

**PAGEV**  
**TURKEY**  
**PLASTICS PACKAGING MATERIALS**  
**FOLLOW - UP REPORT**  
**2015 / 9 MONTHS**





# EXECUTIVE SUMMARY

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Production of plastics packaging materials shares between 40 – 53 % in total plastics goods manufactured in 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 plastics materials so that, after the paper and cardboard, 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 Europe while flexible packaging shares the value of around 10 billion euros.

In Turkish plastics packaging materials industry, in the 9 months of 2015 compared to the peers period of 2014; production decreased by % 0,08 and domestic sales % 3,2 while the imports increased by % 0,02 and exports by % 10,1 on unit base. In this period, 24 % of total production was exported, % 14 of domestic consumption was met by imports while the export import coverage ratio realized as 87 %.

On the other hand, in the same period, production decreased by 13,8 %, imports by % 10,7 exports by % 7,8 on value base. 19 % of the total production was exported while % 16 of domestic consumption was met by imports. Import – export coverage ratio realized as % 129

At the end of 2015, compared to 2014; it is expected that production will increase by 0,9 %, imports by % 0,8, exports by 9,5. However, domestic consumption will decrease by % 1,2 on unit base.

On the other hand, production is expected to decrease by 11,8 %, imports by 10 %, exports 7,1 % and domestic consumption by 10,1 % on value base.

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 INDUSTRY

Packaging materials are generally defined as wrapping, storing, stocking, carrying and selling the manufactured products in a most reliable and hygienic ways. In this way packaging materials add values to the packed products. From this perspective, the development of packaging industry and packaging consumption per capita is generally accepted as an indicator of development.

Plastic packaging is not only safe but also very practical and more efficient. The exact amount of the recovery in output, produced in 2013, which compares packaging containers produced in 1991 has been stated in a study conducted by the GVM's. The striking result of this study is : to replace 3.7 million Tonss of plastic packaging in Germany has only consumed 2.76 million Tonss, which corresponds to a saving of almost a million Tons. This material saving, innovative packaging solutions with more stringent legal requirements relating to the trade in terms of food and divisibility and durability has been achieved despite the growing demands of consumers.

In EU zone, nearly 63 % of all consumer goods are transported in plastic packaging materials. However, plastic packaging accounts for only 24% of the amount of all packaging. This clearly demonstrates the higher efficiency of the plastics packaging material than the others.

# TURKISH PLASTIC PACKAGING PRODUCTION CAPACITY

In plastic packaging industry, 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 (The Union of Chambers and Commodity Exchange of Turkey) database, total manufacturing capacity of 1854 registered companies is defined as: (1.188.2008 Tonss + 2.626.400.207 m<sup>2</sup> + 421.630.400 meters + 4.497.991 pieces)

Plastics packaging sector is made up of flexible plastic by 67 %, textile plastic by 18%, and hard plastic packaging products by 15 %.

| PRODUCTS           | NO OF COMPANIES | TONS             | M <sup>2</sup>       | METER              | 1000 UNIT        |
|--------------------|-----------------|------------------|----------------------|--------------------|------------------|
| PLASTIC FILM       | 205             | 200.639          | 1.036.345.507        | 421.630.400        |                  |
| SHEETS             | 137             | 128.243          | 342.572.240          |                    |                  |
| BOTTLES AND CAPS   | 235             | 86.589           |                      |                    | 2.008.991        |
| STORAGE CONTAINERS | 543             | 279.737          |                      |                    | 1.648.000        |
| PACKING BAGS       | 734             | 493.000          | 1.247.482.460        |                    | 841.000          |
| <b>TOTAL</b>       | <b>1854</b>     | <b>1.188.208</b> | <b>2.626.400.207</b> | <b>421.630.400</b> | <b>4.497.991</b> |

Source: TOBB DATA BANK

Sheet 1: Installed Capacity of Plastics Packaging Industry

According to the PAGEV records, about 1.450 companies are operating in plastic packaging industry, 61% of which located in Istanbul. More than 10 companies that operate in 14 provinces account for 83% of total companies.

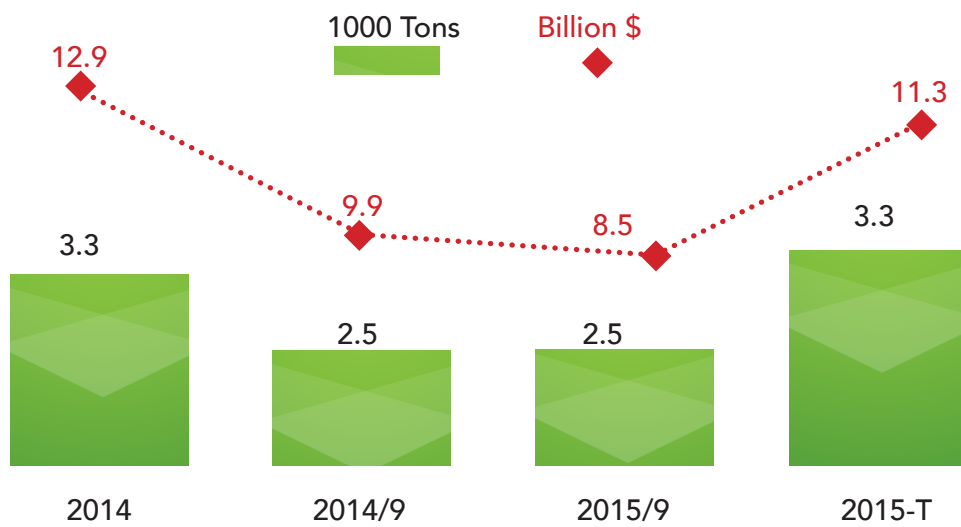
| PROVINCE                 | NO OF COMPANIES | SHARE %    |
|--------------------------|-----------------|------------|
| İSTANBUL                 | 871             | 61         |
| İZMİR                    | 84              | 6          |
| KONYA                    | 57              | 4          |
| ANKARA                   | 51              | 4          |
| BURSA                    | 51              | 4          |
| G.ANTEP                  | 42              | 3          |
| KOCAELİ                  | 40              | 3          |
| ADANA                    | 27              | 2          |
| DENİZLİ                  | 23              | 2          |
| MERSİN                   | 17              | 1          |
| KAYSERİ                  | 16              | 1          |
| MANİSA                   | 15              | 1          |
| SAMSUN                   | 13              | 1          |
| ANTALYA                  | 11              | 1          |
| OTHER CITIES             | 105             | 7          |
| <b>TOTAL OF ENDUSTRY</b> | <b>1.423</b>    | <b>100</b> |

