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Seminar on Plastics Applications  
in Developing Countries  
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THE PRESENT STATUS AND PROSPECTS FOR  
DEVELOPMENT OF THE PLASTICS INDUSTRY  
AND TECHNICAL ASSISTANCE

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## I. Introduction

### Role of Plastics Industry:

1. Plastics materials are now well established in Jordan, not as a cheap substitute or as novelties but alongside other materials such as metals and woods. There is no doubt the usage of plastics materials will continue to increase rapidly because of the increased market for present applications and because of their development in new outlets.
2. In some outlets such as household articles, table and kitchen utensils, hoses and toys, plastics are well established. In other outlets such as building materials and packaging items plastics are only just beginning to replace more traditional materials.

### Investment in Plastics Industry:

3. According to the industrial survey conducted early 1972 by "Thomas Liner Co. S.A.", there were about 7 major plastics plants producing various items mainly household articles, table and kitchen utensils, plastic shoes, polyethylene bags, artificial sponges, etc., employing about 200 labourers.

According to the records of the Ministry of National Economy, in 1971 five licenses were granted to establish new plastic factories.

4. In 1972, 13 licenses were granted to produce various plastic items such as: insulated electric wires, plastic adhesives, polypropylene bags, plastic shoes, sandals, plastic granules and artificial sponges.

5. In 1973 nine licenses were granted to produce: advertising items, dairy and other foodstuff packaging, plastic pipes, plastic tiles, sliding doors and vegetables boxes.

## II. Production of plastics

### Raw Materials:

6. Total imports of plastics raw materials and articles thereof amounted to about 3200 tons (value = JD. 700,000) in 1970 and to 2600 tons (value = JD. 550,000) in 1971. Main items imported in 1970 are shown in Table (I).

(Quantities are net and values CIF Jordan)

### 7. Equipment

7. According to the industrial survey conducted early 1972, the cost of equipment in the main plastic plants is as follows:

JD. 18000,	17000,	29000
18000,	37000,	30000
20000,	37000	

Table (I)

Imports of Plastic raw materials and articles thereof

Quantity in tons and Value in U.S.D.

Quantities are (net) and values (CIF) border Clearing Posts

Item	Qty.	Value
Liquids, lumps, pieces and sheets for plastic industry	270	44000
Liquids, lumps, pieces and sheets from the products of polymerisation and copolymerisation used in industries	1,470	182000
Polymerisation and copolymerisation products, other than liquids, pastes, blocks, lumps, granules, flakes and powders for industrial use and other than transparent flakes (rolls) of polyethylene for industry of plastic bags.	200	25000
Dispersed cellulose	190	50000
Liquids, pastes, blocks, lumps, granules, flakes and powders for industrial use	80	11000
Formika	335	90000
Household articles of plastic (for example pails, jars and similar articles)	52	18000
Clothes and parts thereof made out of plastic materials	20	17000
Other articles of plastic	450	210000

### Main Products:

3. The main products made by plastic fabricators in Jordan are: construction, furniture, shoes, garden hose, toys, polyethylene bags, window shutters, electric conduits and fittings.

### Projections:

9. From the licenses granted to plastic fabricators by the Ministry of National Economy during the first quarter of 1973 and during the second half of 1972, it is clear that plastics are expected to replace some of the traditional materials.
10. Plastic pipes: According to Phase I of the "Feasibility Study for Glass, building material and Component Industry" conducted by "Windell-Wecker Company" U.S.A. It is believed that as much as 50% of the imported steel pipe can be replaced by plastic pipes at less cost for materials and labour for installation. This would result in considerable saving of foreign exchange which could amount to about JD. 125000 per year. Jordanian manufacturers now, can make pipe in diameters as large as 1 1/2 inch (38mm), although irrigation projects require diameters up to 3 inch (76mm). A phase II of the study is contracted with the same firm to cover the production of injection-molded fittings for plastic pipe, pipe in diameters between 1" and 2 inch, and other plastic products which would reduce import of finished products and utilize existing facilities more efficiently. Some export potential may exist for fittings to other Middle East nations which manufacture pipe but which do not produce fittings. The consultant recommends that in order to help insure the most efficiency in both production and marketing, the new products should be made by the expansion of current enterprises.



11. Foamed polystyrene: Demand for containers of fruits and vegetables, wood-boxes are used for the same thing, and it proved to be more economical to use foamed polystyrene packing, thus a license was granted to establish a new plastics factory to establish a new plastic factory to produce foamed polystyrene boxes for fruits and vegetables and for other sensitive industrial products like the batteries. The building for this plant is almost finished and the machines are expected to arrive to the site in Oman on August this year. This plant will also produce insulation material for construction industry.
12. Melamine kitchen wares: A license was granted in 1972 by the Ministry of National Economy to produce melamine products. This hopefully will start production within the coming few months.
13. Containers: A license was granted in the first quarter of this year (1973) to produce plastic containers for dairy products and other food stuff (capital JD. 1500).
14. Agricultural uses: The Ministry of Agriculture has conducted many demonstrations using polyethylene sheets in building tunnels and greenhouses. As a result of the success of these experiments, the farmers started to accept the idea and a reasonable demand will be foreseen for polyethylene rolls, and subsequently expansion licenses were recently granted to produce more polyethylene rolls. Moreover a license was recently granted to produce polypropylene bags. (Capital JD. 50,000).

### III. Consumption of Plastics

15. Practically the whole production of the local plastics factories is consumed in the local market, except for a small quantity exported to the neighbouring Arab countries.
16. Total exports of plastic materials amounted to about 300 tons (value = JO 32000) in 1970 and to 515 tons (value = 85,000) in 1971. (Quantities are net, and values are FOB)
17. As seen from the projections, it is expected that consumption of plastic products will increase considerably when the new plastic plants start production of such items as boxes for packaging of fruits and vegetables.

### IV. Technical Assistance Required

#### Problems of Plastics Industry:

18. Lack of good moulds: production of suitable moulds is expensive and technically difficult in the absence of the know-how, heat treatment and other special equipments. The shortage of skilled mould makers and designers has been a major problem.
19. Machine over capacity: Overcapacity is prevalent in most Jordanian industries and specially in plastics machines.
20. Lack of export promotion and facilities: The local market is very small and limited, and an export outlet is deemed essential.
21. Lack of know-how and training.

#### Fields of Technical Assistance:

22. Establishing mould making facilities, equipped with trained mould makers and mould-making shop.

23. Marketing study in Jordan and an export country  
possibilities.
24. A survey is needed covering all existing plastic plants;  
analysis of the results and recommending improvements.
25. Help in implementing the findings of the consultants  
(Swindell-Dressler Company) who are conducting the feasibility  
study.





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