	1.804	1.736	1.708	2.425	2.213	2.155	1.785	0,0%
Ending Stocks (mio mt)	296	396	331	373	763	794	891	714	682	1.077	1.069	942	838	9,1%
Net Import (mio mt)	285	-35	57	-199	-13	24	-149	-140	-356	-261	-289	-444	-728	:
Consumption (mio mt)	1.568	1.524	1.565	1.524	1.666	1.764	1.851	2.047	2.090	2.286	2.504	2.722	2.613	4,3%

	High prices			Low prices				High prices				Very high prices		CHG (%)
	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	1995-07
Australia														
Area (mio Ha)	301	396	448	534	464	505	404	220	196	314	336	145	75	-10,9%
Yield (kg/ha)	1.424,99	1.535,08	1.538,67	1.356,51	1.622,61	1.595,21	1.800,00	1.662,62	1.888,43	2.080,17	1.814,37	2.027,09	1.741,80	1,7%
Production (mio mt)	429	608	689	724	753	806	727	366	370	653	610	294	131	-9,4%
Ending Stocks (mio mt)	238	315	394	454	501	455	496	283	195	426	422	257	87	-8,1%
Net Export (mio mt)	317	518	590	662	699	850	681	578	470	435	628	464	306	-0,3%
Consumption (mio mt)	42	46	42	40	41	38	33	27	16	14	13	12	11	-10,7%
Brazil														
Area (mio Ha)	1.130	695	765	685	752	853	748	735	1.100	1.172	850	1.094	1.133	0,0%
Yield (kg/ha)	363,01	440,15	537,91	759,98	931,12	1.100,62	1.024,29	1.152,31	1.190,56	1.096,05	1.203,89	1.393,12	1.348,74	11,6%
Production (mio mt)	410	306	412	521	700	939	766	847	1.310	1.285	1.023	1.524	1.529	11,6%
Ending Stocks (mio mt)	300	324	373	379	521	646	526	616	996	1.095	831	1.237	1.340	13,3%
Net Export (mio mt)	-363	-519	-410	-285	-337	-63	92	-16	91	293	362	171	481	:
Consumption (mio mt)	818	811	789	822	922	914	827	806	871	925	958	980	978	1,5%
Africa														
Area (mio Ha)	3.624	3.980	4.488	4.447	4.427	4.127	4.931	4.819	4.943	5.445	5.112	4.536	4.239	1,3%
Yield (kg/ha)	393,94	415,87	391,45	340,62	337,87	336,27	353,15	342,87	337,75	364,11	341,32	322,36	315,65	-1,8%
Production (mio mt)	1.428	1.655	1.757	1.515	1.496	1.388	1.741	1.652	1.670	1.983	1.745	1.462	1.338	-0,5%
Ending Stocks (mio mt)	285	420	553	514	506	469	763	732	683	930	844	732	645	7,0%
Net Export (mio mt)	707	892	988	971	987	897	955	1.132	1.173	1.197	1.294	1.040	894	2,0%
Consumption (mio mt)	664	621	627	574	520	519	484	535	540	529	531	528	525	-1,9%

Source:

Fapri - World Agricultural Outlook; (*) World Bank

World	Averages				3 year moving average										
	1995-97	1998-01	2002-05	2006-07	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Area (mio Ha)	34.495	32.732	33.313	34.224	34.495	33.460	32.991	32.400	32.695	32.063	32.102	32.790	34.269	35.131	34.444
Yield (kg/ha)	579,62	600,10	688,88	764,51	579,62	579,41	583,35	587,69	611,73	625,15	638,48	673,66	707,80	747,67	754,52
Production (mio mt)	19.984	19.651	23.054	26.165	19.984	19.392	19.247	19.035	20.013	20.047	20.499	22.197	24.323	26.264	25.985
Ending Stocks (mio mt)	9.065,76	11.065,94	11.274,77	12.554,63	9.065,76	9.837,24	10.520,58	10.776,74	11.266,39	10.848,53	10.481,37	10.665,69	11.743,83	12.938,48	12.737,08
Total Trade (mio mt)	14	-171	-244	-616	14	-17	-63	-171	-199	-206	-176	-204	-275	-363	-533
Consumption (mio mt)	18.897	19.713	22.938	27.376	18.897	18.826	19.075	19.440	20.141	20.672	21.102	22.144	23.445	25.296	26.692
Price (\$/mt)*	188	124	125	133	188	166	145	131	118	113	116	126	133	128	129