Sheet 2: Plastics Packaging  
Materials  
Manufacturers  
By Provinces

# PLASTICS PACKAGING MATERIALS PRODUCTION

Total production of plastic packaging materials, which was 3,3 million tons and USD billion of 12,9 in 2014, realized as 2,5 million tons and USD billion of 8,5 in the 9 months of 2015, by staying as the same level on unit base and decreasing by 14 % on value base with respect to the peers period of 2014.

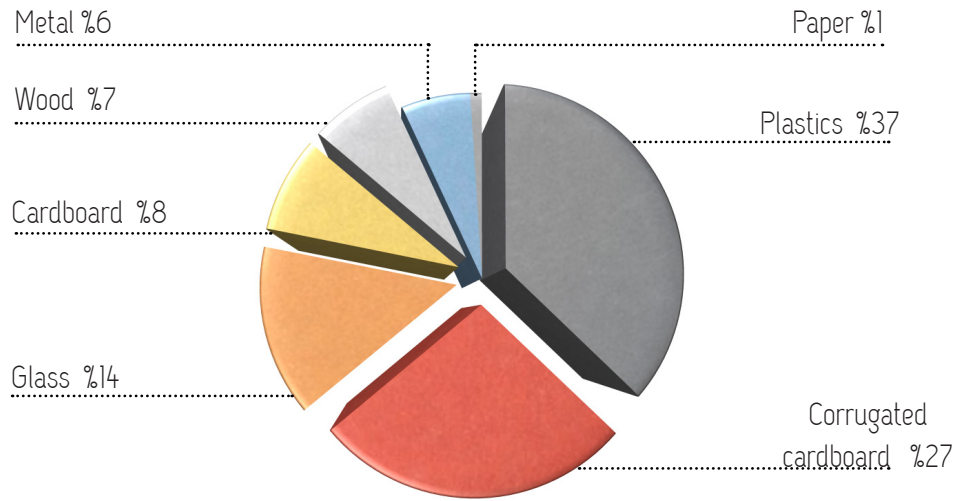
It is expected that the production will be 3.3 million tons and USD billion of 11,3 at the end of 2015 by staying at the same level on unit base and decreasing by % 12 on value base compared with 2014.



Form 1: Plastics Packaging Materials Production

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

# PLASTICS PACKAGING MATERIALS PRODUCTION



Source: ASD

Form 2: Packaging Industry Production by Materials

Plastics packaging foreign trade can be examined by 4 custom duties code numbers specified as follows.

| HS NO | THE MATERIALS GROUPS OF PLASTICS PACKAGING INDUSTRY             |
|-------|---|
| 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        |

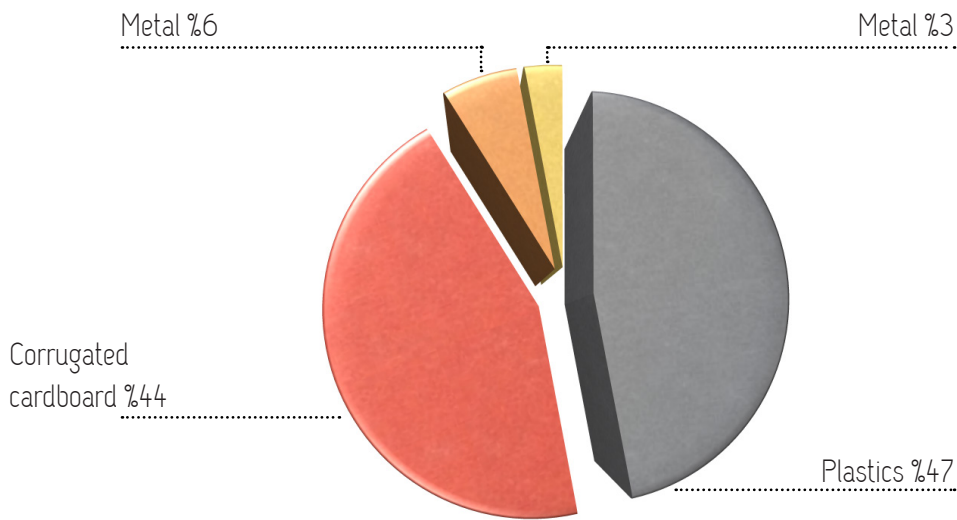
Source: TUIK

Sheet 3: The Materials Groups of Plastics Packaging Industry

# PLASTICS PACKAGING PRODUCT IMPORTS

Although Turkish plastics packaging is sufficient to meet the 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.



