

TURKISH

PLASTICS PACKAGING MATERIALS **FOLLOW UP REPORT** 2015 / 6 M

PAGEV Turkish Plastics Industry Foundation

















EXECUTIVE SUMMARY:

Production of plastic packaging products share between 40 - 53 % in total plastics products manufacturing of leading countries. This ratio is about 40 % in Turkey, while the world average is 46%, respectively. More than 1/3 of all products in developed countries is packaged with a plastic materials so that, after the paper and cardboard, is having the biggest market share. In terms of volume, 55% of the packaging is flexible and 45 % is rigid However, this position is reversed in terms of value. Annual consumption value of rigid packaging is 30 billion euros in the European while flexible packaging shares the value of around 10 billion euros.

In the first six months of 2015 compared to the peers period of 2014,in unit base; plastic packaging products production, imports, exports and trade surplus increased but domestic consumption remained at the same level. 22% of total production was exported, % 14 of domestic consumption was met by imports while the export import coverage rate realized as 179%.

In the first six months of 2015, compared to peers period of 2014, in value base; production, imports, exports, domestic consumption and foreign trade surplus decreased.

% 18 of total production was exported as % 15 of domestic consumption was met by imports and export import coverage ratio realized as 125%.

At the last of 2015, compared to peers period of 2014; it is expected that production to increase by 3,4 %, imports by % 3, exports by 6,9, domestic consumption by % 2,6 and trdae surplus by 12,4 in unit base. On the other hand, in value base, compared to peers period of 2014, it is expected that production to decrease 10.1% imports by 9 %, exports 9.1% domestic consumption by 10,1 and foreign trade surplus by 12,4.

World packaging industry is very large and big industries and the plastic packaging industry has an important place in the economies of the countries. In parallel with the rapid development of plastic packaging, plastic industry has become an essential part of our daily lives. Key to this success is the best way to maintain supply capability and low weight due to the cost savings as a result.

Plastics, through innovative technologies, are becoming increasingly sophisticated, lightweight, versatile and has replaced the traditional packaging materials such as glass and paper in many areas. Previously, classical materials such as paper, glass, and traditional packaging materials such as wood, cellulose acetate and cellophane transparent cellulose film were used, plastic packaging materials placed with polyethylene in the 1950's and has been widely used. Rapid increase in the use of plastics has been realized with the development of polystyrene, polypropylene, PVC, polyester and polyethylene copolymers.

















Despite the size and economic importance of the industry (especially SMEs) of the plastic packaging industry is currently under significant pressure two. On the one hand to determine the price of plastic raw material suppliers, notably in the food industry as well others, great pressure is applied to the lowering of prices by customers. In addition, in many countries, especially in Eastern Europe, particularly if they have a quality manufacturer of extrusion and printing facilities at lower costs and therefore competition in these countries are known to increase rapidly. Competition from others, especially from the Far East side barrier material and printing technology is a growing field.

Food packaging materials constitute 54% of the total packaging market plastic packaging are known to be the most important growth market in the coming years. Demographic developments, such as one - and two people live and increasing the older homes will contribute to the market growth.

Innovation is a key factor for success in this industry. Easy to use in order to develop new products to market in plastic packaging industry using intensive R & D will have a strategic advantage over its competitors. Plastic packaging industry will benefit from R & D in developed countries, as well as in new markets.

TURKISH PLASTIC PACKAGING MATERIALS INUSTRY:

PRODUCTION CAPACITY:

In plastic packaging sector, lots of companies manufacture lots of different products, and manufacturing capacities of companies in terms of products cannot be defined over a certain unit. According to the TOBB database, total manufacturing capacity of 1854 registered companies is defined as: (1.188.2008 tons + 2.626.400.207 m2 + 421.630.400 meters + 4.497.991 pieces)

Plastic packaging sector is made up of flexible plastic by 18%, textile plastic by 18%, and hard plastic packaging products by 15%.