European Union	Averages				3 year moving average										
	1995-97	1998-01	2002-05	2006-07	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Area (mio Ha)	489	523	454	381	489	501	521	525	527	491	473	457	456	432	402
Yield (kg/ha)	948,54	1.046,04	1.077,60	921,50	948,54	929,64	997,70	1.024,24	1.072,12	1.077,70	1.036,10	1.025,54	1.083,50	1.077,31	1.025,59
Production (mio mt)	463	547	489	351	463	466	520	538	565	530	492	469	494	469	417
Ending Stocks (mio mt)	276,37	349,45	274,44	165,88	276,37	272,88	314,11	330,43	373,32	362,51	325,79	277,53	250,24	237,32	198,99
Net Import (mio mt)	-690	-683	-340	-114	-690	-654	-676	-671	-724	-662	-550	-424	-259	-182	-106
Consumption (mio mt)	1.142	1.198	851	513	1.142	1.112	1.160	1.196	1.251	1.189	1.066	928	767	651	549

United States	Averages				3 year moving average										
	1995-97	1998-01	2002-05	2006-07	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Area (mio Ha)	5.706	5.159	5.188	4.700	5.706	4.988	5.061	5.013	5.437	5.301	5.160	5.056	5.243	5.341	4.995
Yield (kg/ha)	715,51	719,80	863,26	944,20	715,51	748,59	711,67	696,42	726,10	747,99	784,59	840,62	902,47	933,80	939,87
Production (mio mt)	4.038	3.722	4.496	4.423	4.038	3.749	3.605	3.489	3.952	3.970	4.047	4.261	4.746	4.988	4.682
Ending Stocks (mio mt)	759,64	1.159,40	1.103,55	1.892,51	759,64	856,16	852,10	1.005,45	1.259,99	1.359,01	1.173,95	1.032,33	1.088,25	1.524,78	1.700,75
Net Export (mio mt)	1.540	1.536	3.133	3.153	1.540	1.292	1.306	1.251	1.768	2.144	2.651	2.900	3.318	3.266	3.380
Consumption (mio mt)	2.404	2.022	1.421	1.040	2.404	2.386	2.318	2.138	1.942	1.730	1.541	1.468	1.366	1.271	1.120

China	Averages				3 year moving average										
	1995-97	1998-01	2002-05	2006-07	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Area (mio Ha)	4.878	4.266	5.199	6.051	4.878	4.557	4.225	4.081	4.201	4.354	4.705	5.098	5.537	5.833	5.867
Yield (kg/ha)	930,75	1.057,63	1.104,72	1.259,80	930,75	974,53	1.020,71	1.042,78	1.073,26	1.122,46	1.076,12	1.083,70	1.080,95	1.193,64	1.229,13
Production (mio mt)	4.521	4.518	5.737	7.621	4.521	4.434	4.311	4.253	4.521	4.884	5.029	5.508	6.009	6.967	7.222
Ending Stocks (mio mt)	3.890,92	4.579,03	3.556,04	3.726,80	3.890,92	4.499,17	4.845,56	4.730,22	4.433,74	3.898,21	3.549,27	3.267,32	3.652,83	3.925,21	3.958,60
Net Import (mio mt)	-612	109	-1.994	-2.647	-612	-369	7	153	122	-165	-809	-1.262	-2.487	-2.620	-3.161
Consumption (mio mt)	4.246	4.885	7.914	11.431	4.246	4.195	4.293	4.609	5.156	5.781	6.397	7.287	8.382	9.689	10.887

India	Averages				3 year moving average										
	1995-97	1998-01	2002-05	2006-07	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Area (mio Ha)	9.030	8.846	8.239	9.333	9.030	9.104	8.994	8.885	8.699	8.324	8.009	8.028	8.430	8.942	9.180
Yield (kg/ha)	317,40	296,99	409,70	545,39	317,40	311,97	301,79	293,73	295,31	295,10	335,76	390,45	445,93	485,37	519,41
Production (mio mt)	2.867	2.629	3.410	5.095	2.867	2.840	2.714	2.612	2.570	2.455	2.678	3.164	3.778	4.344	4.779
Ending Stocks (mio mt)	1.009,24	1.010,35	1.339,01	1.580,73	1.009,24	987,25	1.004,22	975,12	1.002,40	906,10	936,07	1.200,10	1.525,09	1.733,96	1.639,06
Net Export (mio mt)	132	-307	77	1.069	132	74	-122	-241	-387	-360	-260	-119	187	513	934
Consumption (mio mt)	2.741	2.884	3.173	4.092	2.741	2.788	2.819	2.882	2.930	2.912	2.908	3.019	3.266	3.621	3.940