Source: ASD

Form 3: Share of Plastics Packaging Materials in Total Packaging Imports

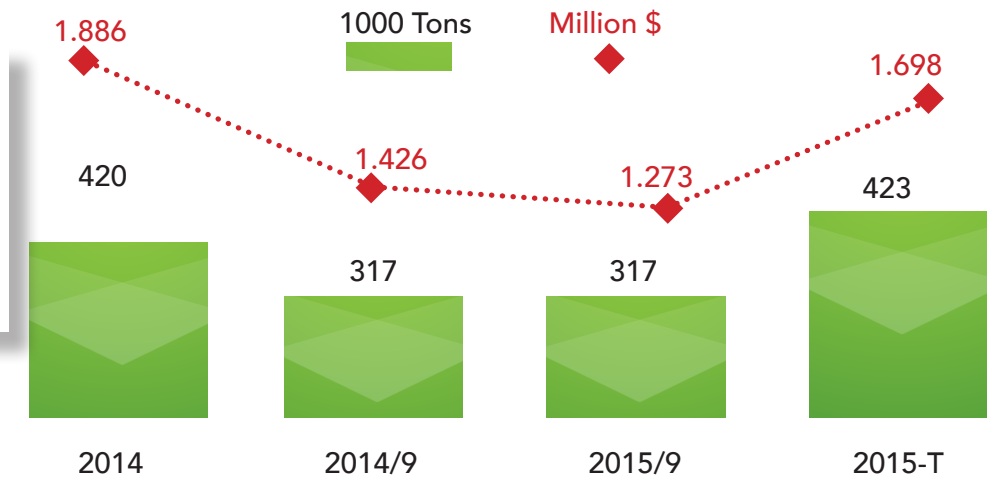
The imports of plastics packaging materials which was 420 thousand tons and USD billion of 1,9 in 2014, realized as 317 thousand tons and stood at USD bilion of 1,27 in the 9 months of 2015 by increasing % 0,02 in unit base and decreasing by % 11 on value base compared to peers period of 2014.

The imports are expected to be 423 thousand tons and USD billion of 1,7 at the end of 2015 increasing by % 1 on unit base and decreasing by % 10 on value base compared to 2014.



# PLASTICS PACKAGING PRODUCT IMPORTS

Form 4: Plastics  
Packaging  
Materials  
imports



The imports of all sub groups of plastics packaging except the materials in HS no 3923 increased by between % 0,1 - % 1,5 on unit base, however decreased by between % 8 - % 15 on value base, in the 9 months of 2015 compared to peers period of 2014.

Sheet 4: Plastics  
Packaging  
Materials Imports  
(Tons)

| HS NO | 2014  | 2014/9 | 2015/9 | 2015-T | INCREASE %<br>2015/2014<br>(9) | INCREASE %<br>2015/2014 |
|-------|-------|--------|--------|--------|--------------------------------|-------------------------|
| 3919  | 55    | 42     | 43     | 57.0   | 1.5                            | 2.2                     |
| 3920  | 252   | 192    | 192    | 256.0  | 0.1                            | 1.5                     |
| 3921  | 67    | 49     | 49     | 65.0   | 0.4                            | -2.7                    |
| 3923  | 46    | 35     | 34     | 46     | -0.8                           | 0.1                     |
| Total | 420.0 | 317    | 317    | 423    | 0.2                            | 0.8                     |

Source: TUIK

# PLASTICS PACKAGING MATERIALS IMPORTS

Sheet 5: Plastics Packaging Materials import (Million \$)

| HS NO        | 2014         | 2014/9       | 2015/9       | 2015-T       | INCREASE % 2015/2014 (9) | INCREASE % 2015/2014 |
|--------------|--------------|--------------|--------------|--------------|--------------------------|----------------------|
| 3919         | 339          | 258          | 236          | 314          | -8.6                     | -7.2                 |
| 3920         | 1.004        | 774          | 689          | 918          | -11.0                    | -8.6                 |
| 3921         | 298          | 205          | 188          | 250          | -8.4                     | -15.8                |
| 3923         | 246          | 189          | 161          | 215          | -14.7                    | -12.6                |
| <b>Total</b> | <b>1.886</b> | <b>1.426</b> | <b>1.273</b> | <b>1.698</b> | <b>-10.7</b>             | <b>-10.0</b>         |

Source: TUIK

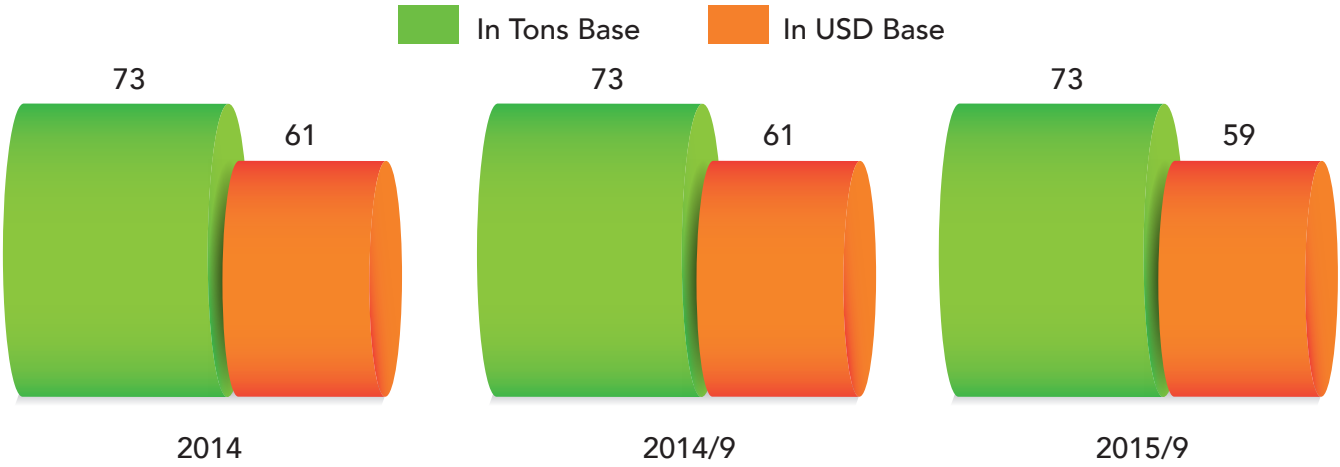
Located in the top 10 plastics packaging materials imports in the 9 months of 2015, are summarized in the following table, 58 % received on unit base and 54 % received on value basis. Imports in the first three rows: are the products described in 392043, 392020 and 391990 HS Codes.

