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PRESENT STATUS AND FUTURE PLANS OF THE
DEVELOPMENT OF THE SYNTHETIC FIBRE INDUSTRY
IN TURKEY^{1/}

by

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INTRODUCTION

During the planned development period in Turkey, while tremendous efforts have been made in all sections of the economy, the efforts in textile industry have been directed to meet the domestic demand as well as to be able to compete in external markets. The synthetic fiber needs of the industry has not been neglected, on the contrary it has been developing in parallel with the needs of the textile industry and further investments in this sector shall be continued in the 3 rd Five Year Development Plan (1973-1977)

The developing synthetic fibers industry in Turkey, has been gaining weight on the manufacture of the following four products.

1. Polyester
2. Polyamide
3. Acrylic
4. Cellulosic

In this report, production and consumption projections of these fibers as well as procurement of their raw materials are summarized.

In Table I. the estimate of the production capacity and consumption of man-made fibers in Turkey are shown. Later on, important fibers which are needed and produced in our country shall be studied.

SYNTHETIC FIBERS PRODUCTION CAPACITY AND CONSUMPTION FORECASTS IN TURKEY

(metric ton)

FIBER TYPE	1973		1974		1975		1976		1977		1978		1979		1980		
	Capacity	Consumption	Cap.	Cons.	Cap.	Cons.	Cap.	Cons.	Cap.	Cons.	Cap.	Cons.	Cap.	Cons.	Cap.	Cons.	
POLYESTER	Staple Fiber	15,000	17,500	17,950	32,230	23,000	53,460	28,340	53,460	33,790	53,460	40,50	53,460	46,570	53,460	53,550	
	Filament	8,030	7,000	9,300	25,700	41,500	35,000	14,000	35,000	18,000	35,000	23,000	35,000	28,500	35,000	34,000	
	Total	23,030	22,410	30,800	27,270	57,930	34,500	85,460	39,460	51,790	89,460	63,050	89,460	75,070	89,460	87,550	
	Staple Fiber	3,000	2,620	2,967	2,190	3,450	3,870	2,190	2,190	4,220	2,190	4,700	5,000	2,190	5,000	5,420	
POLYAMID	Filament	10,110	8,600	9,200	13,850	9,900	12,400	18,425	14,000	14,000	18,425	11,700	12,500	12,500	12,500	12,500	
	Total	13,140	11,220	12,600	16,740	13,350	19,425	20,165	15,290	15,290	23,650	16,400	17,500	17,500	17,500	18,000	
	Staple Fiber	9,600	14,760	12,000	16,820	17,620	23,390	47,200	57,720	27,230	57,200	30,970	57,200	34,800	57,200	40,000	
	Filament	-	360	539	-	820	1300	-	1580	-	-	1720	-	1900	-	2,000	
OTHERS	Total	-	200	250	-	290	300	-	310	-	320	-	330	-	330	350	
	Filament	-	560	589	-	1100	1600	-	1890	-	2080	-	2230	-	2420	2420	
	Staple Fiber	23,600	33,160	32,500	38,270	65,420	46,900	42,250	56,900	412,950	66,898	77,460	112,950	80,270	101,000	101,000	
	Filament	18,100	15,800	22,900	40,750	39,550	24,690	49,225	54,425	29,310	57,425	35,020	64,330	64,330	47,750	47,750	
TOTAL SYNTHETICS	Total	45,750	49,960	55,400	57,026	104,970	68,580	152,075	27,600	167,275	96,200	172,580	172,580	229,600	229,600	248,250	
	Staple Fiber	8,000	11,000	8,000	13,730	8,000	16,000	18,000	21,000	10,210	21,000	22,320	24,400	24,400	26,700	26,700	
	Viscose Conventional Filament	-	8,000	-	8,900	-	9,700	10,200	-	10,600	-	11,500	-	11,500	-	12,300	12,300
	Total	8,000	19,000	8,000	22,530	8,000	25,700	28,200	30,810	30,810	32,320	33,320	35,900	35,900	39,000	39,000	

POLYESTER STAPLE and FILAMENT

The needs of textile industry in the country as far as polyester staple and filaments are concerned shall be met by the factories which are planned until 1975. The plants which are planned after 1975 shall be able to meet the increasing demand as well as creating an export potential for polyesters.

