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PESTICIDES INDUSTRY IN IRAN<sup>1/</sup>

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## INTRODUCTION

1. During the Third and Fourth Five Year Plans the Government of Iran had intensified their efforts towards agricultural development programmes. High yielding seeds are being sown on large tracts of cultivated land, larger areas have been covered by irrigation facilities, and greater emphasis has been laid on adoption of plant protection measures. Consequently the consumption of pesticides formulations has been rising.

2. Until 1965 all such formulations were being imported; the first factory to manufacture these products was established in Tehran during 1965.

3. The fast expanding demand for the formulations prompted the establishment of many other units in the last few years. The indigenous production of the formulations increased eleven-fold in 1971 over that of 1966. In terms of value the increase during the corresponding period has been nearly eighteen-fold. The larger increase in terms of value is partly attributed to the rising trend in prices.

## II. GROWTH OF PESTICIDE FORMULATION INDUSTRY

4. The growth of this industry and its geographical distribution in Iran is depicted in Table I.

Table I

## Growth of Pesticides Formulation Industry in Iran

Location	Number of Units Established						Total
	1966	1967	1968	1969	1970	1971	
Tehran	1	1	3	4	1	1	11
Gorgan						1	1
Iran	1	1	3	4	1	2	12

5. Even though the demand for the formulations is widespread in the country, the industry is concentrated in Tehran.

1. Production Capacity

6. The installed capacity in 1971 on single shift basis separately for agricultural and domestic types is shown in Table II.

Table II

Installed Capacity for Pesticides Formulations  
(Year 1971 - Figures in metric tons)

Location	FORMULATIONS		Total
	For agricultural use	For domestic use	
Tehran	6000	1000	7000
Gorgan	1000	-	1000
Iran	7000	1000	8000

7. It will be seen that 57.5 per cent of the installed capacity for the manufacture of the formulations is licensed in Tehran. The actual installed capacity however, is higher than the level shown in Table III. In addition some of the units engaged in formulations for agricultural use have expanded their production capacity and have yet to obtain license for the additional capacity. It has been informally gathered that the existing units have capacity to produce 8000 tons of formulation and it is possible to increase the production up to 12000 tons a year.

## 2. Production

8. Indigenous production figures for the past six years separately for agricultural and domestic type formulations are given in Table III.

Table III

### Production of Pesticide Formulations in Iran

(Quantity in tons)

Year	Formulations for			Percentage increase over 1966
	Agricultural use	Domestic use	Tot.	
1966	398	..	398	..
1967	700	40	740	86
1968	763	80	843	112
1969	1842	100	1942	388
1970	2422	614	3036	663
1971	3654	810	4464	1022

## 3. Imports

9. The imports of these types of formulations since 1966

may be seen in Table IV.

Table IV

Imports of Pesticides Formulations

(Quantity in tons)

Year	Formulations For:			Percentage increase over 1966
	Agricultural Use	Domestic Use	Total	
1966	2085	195	2280	-
1967	6248 *	208	6456	+ 183
1968	3034	133	3167	+ 39
1969	3123	236	3359	+ 48
1970	1700	486	2186	- 4
1971	2000	600	2600	- 143

- \* Relatively far higher imports were made in 1967. In this year the Government Department concerned (Department for Plant Protection, Ministry of Agriculture) anticipating large emergency needs for formulations for agricultural purposes imported these in sizable quantities on its own.

III. CONSUMPTION

10. The consumption figures for the different years can be arrived at by taking into consideration local production and imports for the respective years. This is possible since during the period under consideration practically there have been no exports of these formulations from Iraq. The consumption estimates for these formulations since 1966 are shown in Table V.



Table V

## Consumption of Pesticides Formulations

(Quantity in tons)

Year	Production	Imports	Total	Remarks
1966	398	2,035	2,433	
1967	700	6,248	6,948	
1968	763	3,034	3,797	
1969	1,842	3,123	4,965	
1970	2,422	1,700	4,122	
1971	3,654	2,000 *	5,600 *	

\* Figures show estimates

IV. DEMAND OUTLOOK

11. An estimate of the demand for pesticide formulations for agricultural purposes during the Fifth Plan Period may be made taking into account various factors such as extension of the area under cultivation, improvement in irrigation facilities, intensive use of pesticides etc. In the year 1972 the extent of cultivated land in Iran was 7,650,000 hectares. By 1977 this is expected to rise to 8,650,000 hectares. During 1972 the extent of land covered by irrigation facilities was 3,300,000 hectares. This is expected to be increased to 3,660,000 hectares by 1977. Apart from the expected increase in the area under cultivation and irrigation facilities, farmers are also becoming increasingly aware of the advantages of the use of pesticides in adequate quantities. Taking all these factors into consideration it is estimated that the total demand for formulations for pesticides, fungicides and insecti-

cides for agricultural purposes may increase up to 18,000 tons by 1977.

#### V. DEVELOPMENT PROSPECTS

12. At present the pesticide industry in Iran is entirely a formulation industry, all active ingredients for formulations being imported. The indigenous industries suffer from several handicaps, the chief being the marked consumer preference for imported formulations. Iranian pesticides industry is mostly local-owned, with the exception of Shell and Bayer which is a joint venture. Since imported pesticide formulations have a decisive competitive advantage over local production, most of the local units are now working below capacity. Government policy so far has been to allow the farmer complete access to the best chemicals available, and therefore there have been no special measures of protection for the indigenous units. However with the increase in the quality of local products there will be scope and need for appropriate Government measures through tariff and import policy adjustments to protect the local units. The anticipated increase in demand for pesticide formulations during the Fifth Plan Period should encourage the existing units to increase their production as well as their efficiency, and also lead to the establishment of new units for formulations.