| HS CODE      | DESCRIPTION   | TONS       | 1000 \$      | % - TONS     | % - \$       |
|--------------|---|------------|--------------|--------------|--------------|
| 392043100000 | Vinyl chloride polymer in the plate / sheet / film etc; plasticizer ratio => 6%, thickness = <1mm                   | 42         | 139          | 13.1         | 10.9         |
| 392020210019 | The propylene polymer of the sheet, plate, film, foil and strip; thick <= 0, 10 mm boryent                          | 31         | 141          | 9.8          | 11.1         |
| 391990003000 | Adhesive sheet, plate, strip, strip, film, foil; The addition polymerization product of> 20cm                       | 19         | 102          | 6.0          | 8.0          |
| 391990009000 | Adhesive sheet, plate, strip, strip, film, foil; Most of the others> 20cm   | 10         | 62           | 3.0          | 4.8          |
| 392010250000 | Other plastic plates, sheets, etc; Polyethylene, specific gravity <0.94, thick <0, 125mm                            | 15         | 49           | 4.7          | 3.9          |
| 392190600012 | Polyvinyl chloride plates, sheets, film, foil, strip (porous)   | 19         | 44           | 5.9          | 3.4          |
| 392010890000 | Other plastic plates, sheets, film etc; ethylene polymers, thick> 0, 125mm  | 14         | 41           | 4.4          | 3.2          |
| 392051000000 | Polymethyl methacrylic the plates, sheets, film, foil and strip (non-porous)  | 12         | 40           | 3.6          | 3.1          |
| 392069000000 | Other than polyester plates, sheets, film, foil and strip   | 14         | 36           | 4.4          | 2.8          |
| 392043100000 | Other plastic plate / sheet / film etc; Poly (ethylene terephthalate) from the first thickness = <0,35mm and others | 10         | 33           | 3.1          | 2.6          |
|              | <b>Total 10 Products</b>  | <b>184</b> | <b>685</b>   | <b>58.1</b>  | <b>53.8</b>  |
|              | <b>Others</b>   | <b>133</b> | <b>585</b>   | <b>41.9</b>  | <b>46.2</b>  |
|              | <b>TOTAL</b>  | <b>317</b> | <b>1.273</b> | <b>100.0</b> | <b>100.0</b> |

Sheet 6: The 10 Main Products in Total Plastics Packaging Materials Imports ( 2015 / 9 )

In 2014, plastic packaging products imports, shared % 73 of total plastics industry imports on unit base and received % 61 share on value base. But in the 9 months of 2015, its share declined to % 72 on unit base and % 59 on value base .

# PLASTICS PACKAGING MATERIALS IMPORTS



Form 5: Share of Plastics Packaging Materials in Total Plastics imports (%)

Plastic packaging products are imported from more than 80 countries. The share of top 10 import partners within total imports realized as % 71 on unit base and % 75 on value base in the 9 months of 2015.

5 major import partners in the 9 months of 2015 are Germany, China, S. Korea, Italy and France.

## 2014

## 2015/9

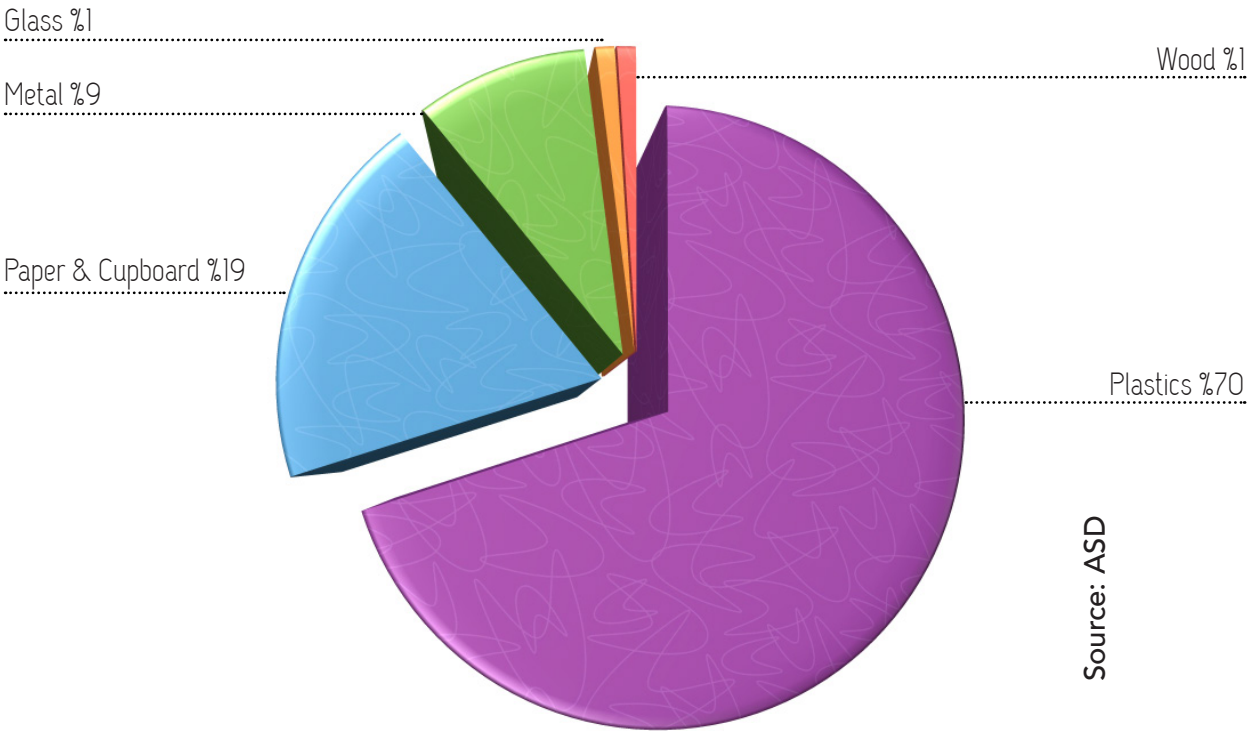
| Countries          | 2014       |              |              |              | 2015/9       |                        |              |              |
|--------------------|------------|--------------|--------------|--------------|--------------|------------------------|--------------|--------------|
|                    | 100 Tons   | Million \$   | 1000 Tons    | % Share      | Million \$   | 1000 Tons              | 100 Tons     | % Share      |
| Germany            | 69         | 383          | 16.6         | 20.5         | 244          | 52                     | 16           | 19           |
| China              | 102        | 321          | 24.3         | 17.2         | 235          | 78                     | 25           | 18           |
| S.Korea            | 30         | 172          | 7.2          | 9.2          | 105          | 27                     | 8            | 9            |
| Italy              | 34         | 160          | 8.1          | 8.6          | 111          | 22                     | 7            | 8            |
| France             | 15         | 87           | 3.6          | 4.7          | 55           | 11                     | 4            | 4            |
| UK                 | 9          | 76           | 2.1          | 4.1          | 50           | 6                      | 2            | 4            |
| Belgium            | 11         | 64           | 2.6          | 3.5          | 51           | 5                      | 2            | 4            |
| USA                | 7          | 63           | 1.7          | 3.4          | 46           | 9                      | 3            | 4            |
| Greece             | 11         | 39           | 2.7          | 2.1          | 27           | 8                      | 3            | 2            |
| India              | 10         | 35           | 2.4          | 1.9          | 24           | 5                      | 2            | 2            |
| Total 10 Countries | 299        | 1,400        | 71.3         | 75.0         | 949          | Total 10 Countries 224 | 71           | 75           |
| Others             | 120        | 466          | 28.7         | 25.0         | 324          | Others                 | 29           | 25           |
| <b>Total</b>       | <b>419</b> | <b>1,866</b> | <b>100.0</b> | <b>100.0</b> | <b>1,273</b> | <b>Total</b>           | <b>100.0</b> | <b>100.0</b> |

