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# ROPOSED PROGRAMME FOR DEVELOPMENT OF POULTRY PRODUCTION IN THE NEAR EAST REGION

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## **Introduction**

Malnutrition in terms of insufficient animal protein in the average daily per capita diet is a major problem facing developmental programmes in the Near East countries. -. While FAO and WHO recommend 29 grams/day of animal protein, the present average daily per capita intake of animal protein in this region does not exceed 12.2 grams as compared to 47 grams in developed countries. The annual average per capita consumption of animal products in the N.E. countries, during the period 1975-77, was about 13.4 kg of red meat, 60.2 kg milk, 3.1 kg of poultry, 3.05 kg of Fish and about 46 eggs. These averages were below the World averages, which were about 20 kg of red meat, 5.5 kg of poultry, 100 kg of milk, 18 kg of fish and about 118 eggs, during the same period. The averages of these products in developed countries were several folds more than the averages in the N.E. countries.

It should be mentioned, that seven countries only in this region enjoyed a consumption level of animal products above the World averages. How those countries depended mainly on imported products. The nature of the problem is not nutritional, but it is also economical, in terms of the gap between present production and consumption levels. This gap is expected to increase at a higher rate in the future, because of the high annual increase in effective demand for animal products i.e. about 5-6 percent against a production growth rate, in these products, of not more than 2-3%. Estimates of such gap show that its value may jump from about US\$ 980 m in 1977 to about US\$ 5.7 billion in the year 2000 in this region« These countries have to spend about 'US\$ 76.4 billion over the period 1977-2000 to import and meet the demand in animal products. This figure represents about 40% of expected expenses to import all food items over this period. These values are beyond the investments foreseen for this sector. Meanwhile, to reduce this gap through limiting

Importation will lead to more inflation in animal product prices in these countries. High population growth rate, increased income from oil, high income elasticity for these food items and the strong migration flow from rural to urban regions in most N.E. countries, are major factors contributing to such large increase in the effective demand for animal products.

*1/ this study includes 18 Arab Countries of this region (tables 1, 2).*

## **Discussion and Proposed Programme**

Though livestock production (cattle, sheep, goat and buffalo) share in total animal protein consumption represents a major source in the diet of the people in the N.E. region, it is unable to grow at a significant rate because of some major constraints such as

- (1) High rate of fluctuations in animal numbers and annual production due to dependence on un-developed range and the absence of feed lot systems,<sup>1/</sup>.
- (2) There is shortage in feed supply for livestock requirements.
- (3) Fragmentation of livestock holdings and inconsistency in livestock-cultivated land density
- (4) In countries that hold most of the livestock flocks (e.g. Sudan & Somalia), people keep herds mostly for social and prestige benefits, therefore these herds are isolated from market incentives.
- (5) Livestock flocks in most countries are scattered extensively over very wide areas with poor infrastructure and transportation facilities. This creates difficulties in providing extension work and/or efficient technical services to flock owners and
- (6) Poor productivity of domestic animals in terms of low off-take rate, small carcass weight, long production cycle, low feed conversion rates, and poor age and sex structure of herds.

These constraints inhibit programmes for the promotion of livestock production. Traditional poultry sector cannot be developed over a short period of time, since it is strongly related to rural development in a general sense. This sector needs serious investigations and research supported by surveys and studies on many socioeconomic aspects of rural areas to determine optimum plans to promote this sector i.e. development, multiplication and distribution of suitable breeds and strains, least cost rations, disease control systems, etc. This sector is important in some N.E. countries and should not be neglected. The present proposal focus attention only on intensive

System of production as a quick measure to satisfy a part of the demand for animal protein during the next 20 years.

On the other hand, intensive poultry industry enjoys several advantages that may contribute to the success of efforts for the quick production of animal protein i.e.

- (1) High dressing percentage.
- (2) High feed conversion rate;
- (3) Short production cycle.
- (4) A capital-output ratio of less than 1.5.
- (5) Does not depend directly on agricultural land use and cropping pattern economic problems.
- (6) The price per animal unit from poultry products is the lowest one compared to other livestock products.
- (7) Feed/meat and feed/egg (input-output) price ratio provides high incentives enterprising in this industry in most countries of the N.E. region.

Several countries within this region have established economically successful industries for broiler and egg production, in spite of their small agricultural sector significance in their economy (Lebanon, Tunisia, Libya, Kuwait etc.).