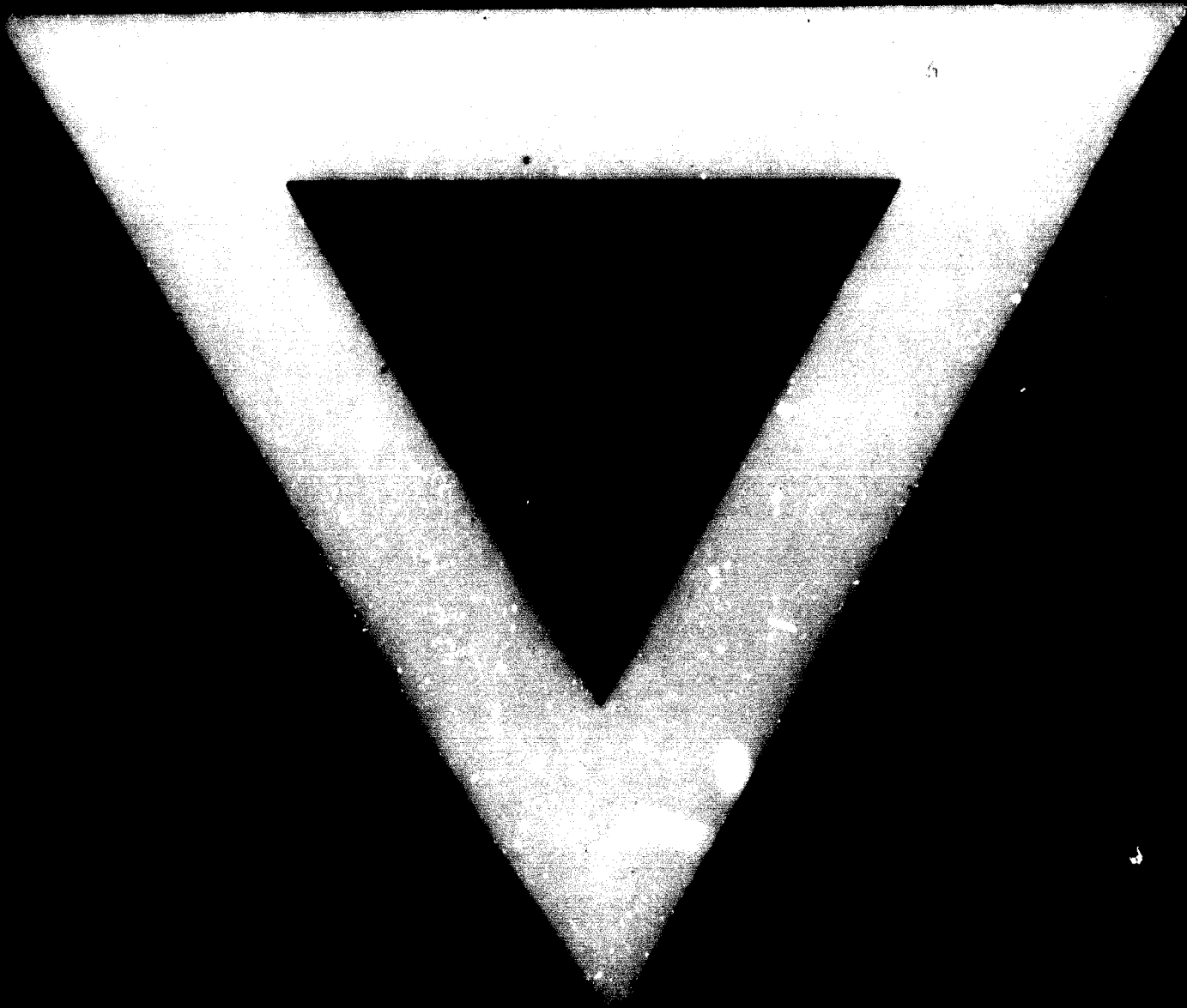
13. Till now there has been no indigenous industry for the manufacture of active ingredients. The demand for active ingredients is estimated to rise up to about 7000 tons by 1977 and this may throw open the possibilities for indigenous manufacture.

VI. SUMMARY

14. As a result of the agricultural development programmes introduced by the Government during the Third and Fourth Five Year Plan Periods, the demand for pesticides has been steadily increasing in Iran. Till 1965 all pesticide formulations were being imported. The first unit to manufacture the formulations was established in Tehran in 1965, and about 12 units with an installed capacity of 8000 tons of formulations (7000 tons for agricultural formulations and 1000 tons for domestic use) have been so far licensed. However imports also have been allowed. There is a consumer preference for imported formulations and local units are not working to full capacities.

15. The agricultural development programmes during the Fifth Plan Period are expected to lead to a big increase in the demand for pesticides, and it is estimated that the demand may go up to about 18,000 tons of formulations by 1977. This will provide scope for existing units to increase their production and efficiency and also for new units to be set up. With the improvement in the quality of local products there is scope and need for appropriate Government measures to protect indigenous industries.

16. The demand for active ingredients is estimated to increase to about 7000 tons by 1977 and this may throw open possibilities for indigenous manufacture.



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