Sheet 7: 10 Major Import Partners For Plastics Packaging Materials

Source: TUIK

# PLASTICS PACKAGING MATERIALS EXPORTS

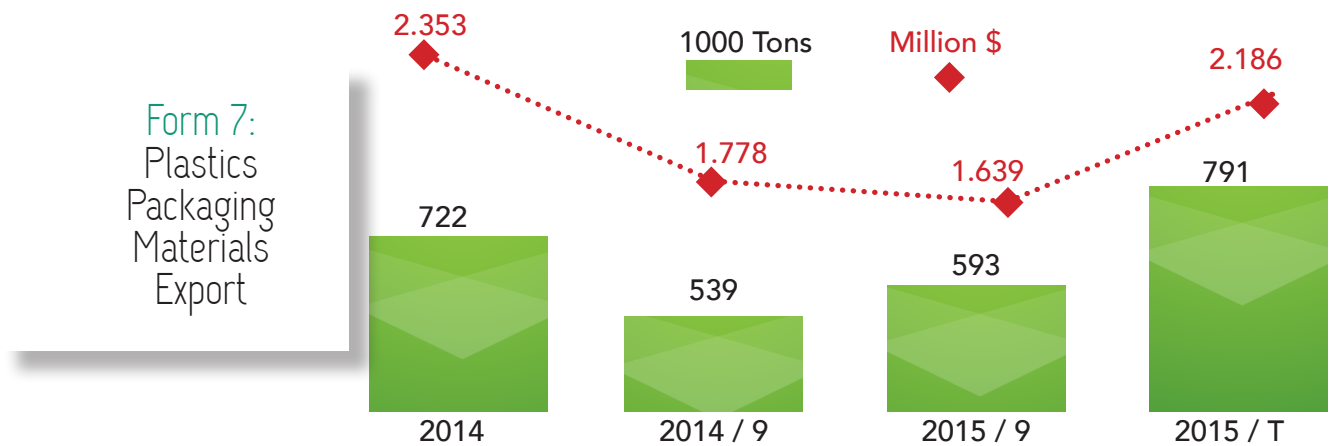
According to the ASD - Packaging Manufacturers Association records, The share of total exports of plastics packaging industry is 70 % in total packaging imports.



Form 6: Total Packing Materials Exports By Materials

Plastic packaging products exports in the 9 months of 2015 has amounted to 593 thousand tons and USD billion of 1.6 increasing by % 10 on unit base and decreasing by % 8 on value base, compared to peers period of 2014.

# PLASTICS PACKAGING MATERIALS EXPORTS



In the 9 months of 2015, compared to peers period of 2014, the exports of all plastics materials other than described in 3919 HS number, increased by between % 6 - % 16 on unit base and decreased by between % 3 - % 25 on value base.

At the end of 2015, exports of plastics packaging materials are estimated to be 791 thousand tons ve USD billion of 2,2 increasing by % 10 on unit base and decreasing by % 7 on value base compared with 2014.



# PLASTICS PACKAGING MATERIALS EXPORTS

Sheet 8: Plastics Packaging Materials Export (1000 Tons)

| HS NO | 2014 | 2014/9 | 2015/9 | 2015-T | INCREASE %<br>2015/2014<br>(9) | INCREASE %<br>2015/2014 |
|-------|------|--------|--------|--------|--------------------------------|-------------------------|
| 3919  | 21   | 15     | 14     | 19     | -9.1                           | -10.3                   |
| 3920  | 302  | 228    | 246    | 328    | 7.5                            | 8.4                     |
| 3921  | 121  | 87     | 93     | 123    | 5.9                            | 2.2                     |
| 3923  | 278  | 208    | 241    | 321    | 16.1                           | 15.4                    |
| Total | 722  | 539    | 593    | 791    | 10.1                           | 9.5                     |

Source: TUIK

Sheet 9: Plastics Packaging Materials Export (Million \$)

| HS NO | 2014  | 2014/9 | 2015/6 | 2015-T | INCREASE %<br>2015/2014<br>(6) | INCREASE %<br>2015/2014 |
|-------|-------|--------|--------|--------|--------------------------------|-------------------------|
| 3919  | 148   | 114    | 85     | 114    | -25.3                          | -23.4                   |
| 3920  | 968   | 739    | 674    | 899    | -8.8                           | -7.1                    |
| 3921  | 420   | 309    | 280    | 374    | -9.3                           | -11.1                   |
| 3923  | 816   | 615    | 600    | 799    | -2.6                           | -2.1                    |
| Total | 2.353 | 1.778  | 1.639  | 2.186  | -7.8                           | -7.1                    |

Source: TUIK

The share of plastics packaging products in total plastics exports which was 45 % on unit base and % 47 on value base in 2014 increased to % 51 in on unit and value bases in the 9 months of 2015.