Installed Capacity of Plastics Packaging Industry

Products	No of Companies	Ton	M2	Meter	1000 Unit
Plastic Film	205	200.639	1.036.345.507	421.630.400	
Sheets	137	128.243	342.572.240		
Bottles and cans	235	86.589			2.008.991
Storage Containers	543	279.737			1.648.000
Packings Bags	734	493.000	1.247.482.460		841.000
TOTAL	1.854	1.188.208	2.626.400.207	421.630.400	4.497.991

Source: TOBB (The Union of Chambers and Commodity Exchange of Turkey)

















About 1.450 companies are operating in plastic packaging 61% of which located in Istanbul. More than 10 companies that operate in 14 the provinces 14 account for 83% of total companies.

Plastics Packaging Materials Manufacturers By Provinces

Province	No of Companies	% Share
İstanbul	871	61
İzmir	84	6
Konya	57	4
Ankara	51	4
Bursa	51	4
Gazıantep	42	3
Kocaeli	40	3
Adana	27	2
Denizli	23	2
Mersin	17	1
Kayseri	16	1
Manisa	15	1
Samsun	13	1
Antalya	11	1
Others	105	7
Total of Industry	1.423	100

PLASTICS PACKAGING MATERIALS MANUFACTURING:

Total manufacturing of plastic packaging materials, which was 3 million tonnes and USD billion of 12,9 in 2014, realized as 1 million 718 thousand tonnes and USD billion of 5,8 in the first half of 2015 with 1,4 % increase on unit base and 13,6 % decrease in value base with respect to the peer period of 2014.

It is expected that the production will be 3.4 million tons and USD billion of 11,6 at the end of 2015 at the end of 2015 by increasing % 3,4 in unit base and decreasing % 11,6 in value base compared with 2014.









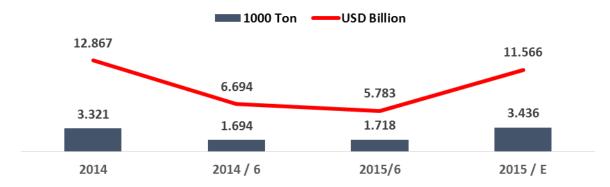






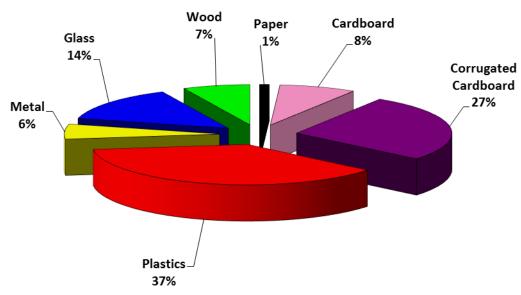


Plastics Packaging Materials Production



According to the data from ASD - Packaging Industrialists Association, the share of plastic packaging sector in total packaging industry is 37%.

Packaging Industry Production by Materials



Source: ASD - Packaging Industrialists Association

















PLASTICS PACKAGING PRODUCT FOREIGN TRADE:

Plastics packaging foreign trade can be examined by 5 custom duty code numbers specifies as follows.

The Materials Groups of Plastics Packaging Industry

HS CODE	DEFINITIONS
3919	ADHESIVE PLATE, SHEET, STRIP, SLIDE, ETC. FROM PLASTIC; FLAT
3920	OTHER PLATE, SHEET, PELLICULE AND SLIDES FROM PLASTIC
3921	OTHER PLATES, SHEETS, PELLICULES, FOILS AND SLIDES FROM PLASTIC
3923	PLASTIC PRODUCTS FOR MOVING FURNITURE, TAP, CAP, CAPSULE

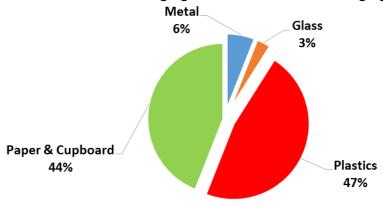
Source: Turkish Statistics Department

PLASTICS PACKAGING PRODUCT IMPORTS:

Although Turkish plastics packaging is sufficient to meet the requirements of requirements of the domestic manufacturing industry with its structural and technological aspects, the materials are imported come with their own packaging materials. As new products begin to be manufactured in Turkey, their packaging materials will be produced in Turkey and market volume will grow accordingly.