Today, it is estimated that the consumption of polyester staple in 1980 shall reach 53.550 tons per year. However, as a cotton growing country, the textile industry in Turkey has directed its attention to using the cotton grown in the country to produce yarn. Because of the large population of Turkey, weaving industry within the textile industry is also developing very rapidly. Therefore this general trend could make the real consumption of polyester staple exceed the above consumption estimate in 1980.

POLYAMIDE STAPLE AND FILAMENT

The production of polyamide staple and filament (Nylon 6) of Turkey is thought to be of sufficient level to meet the domestic needs. The development of production of this staple and filament shall be affected tremendously after the production of caprolactam by "Petkim" in 1976.

Then, the excess production, as can be seen from the table, either has to be exported or domestic usage of the staple and filament should be expanded in other fields.

ACRYLIC FIBERS

As it can be observed from Table I the investments planned in the country shall be able to meet the consumption in 1980.

CELLULOSE FIBERS

For the moment, now 8000 ton/year capacity viscose staple plant is operational but already there are some efforts being made for another 13,000 tons/year plant.

CONCLUSION

To meet the needs of textile industry in the country, some important investments have been made to produce synthetic fibers and these investments have been expanding continuously.

As it is known, it is more profitable to produce staples and filaments from polymer chips in the beginning. Therefore, in our country, the private sector directed its investments to this end. However, today synthetic fiber producers are permitted to invest in this industry only if they also include polymerisation plant as well; and quite a number of investments have been made in this direction. Because the synthetic fiber raw materials require large petro-chemical investment, the investment in the raw materials production has been lacking. Therefore, with the exception of polyamide fiber (Nylon 6) raw materials, today the industry is dependent upon external sources.

Today, the problems of the industry may be summarized as follows :

- 1- Both the government and the private sector have planned investments to produce DMT and PTA as polyester raw materials. The erection of these plants, however, is closely related to the establishment of the II, Petrochemical complex . A large part of the production capacity of 1980, approximately 60 % shall be belong to a large producer; the other 40% of the production shall be distributed in various industrial parts of the country approximately in lots of 5.000 tons/year capacities. However, it is not known which of the raw materials, DMT or PTA, is more suitable yet.

The last proposal in this matter was that the larger producer should invest in 60.000 tons/year DMT plant, and depending on the material balance of the II Petrochemical complex, a suitable PTA plant should be established. However, there are serious problems in this area due to the last economic crisis in the world.

- 2- The raw material of Acrylic fiber, acrylonitrile, is not produced in Turkey and there have been no plans in this direction either. For the moment, discussion is centered around whether the plant to produce this raw material should be included in the II, Petrochemical complex or not. On the other hand, the procurement of the propylene for the acrylonitrile plant is dependent upon the completion of the II, Petrochemical complex. The acrylonitrile plant erection may be started in parallel with the II, Petro-