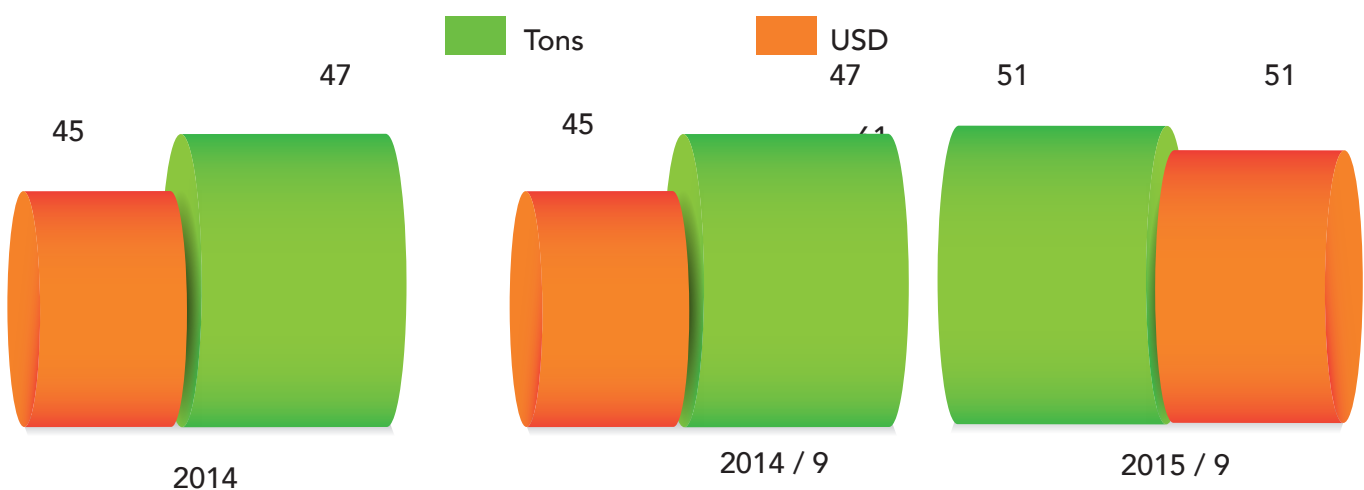
# PLASTICS PACKAGING MATERIALS EXPORT

| HS CODE      | DESCRIPTION   | 1000 TONS  | MILYON \$    | % - TONS     | % - \$       |
|--------------|---|------------|--------------|--------------|--------------|
| 392321000019 | Sacks and bags used in other places (including cones); which are polymers of ethylene             | 61         | 168          | 10.3         | 10.2         |
| 392020210019 | The propylene polymer of the sheet, plate, film, foil and strip; thick <= 0, 10 mm boryent        | 60         | 140          | 10.1         | 8.6          |
| 392330100019 | Other bottles, flasks, etc; volume = <2 liters  | 72         | 118          | 12.1         | 7.2          |
| 392310000000 | Plastic boxes, cases, crates and so on.   | 42         | 108          | 7.0          | 6,6          |
| 392020210011 | The propylene polymer of the sheet, plate, film, foil and strip; bold <= 0, 10 mm boryent printed | 17         | 85           | 2.9          | 5.2          |
| 392010230000 | Plastic film and so on; Polyethylene, specific gravity <0, 94, bold <0, 125mm                     | 15         | 58           | 2.5          | 3,5          |
| 392010250000 | Other plastic plates, sheets, etc; Polyethylene, specific gravity <0.94, thick <0, 125mm          | 15         | 56           | 2.6          | 3.4          |
| 392329900019 | Sacks and bags (including cones) of other plastics  | 16         | 55           | 2.7          | 3.3          |
| 392350900000 | Stoppers and other closures materials   | 15         | 54           | 2.5          | 3.3          |
| 392190600019 | Other joining plates of the polymerization products, sheets, film, etc. (non-porous)              | 10         | 45           | 1.6          | 2.7          |
|              | <b>Total 10 Products</b>  | <b>322</b> | <b>887</b>   | <b>54.4</b>  | <b>54.1</b>  |
|              | <b>Others</b>   | <b>271</b> | <b>753</b>   | <b>45.6</b>  | <b>45.9</b>  |
|              | <b>TOTAL</b>  | <b>593</b> | <b>1.639</b> | <b>100.0</b> | <b>100.0</b> |

Source: TUIK

Sheet10: The 10 Main Products in Total Plastics Packaging Materials Exports (2015 / 9)

The share of plastics packaging products in total plastics exports which was 45 % on unit base and % 47 on value base in 2014 increased to % 51 in on unit and value bases in the 9 months of 2015.



Form 8: Plastics Materials Exports in Total Plastics Exports (%)

Turkey exports plastic packaging products to more than 150 countries, and 10 major export partners had 48 % share on unit and value base in the 9 months of 2015. In this period, Iraq, UK, Germany, France, and Italy kept its status of top 5 markets, to which Turkey exported plastic packaging products.