According to the ASD - Packaging Manufacturers Association records, The share of total imports of plastics packaging industry is 47% in total packaging imports

Share of Plastics Packaging Materials In Total Packaging Imports



Source: ASD

The imports of plastics packaging materials which was 420 thousand tones and USD billion of 1,7 realised as thousand tons and stood at USD million of 858 in the first six months of 2015 by increasing % 5,8 in unit base and decreasing by % 8,7 in value base compared to peers period of 2014. The imports are expected to be 433 thousand tones and USD billion of 1,72 at the end of 2015.









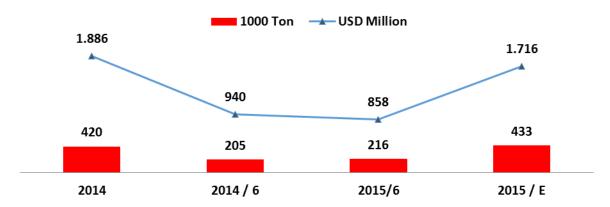








Plastics Packaging Materials Imports



The imports of all sub groups of plastics packaging materials increased by between % 0,8 - % 7,9 on unit base however decreased by between % 2,5 - % 12,9 in value base, in the first six months of 2015 compared to peers period of 2014.

Plastics Packaging Matrials Imports (1000 Tones)

HS Code	2014	2014 / 6	2015 / 6	2015 (E)	% Increase 2015 / 2014 (6 M)	% Increse 2015 /2014
3919	55,5	27,8	29,1	58,2	4,8	4,9
3920	252,0	122,9	130,7	261,4	6,3	3,7
3921	66,9	31,7	34,2	68,4	7,9	2,3
3923	45,6	22,2	22,3	44,7	0,8	-2,1
TOTAL	420,0	204,5	216,3	432,7	5,8	3,0

Source: Turkish Statistics Department

Plastics Packaging Matrials Imports (USD Million)

HS Code	2014	2014 / 6	2015 / 6	2015 (E)	% Increase 2015 / 2014 (6 M)	% Increse 2015 /2014
3919	338,8	173,1	159,7	319,3	-7,8	-5,8
3920	1.004,0	508,4	459,8	919,7	-9,6	-8,4
3921	297,5	134,8	131,3	262,7	-2,5	-11,7
3923	245,9	123,6	107,0	214,1	-13,4	-12,9
TOTAL	1.886,3	939,9	857,9	1.715,7	-8,7	-9,0

Source: Turkish Statistics Department











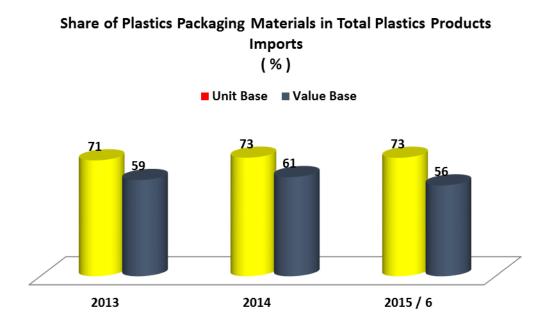






In the first 6 months of 2015, the packaging materials decribed in the custom tarif numbers of 392020, 392043 and 391990, shared % 58 of total imports in unit base and received % 53 share in value base.

In 2014, plastic packaging products imports, shared % 73 of total plastics industry imports in unit base and received % 61 share in value base. But in the first six months of 2015, its share declined to % 56 in value base while in unit base remained the same level.