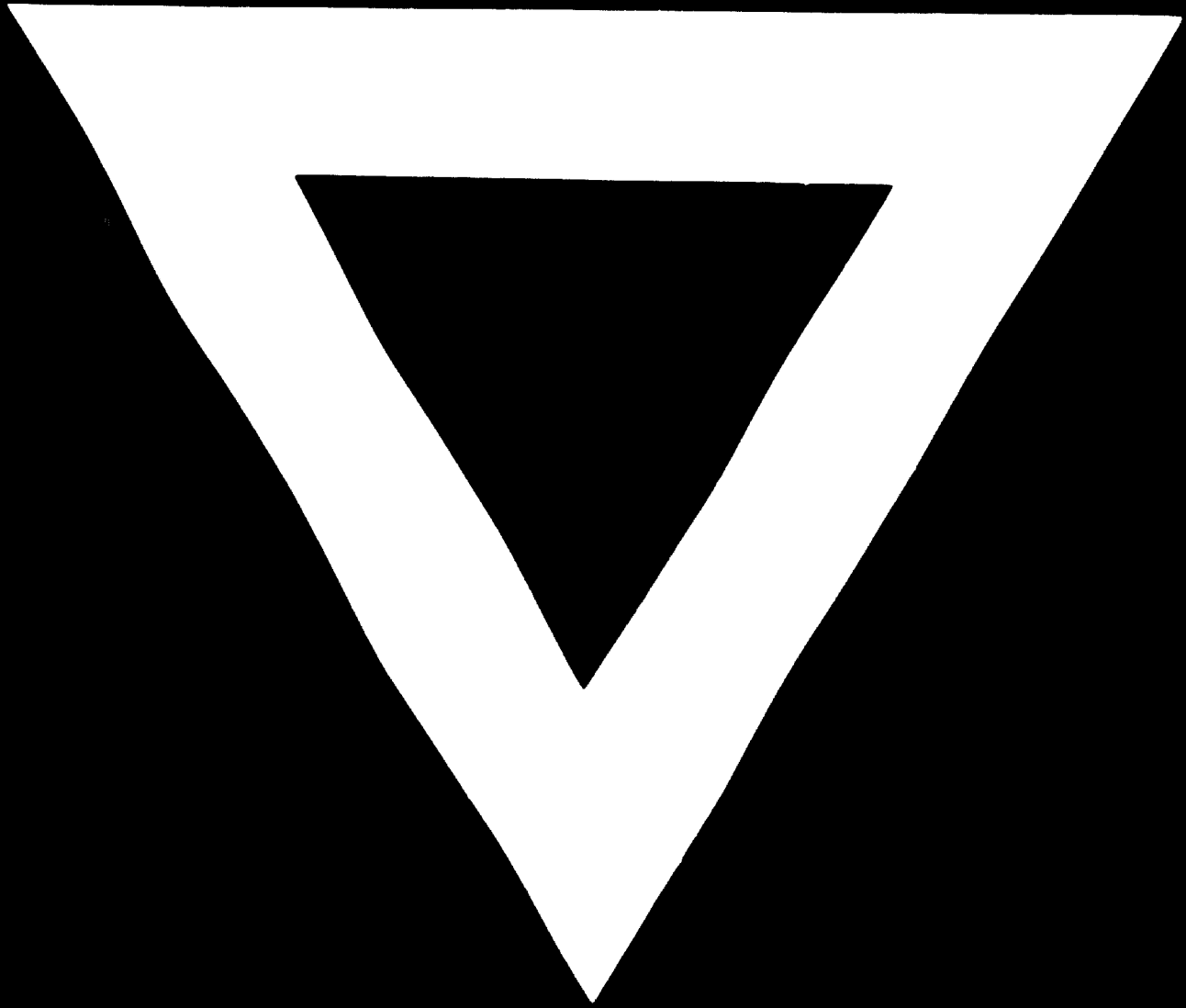
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chemical complex ; however, if the II, Petrochemical complex is delayed, then the problem of importing propylene shall arise. In this case there is the problem whether the plant can be operated profitably.

- 3- In case of cellulose viscose fibers there is a problem of procurement of the raw material in addition to a large plant investment. Turkey, as a cotton growing country, has a pulp producing plant which uses cotton linters. Especially in last few years the domestic price of the linters pulp became cheaper than the wood pulp. Therefore, linters cellulose gained advantage over the wood pulp in viscose industry. However, at this point the procurement of the necessary know-how to produce viscose fiber from linters pulp has not been possible. Thus there is a definite need to obtain aid and research opportunities from external sources in this area.

If the problem of procurement of the raw material (pulp) can be solved there is a great chance of the development of cellulose fibers industry in Turkey.





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