## 2014

## 2015/9

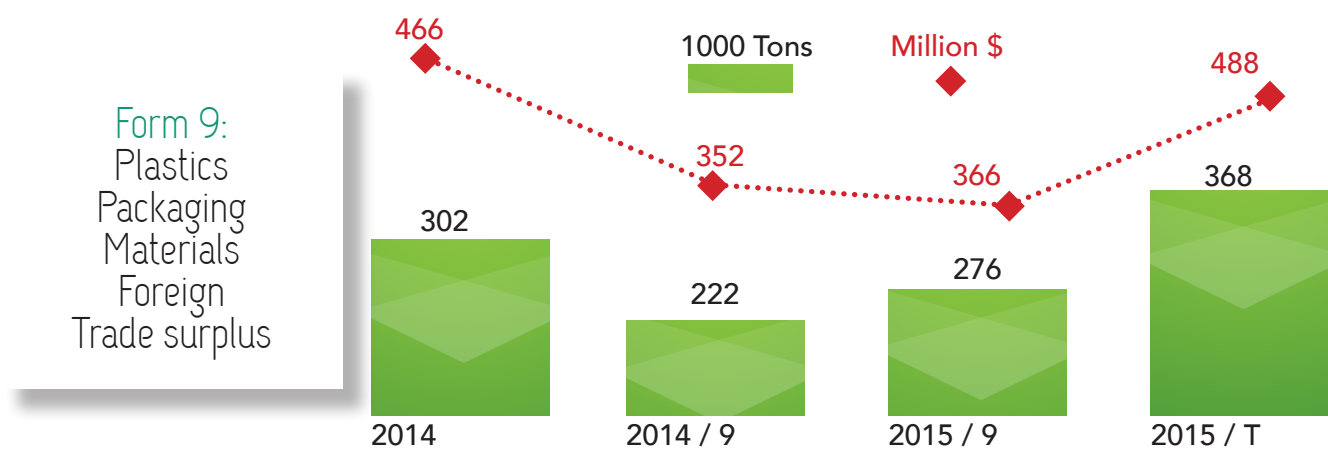
| Countries          | 1000 Tons  | Million \$   | %Share Value | % Share Value | Countries          | 1000 Tons  | Million \$   | %Share Value | % Share Value |
|--------------------|------------|--------------|--------------|---------------|--------------------|------------|--------------|--------------|---------------|
| UK                 | 59         | 177          | 8.1          | 7.5           | Iraq               | 66         | 131          | 11           | 8             |
| Germany            | 47         | 167          | 6.5          | 7.1           | UK                 | 46         | 125          | 8            | 8             |
| Iraq               | 67         | 159          | 9.3          | 6.7           | Germany            | 42         | 125          | 7            | 8             |
| France             | 28         | 111          | 3.9          | 4.7           | France             | 22         | 77           | 4            | 5             |
| Iran               | 19         | 97           | 2.7          | 4.1           | Italy              | 25         | 68           | 4            | 4             |
| Italy              | 32         | 96           | 4.4          | 4.1           | Israel             | 24         | 58           | 4            | 4             |
| Netherland         | 21         | 86           | 2.9          | 3.7           | Netherland         | 16         | 55           | 3            | 3             |
| Azerbaijan         | 24         | 80           | 3.3          | 3.4           | Iran               | 12         | 54           | 2            | 3             |
| Rusya              | 17         | 73           | 2.4          | 3.1           | Azerbaijan         | 15         | 44           | 3            | 3             |
| Israel             | 26         | 70           | 3.6          | 3.0           | Romania            | 15         | 43           | 3            | 3             |
| Total 10 Countries | 339        | 1.115        | 47.0         | 47.4          | Total 10 Countries | 283        | 780          | 48           | 48            |
| Others             | 383        | 1.238        | 53.0         | 52.6          | Others             | 310        | 859          | 52           | 52            |
| <b>Total</b>       | <b>722</b> | <b>2.353</b> | <b>100.0</b> | <b>100.0</b>  | <b>Total</b>       | <b>597</b> | <b>1.639</b> | <b>100.0</b> | <b>100.0</b>  |

Sheet 11: 10 Major Export Partners

# BALANCE OF TRADE IN PLASTIC PRODUCTS

Turkey has foreign trade surplus in terms of unit and value in total foreign trade of plastic packaging products. Having been 276 thousand tons and USD million of 366 in the 9 months of 2015, the foreign trade surplus of plastic packaging products increased by 24 % on unit base and % 4 on value base compared to the peers period of 2014.

Foreign trade surplus is expected to be 368 thousand tons and USD million of 488 at the end of 2015 increasing by % 22 on unit base and % 5 on value base compared to 2014.



## FOREIGN TRADE BALANCE IN PLASTIC PACKAGING PRODUCTS

Sheet 12: Foreign Trade Equilibrium in Plastics Packaging Industry (1000 Tons)

| HS NO | 2014 | 2014/9 | 2015/9 | 2015-T | INCREASE % 2015/2014 (9) | INCREASE % 2015/2014 |
|-------|------|--------|--------|--------|--------------------------|----------------------|
| 3919  | -35  | -26    | -28    | -38    | 8                        | 10                   |
| 3920  | 50   | 37     | 54     | 72     | 46                       | 43                   |
| 3921  | 54   | 39     | 44     | 58     | 13                       | 8                    |
| 3923  | 233  | 173    | 207    | 276    | 19                       | 18                   |
| Total | 302  | 222    | 276    | 368    | 24                       | 22                   |

Source: TUIK

Sheet 13: Foreign Trade Equilibrium in Plastics Packaging Industry (Million \$)

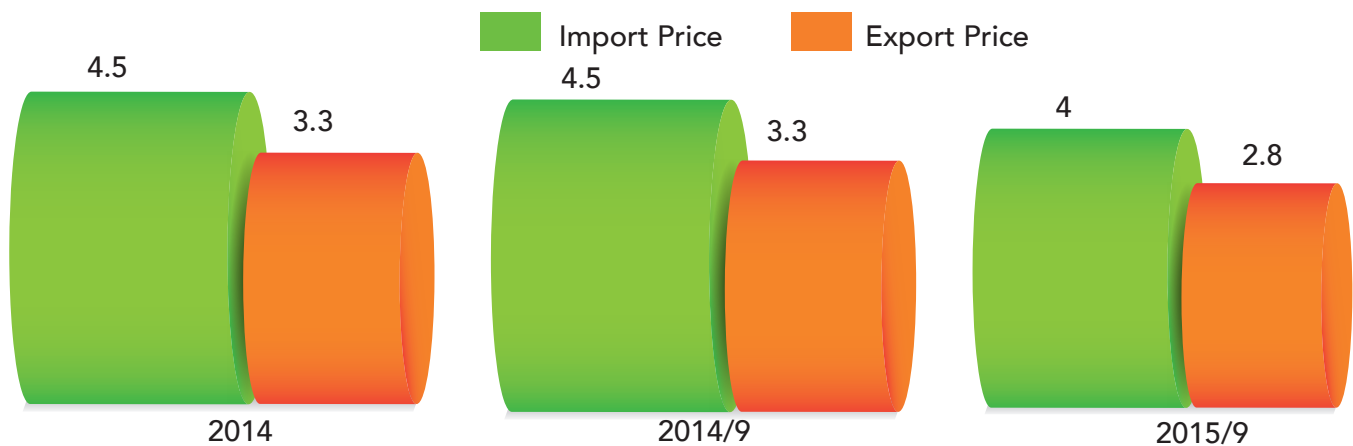
| HS NO | 2014 | 2014/9 | 2015/9 | 2015-T | INCREASE % 2015/2014 (9) | INCREASE % 2015/2014 |
|-------|------|--------|--------|--------|--------------------------|----------------------|
| 3919  | -190 | -144   | -151   | -201   | 5                        | 5                    |
| 3920  | -36  | -35    | -14    | -19    | -59                      | -47                  |
| 3921  | 123  | 104    | 92     | 123    | -11                      | 0                    |
| 3923  | 570  | 427    | 438    | 585    | 3                        | 2                    |
| Total | 466  | 352    | 366    | 488    | 4                        | 5                    |