Plastic packaging products are imported from more than 80 Countries. The share of top 10 import partners within total imports realised as % 71 in unit base and % 75 in value base in the first half of 2015. 5 major import partners in the first 6 months of 2015 are Germany, China, Italy, S. Korea, and France.

10 Major Import Partners for Plastics Packaging Materials

	2014							2015/6			
			% SI	nare				% SI	nare		
COUNTRIES	1000 Ton	USD Million	1000 Ton	USD Million	COUNTRIES	1000 Ton	USD Million	1000 Ton	USD Million		
Germany	69	383	16,6	20,5	Germany	35	164	16,2	19,1		
China	102	321	24,3	17,2	China	52	155	24,0	18,1		
S.Korea	30	172	7,2	9,2	Italy	19	74	8,8	8,6		
Italy	34	160	8,1	8,6	S.Korea	14	72	6,5	8,4		
France	15	87	3,6	4,7	France	7	36	3,4	4,2		
UK	9	76	2,1	4,1	UK	4	35	2,0	4,0		

















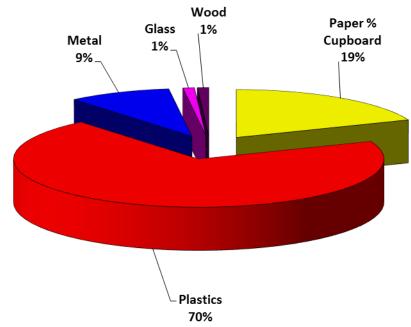
Belgium	11	64	2,6	3,5	USA	4	34	1,7	3,9
USA	7	63	1,7	3,4	Belgium	6	31	2,9	3,6
Greece	11	39	2,7	2,1	Greece	6	20	2,9	2,3
India	10	35	2,4	1,9	India	5	18	2,4	2,0
Total 10 Countries	299	1.400	71,3	75,0	Total 10 Countries	153	639	70,9	74,5
Others	120	466	28,7	25,0	Others	63	219	29,1	25,5
Total	419	1.866	100,0	100,0	Total	216	858	100,0	100,0

Source: Turkish Statistics Department

PLASTICS PACKAGING MATERIALS EXPORTS:

According to the ASD - Packaging Manufacturers Association records, the share of total exports of plastics packaging industry is 70 % in total packaging imports

Total Packaging Materials Exports By Materials



Source: ASD - Packaging Industrialists Association

Plastic packaging products exports in the first 6 months of 2015 has amounted to 386 thousand tons and USD billion of 1.1 increasing by % 10,2 in unit and decreasing by % 7,9 in value base, compared to peers period of 2014.









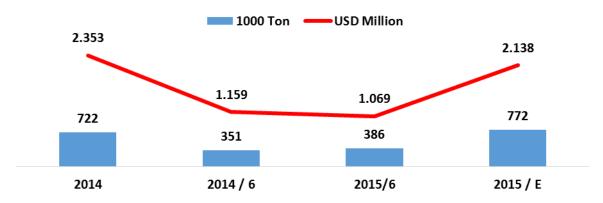








Plastics Packaging Materials Exports



In the first six months of 2015, compared to peers period of 2014, the exports of all plastics materials other than described in 3919, increased by between % 3,6 - %17,2 in unit base and decreased by between % 2,1 - % 18,8 in value base.

Plastics Packaging Materials Exports (1000 Ton)

HS Code	2014	2014 / 6	2015 / 6	2015 (E)	% Increase 2015 / 2014 (6 M)	% Increse 2015 /2014
3919	21	10	9	18	-8,8	-12,1
3920	302	148	159	319	7,5	5,5
3921	121	57	59	119	3,6	-1,7
3923	278	135	158	317	17,2	13,7
TOTAL	722	351	386	772	10,2	6,9

Source: Turkish Statistics Department

Plastics Packaging Materials Exports (USD Million)

HS Code	2014	2014 / 6	2015 / 6	2015 (E)	% Increase 2015 / 2014 (6 M)	% Increse 2015 /2014
3919	148	71	58	115	-18,8	-22,4
3920	968	481	435	871	-9,5	-10,0
3921	420	203	179	359	-11,5	-14,6
3923	816	405	396	793	-2,1	-2,9
TOTAL	2.353	1.159	1.069	2i138	-7,9	-9,1

Source: Turkish Statistics Department

In 2014, plastic packaging products exports, shared % 45 of total plastics industry exports in unit base and received % 47 share in value base. But in the first six months of 2015, its share increased to % 50 in unit base and % 49 in value base.