Pakistan	Averages				3 year moving average										
	1995-97	1998-01	2002-05	2006-07	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Area (mio Ha)	3.052	2.988	3.019	3.250	3.052	3.010	2.955	2.945	3.009	2.946	2.966	2.992	3.094	3.181	3.200
Yield (kg/ha)	540,00	577,96	666,52	606,28	540,00	501,17	545,86	577,62	614,19	607,75	590,55	650,79	681,62	712,21	642,08
Production (mio mt)	1.647	1.728	2.020	1.970	1.647	1.509	1.615	1.702	1.846	1.788	1.749	1.956	2.115	2.265	2.051
Ending Stocks (mio mt)	340,89	704,88	885,59	889,88	340,89	366,51	488,79	642,94	815,67	799,41	762,33	824,30	942,82	1.029,40	949,74
Net Import (mio mt)	102	-84	-261	-586	102	-59	-52	-63	-46	-88	-215	-252	-302	-331	-487
Consumption (mio mt)	1.552	1.701	2.232	2.667	1.552	1.538	1.585	1.651	1.760	1.887	1.996	2.141	2.293	2.504	2.613

	Averages				3 year moving average										
	1995-97	1998-01	2002-05	2006-07	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Australia															
Area (mio Ha)	382	477	267	110	382	459	482	501	458	376	273	243	282	265	185
Yield (kg/ha)	1.499,58	1.593,58	1.861,40	1.884,44	1.499,58	1.476,75	1.505,93	1.524,78	1.672,61	1.685,94	1.783,68	1.877,07	1.927,66	1.973,88	1.861,08
Production (mio mt)	575	753	500	212	575	674	722	761	762	633	488	463	544	519	345
Ending Stocks (mio mt)	315,70	476,38	331,49	171,75	315,70	387,63	449,60	470,00	483,86	411,21	324,48	301,33	347,56	368,24	255,15
Net Export (mio mt)	475	723	528	385	475	590	650	737	743	703	576	494	511	509	466
Consumption (mio mt)	43	38	18	11	43	43	41	40	37	33	25	19	15	13	12
Brazil															
Area (mio Ha)	863	760	964	1.114	863	715	734	763	784	779	861	1.002	1.041	1.039	1.026
Yield (kg/ha)	447,02	954,00	1.160,70	1.370,93	447,02	579,35	743,00	930,57	1.018,68	1.092,41	1.122,39	1.146,31	1.163,50	1.231,02	1.315,25
Production (mio mt)	376	731	1.116	1.526	376	413	544	720	802	851	974	1.147	1.206	1.277	1.359
Ending Stocks (mio mt)	332,32	518,08	884,72	1.288,50	332,32	358,81	424,35	515,43	564,41	596,13	712,83	902,61	974,24	1.054,51	1.136,01
Net Export (mio mt)	-431	-148	183	326	-431	-405	-344	-228	-103	4	56	123	249	275	338
Consumption (mio mt)	806	871	890	979	806	808	844	886	888	849	835	867	918	954	972
Africa															
Area (mio Ha)	4.031	4.483	5.080	4.388	4.031	4.305	4.454	4.334	4.495	4.626	4.898	5.069	5.167	5.031	4.629
Yield (kg/ha)	400,42	341,98	346,52	319,01	400,42	382,65	356,65	338,25	342,43	344,10	344,59	348,25	347,73	342,60	326,44
Production (mio mt)	1.613	1.535	1.762	1.400	1.613	1.642	1.589	1.466	1.542	1.594	1.688	1.768	1.799	1.730	1.515
Ending Stocks (mio mt)	419,27	563,04	797,20	688,33	419,27	495,62	524,36	496,34	579,36	654,77	725,97	781,63	818,86	835,34	740,18
Net Export (mio mt)	862	953	1.199	967	862	950	982	952	946	995	1.087	1.167	1.221	1.177	1.076
Consumption (mio mt)	637	524	533	526	637	607	574	538	508	513	519	534	533	529	528

Source:

Fapri - World Agricultural Outlook; (*) World Bank