Source: TUIK

# 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 realized as 4,0 USD / Kg and average export unit price 2,8 USD / Kg for plastic packaging goods in the 9 months of 2015. The import prices declined by 11 % and export price decreased by 16 % compared to the peers period of 2014.



Form 10: Unit Foreign Trade Prices of Packing Materials(\$/Tons)

It is seen that, the unit import and export prices of all plastics packaging materials declined in the 9 months of 2015.



## FOREIGN TRADE PRICES IN PLASTIC PACKAGING PRODUCTS

Sheet 14: Unit Foreign Trade Prices in Turkish Plastics Packaging Materials (\$/Kg)

| HS NO   | UNIT IMPORT PRICES |        |            | UNIT EXPORT PRICES |        |            |
|---------|--------------------|--------|------------|--------------------|--------|------------|
|         | 2014/9             | 2015/9 | INCREASE % | 2014/9             | 2015/9 | INCREASE % |
| 3919    | 6.2                | 5.5    | -10        | 7.40               | 6.08   | -18        |
| 3920    | 4.0                | 3.6    | -11        | 3.23               | 2.74   | -15        |
| 3921    | 4.2                | 3.8    | -9         | 3.54               | 3.03   | -14        |
| 3923    | 5.5                | 4.7    | -14        | 2.96               | 2.49   | -16        |
| Avarage | 4.5                | 4.0    | -11        | 3.3                | 2.76   | -16        |

Source: TUIK

# 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.

|  | 2014  | 2014/9 | 2015/9 | 2015 /T | % INCREASE<br>2015/2014 (9) | % INCREASE<br>2015/2014 (T) |
|--|-------|--------|--------|---------|-----------------------------|-----------------------------|
| <b>PRODUCTION</b>                        | 3.321 | 2.533  | 2.512  | 3.350   | -0.8                        | 0.9                         |
| <b>IMPORT</b>                            | 420   | 317    | 317    | 423     | 0.2                         | 0.8                         |
| <b>EXPORT</b>                            | 722   | 539    | 593    | 791     | 10.1                        | 9.5                         |
| <b>DOMESTIC CONSUMPTION</b>              | 3.019 | 2.310  | 2.236  | 2.982   | -3.2                        | -1.2                        |
| <b>FOREIGN TRADE DEFICIT / SURPLUS</b>   | 302   | 222    | 276    | 368     |                             |                             |
| <b>EXPORT / PRODUCTION (%)</b>           | 22    | 21     | 24     | 22      |                             |                             |
| <b>IMPORT / DOMESTIC CONSUMPTION (%)</b> | 14    | 14     | 14     | 14      |                             |                             |
| <b>EXPORT / IMPORT (%)</b>               | 172   | 170    | 187    | 187     |                             |                             |

Sheet 15: General Supply and Demand Equilibrium in Plastics Packaging Materials Industry  
( 1000 Tons )

## SUPPLY AND DEMAND EQUILIBRIUM FOR 2015

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 % 187

|  | 2014   | 2014/9 | 2015/9 | 2015 /T | % INCREASE<br>2015/2014 (9) | % INCREASE<br>2015/2014 (T) |
|--|--------|--------|--------|---------|-----------------------------|-----------------------------|
| <b>PRODUCTION</b>                        | 12.867 | 9.877  | 8.510  | 11.347  | -13.8                       | -11.8                       |
| <b>IMPORT</b>                            | 1.886  | 1.426  | 1.273  | 1.698   | -10.7                       | -10.0                       |
| <b>EXPORT</b>                            | 2.353  | 1.778  | 1.639  | 2.186   | -7.8                        | -7.1                        |
| <b>DOMESTIC CONSUMPTION</b>              | 12.400 | 9.525  | 8.144  | 10.859  | -14.5                       | -12.4                       |
| <b>FOREIGN TRADE DEFICIT / SURPLUS</b>   | 466    | 352    | 366    | 488     |                             |                             |
| <b>EXPORT / PRODUCTION (%)</b>           | 18     | 18     | 19     | 19      |                             |                             |
| <b>IMPORT / DOMESTIC CONSUMPTION (%)</b> | 15     | 15     | 16     | 16      |                             |                             |
| <b>EXPORT / IMPORT (%)</b>               | 125    | 125    | 129    | 129     |                             |                             |

Sheet 16: General Supply and Demand Equilibrium in Plastics Packaging Materials Industry  
( USD Million )

## PLASTIC PACKAGING END OF YEAR 2015 EXPECTATIONS

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At the end of 2015; It is expected that production of plastics packaging materials to increase % 0,9 imports by % 0,8 exports by % 9,5 while domestic consumption decline by % 1,2 on unit base compared to 2014.

On the other hand, in value base; It is expected that, the production to decline by % 11,8 imports by % 10 exports by % 7,1 and domestic consumption by % 12,4.

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 enters 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.

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