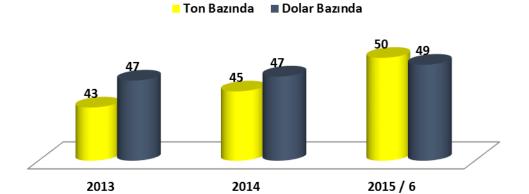








Share of Plastics Packaging Materials Exports in Total Plastics Products Exports (%)



Turkey exports plastic packaging products to more than 150 Countries, and 10 major export partners had 47 % share in unit and value base in the first 6 months of 2015. In the first 6 months of 2015, Iraq, UK, Germany, France, and Italy kept its status of top 5 markets, to which we exported plastic packaging products.

10 Major Export Partners

		20:	14			2015 / 6			
COUNTRIES	1000 Ton	USD Million	% Share Unit	% Share Value	COUNTRIES	1000 Ton	USD Million	% Share Unit	% Share Value
UK	59	177	8,1	7,5	Iraq	42	83	10,9	7,8
Germany	47	167	6,5	7,1	UK	30	80	7,6	7,5
Iraq	67	159	9,3	6,7	Germany	27	80	6,9	7,4
France	28	111	3,9	4,7	France	15	51	3,8	4,7
Iran	19	97	2,7	4,1	Italy	17	45	4,4	4,2
Italy	32	96	4,4	4,1	Israel	16	38	4,0	3,6
Netherland	21	86	2,9	3,7	Netherland	11	37	2,8	3,4
Azerbaijan	24	80	3,3	3,4	Iran	7	35	1,9	3,3
Russian Fed.	17	73	2,4	3,1	Azerbaijan	10	30	2,7	2,8
Israel	26	70	3,6	3,0	Poland	10	27	2,7	2,6
Total 10 Countries	339	1.115	47,0	47,4	Total 10 Countries	184	505	47,5	47,3
Others	383	1.238	53,0	52,6	Others	203	563	52,5	52,7
Total	722	2.353	100,0	100,0	Total	386	1.069	100,0	100,0

Source: Turkish Statistics Department

BALANCE OF TRADE IN PLASTIC PRODUCTS:

Turkey has foreign trade surplus in terms of amount and value in total foreign trade of plastic packaging products. Having been 170 thousand tonnes and USD million of 211 in the













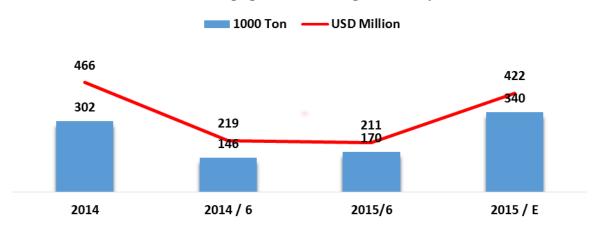




first 6 months of 2015, the foreign trade surplus of plastic packaging products rose to 16,3 % in unit base and decreased by % 3,8 in value base compared to the peers period of 2014.

The foreign trade surplus is expected to increase by % 12,4 in unit base and decrease by % 9,6 in value base at the end of 2015.

Plastics Packaging Materials Foreign Trade Surplus



Foreign Trade Equilibrium in Plastics Packaging Industry (1000 Ton)

HS Code	2014	2014 / 6	2015 / 6	2015 (E)	% Increase 2015 / 2014 (6 M)	% Increse 2015 /2014
3919	-35	-18	-20	-40	12,5	15,1
3920	50	25	29	57	13,3	14,7
3921	54	26	25	50	-1,8	-6,7
3923	233	113	136	272	20,5	16,8
TOTAL	302	146	170	340	16,3	12,4

Source: Turkish Statistics Department

Foreign Trade Equilibrium in Plastics Packaging Industry (USD Million)

HS Code	2014	2014 / 6	2015 / 6	2015 (E)	% Increase 2015 / 2014 (6 M)	% Increse 2015 /2014
3919	-190	-102	-102	-204	-0,2	7,2
3920	-36	-28	-24	-49	-11,2	35,0
3921	123	68	48	96	-29,2	-21,7
3923	570	281	289	579	2,9	1,5
TOTAL	466	219	211	422	-3,8	-9,6

Source: Turkish Statistics Department













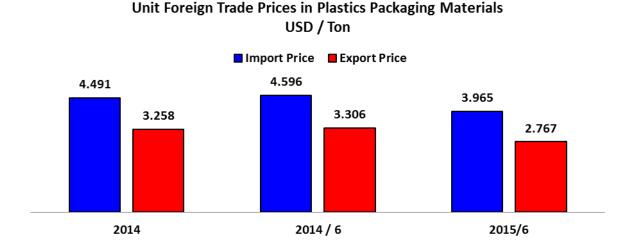




FOREIGN TRADE PRICES IN PLASTIC PACKAGING PRODUCTS:

Average import prices of plastic packaging products have been over the average export prices in Turkey since 2000. This shows that Turkey imports plastic packaging products with higher added-value while exporting products with lower added-value.

Average import unit price realised as 3,965 USD / Tonne and average export unit price 2.767 USD / Tonne for plastic packaging goods in the first half of 2015. The import prices declined by 13,7 and export price by 16,3 compared to the peers period of 2014.



It is seen that, the unit import and export prices of all plastics packaging materials declined in the first 6 months of 2015.

Unit Foreign Trade Prices in Plastics Packaging Materials (\$ / KG)

HS CODE	Unit Import Prices			Unit Export Prices			
	2014/6	2015 / 6	% Increase	2014/6	2015 / 6	% Increase	
3919	6.,2	5,5	-12,0	7,0	6,3	-10,9	
3920	4,1	3,5	-15,0	3,2	2,7	-15,8	
3921	4,3	3,8	-9,7	3,5	3,0	-14,5	
3923	5,6	4,8	-14,1	3,0	2,5	-16,4	
Avarage	4,6	3,9	-13,7	3,3	2.8	-16,3	

Source: Turkish Statistics Department

SUPPLY AND DEMAND EQUILIBRIUM FOR 2015

Turkey, shows a faster development than the EU Countries the economies of which are more developed and relatively sophisticated packaging markets have reached saturation pints.

















Growing urbanization trend, the lengthening of the average life expectancy, women's increasing population of working life, the contribution of consumption habits and the expectations of consumers; developed the self-service in the central and consumer direct selling hypermarket, promotes the spread of supermarkets and supermarket chains in the entire country.

This support the development of use of retail systems packaging. Likewise, consumers in markets achieve the possibility of finding with many more varieties of cheap but good quality and reliable products, price and quality.

Apart from customer service, sale promotions, special discounts, free product coupons directs customers preferably to purchase from the store.

To sum up; the chain of shopping malls and retail sales racks and feed the order accordingly packaged product demand.

In the first six months of 2015 compared to peers period of 2014, regarding with the the plastic packaging products in unit base;

Production by 5.8%, imports by % 5,8 exports by % 10,2 and trade surplus by % 16,3 increased but domestic consumption remained at the same level.

22% of the total production was exported while % 14 of domestic consumption was met by imports. Import – export coverage ratio realised as % 179

General Supply and Balance Equilibrium in Plastics Packaging Materials Industry (1000 Tonnes)

	2014	2014 / 6	2015 / 6	2015 / E	% Increase 2015 / 2014 (6)	% Increase 2015 / 2014 (T)
Production	3.321	1.694	1.718	3.436	1,4	3,4
Import	420	205	216	433	5,8	3,0
Export	722	351	386	772	10,2	6,9
Domestic Consumption	3.019	1.548	1.548	3.096	0,0	2,6
Foreign Trade Deficit / Surplus	302	146	170	340	16,3	12,4
Export / Production (%)	22	21	22	22		
Import / Domestic Consumption (%)	14	13	14	14		
Export / Import (%)	172	171	179	179		

On the other hand, in the same period in value base;

Production by 13,6 %, imports by % 8,7 exports by % 7,8 and trade surplus by % 3,8 decreased 18 % of the total production was exported while % 15 of domestic consumption was met by imports. Import – export coverage ratio realised as % 125

















General Supply and Balance Equilibrium in Plastics Packaging Materials Industry (USD Million)

	2014	2014 / 6	2015 / 6	2015 / E	% Increase 2015 / 2014 (6)	% Increase 2015 / 2014 (T)
Production	12.867	6.694	5.783	11.566	-13,6	-10,1
Import	1.886	940	858	1.716	-8,7	-9,0
Export	2.353	1.159	1.069	2.138	-7,8	-9,1
Domestic Consumption	12.400	6.474	5.572	11.144	-13,9	-10,1
Foreign Trade Deficit / Surplus	466	219	211	422	-3,8	-9,6
Export / Production (%)	18	17	18	18		
Import / Domestic Consumption (%)	15	15	15	15		
Export / Import (%)	125	123	125	125		

PLASTIC PACKAGING END OF YEAR 2015 EXPECTATIONS:

At the end of 2015; It is expected that manufacturing of plastic packaging materials to increase % 3,4 imports by % 3 exports by % 6,9 , domestic consumption by % 2,6 and trade surplus by % 12,4 in unit base compared to 2014.

On the other hand, in value base; It is expected that, the production by % 10,1 imports by % 9 exports by % 9,1, domestic consumption by % 10,1 and trade surplus by % 9,6 will decrease

CONCLUSION:

In the coming years, increased globalization in the world plastic packaging industry; will result for especially small and medium-sized plastic processors in particular, the merger of the companies and even go to more and more cooperation. It will also create opportunities for the companies that develop new products and manufacture them will offer more added value. The raw materials and machinery suppliers enter into closer global cooperation in the plastic packaging industry.

The plastics packaging industry comes increasingly into a service industry with international services, timely delivery and e-commerce. Outsourcing for customers and full service packages is being more important in the plastics packaging industry.

Export of plastic packaging products in 2023 is expected to reach USD billion of 5.5 In order to achieve this goal; target markets and of products to be exported to these market (traditional and larger value-added) must be identified, conducting market researches for these products, the presentations of the selected product in the target markets, making B2B meetings, delegation visits and active participation in fairs to be obtained as the main actions.

In 2023, in order to achieve the export target of \$ 5.5 billion; The creation of strategic alliances should be discussed as another strategy. To this end; Exporting or less exporting

















companies to be gathered, establishment of plastic packaging industrial foreign trade company, to cut costs with joint purchasing and secure raw materials and additives to ensure supply, creating partner portals, establishing technical and commercial infrastructure, develop and expand the cluster activities to ensure increased efficiency in production and create a synergy actions in major plastic specialized organized industrial zones.

Another strategy is: to become a global center of excellence in producing innovative products in Turkey. The main actions that can be done for this purpose are;

To produce technological products, to set priorities on R & D investments, create development policies, take best practices of the leading Countries and organizations in the packaging industry as a model, develop mechanisms to encourage mergers to increase the international competitiveness, to identify the R & D needs of the plastic packaging industry to establish scientific works in universities to increase innovative activities.