The major element in a development programme for intensive poultry industry is the availability of funds to finance construction, modern technology transfer and related infrastructure particularly: processing and marketing of final products. Therefore the 18 countries under study were classified

<sup>1/</sup> Range development, efficient management and intensive feeding programmes need high rate of investment and long-range programmes.

According to their capability to finance the proposed programme into three classes:

- (1) Completely auto-financed countries: this class include: Bahrain, Iraq, Kuwait, Qatar, Saudi Arabia, United Arab Emirates and Libya.
- (2) Partially auto-financed countries: Jordan, Lebanon, Oman, Syria, Egypt, Morocco and Tunisia can provide part of the investment costs needed for the proposed programmes from local resources. The rest of investments have to be provided from outside finance.
- (3) Completely outside-financed countries: available funds from domestic sources are not able to provide significant financial support for their poultry programmes in Arab Republic of Yemen, PDR Yemen, Sudan and Somalia.

These countries need complete financial support from outside to build such poultry industry. The

Plan for the proposed programme consists of establishing a number of complete integrated projects for either broiler or table-egg production. A broiler project will have a production capacity of about 6 million marketable broilers/year, while an egg production project will have a production capacity of 15 million eggs/year. Estimated investment

Costs for each broiler project to be built during the period from 1980-85 and 1985-2000 were \$ 6 m and \$ 8 m. respectively. While estimated investment costs for each egg production project during the same periods were \$ 1.5 m and 0.2 m) respectively. Each project will include units for parent-stock/hatchery, production farms, feed mill and processing plant (or) egg marketing centers. A number of such projects will be built in each country over the period from 1980-2000 (Tables 1 & 2).

The annual rate of investment return would not be less than 21% from each project. The whole programme has to be supported by 3 regional programmes for making available (within the region) the basic inputs for such an industry. Table 3 shows feed quantities required for the Whole programme.

The regional project dealing with feed may be located in Lebanon, or Tunisia or Jordan. Such supporting regional project is expected to decrease feed costs by 15-20% than the present prevailing prices in the region. Preliminary estimate for capital needed for this Project is about 0.200 million

A tremendous number of parent stocks will be also required in this proposed programme (Table 3)

This will justify the establishment of a regional project for grand-parent stock Broilers and Egg Layers).

The proposed location for this regional project may be Iraq and/or Syria and/or Egypt. Preliminary estimate on investment capital required for this project is 0.190 m. The third regional project is to provide and/or manufacture (under license) poultry equipment. It could be stationed in either Syria, Lebanon, Iraq, Tunisia, Egypt.

Estimated capital required for this regional project is \$ 135 m. These 3 regional projects could be established as joint ventures with some international companies.

It should be mentioned that though the proposed programme may require about \$ 8.84 billion up to the year 2000, this value represents not more than one-tenth of the expenses needed to import animal products to fill the expected cumulative gap over the period 1977-2000. If we exclude the investment costs in the 7 oil Producing countries (which have their own fund resources) the total foreign finance funds required for the proposed programme could be \$ 2.7 billion for country projects and \$ 0.5 m for 3 regional

Projects (Total: \$ 320.5 m). Financial basis for joint Arab cooperation or implementing such proposed programme do exist.

There are several Arab Funds (Banks) created to support joint Arab activities besides the establishment of "Arab Company for Livestock Development", Damascus, Syria (capital 0.600 m) and "Arab Authority for Agricultural Investment and Development", Khartoum, Sudan (capital 0.700 m). These bodies could work together towards creating a Joint Arab Authority to adopt and implement such poultry programme for the region. Results of such programme will not be successful without solving the various problems facing trade between Arab countries, particularly those problems related to pricing and marketing policies for different commodities and governmental and institutional policies dealing with the poultry sector in these countries. This should include training of technicians and workers as well as strengthening veterinary services in these countries.

## **SUMMARY AND CONCLUSIONS**

The study proposes a programme for building a number of intensive poultry projects (integrated units for broiler and egg production) in each of 18 Arab-countries over the next 20 years. Programme objective is to increase the average annual per capita consumption from 4.4 kg of poultry meat and 46 eggs to 12.8 kg of meat and 128 eggs by the year 2000. Three regional projects were also suggested to support this programme and to make available (within the region) feed ingredients, breeding stock and equipment at lower prices. A joint Arab fund (0 3.5 billion) is required to finance this proposal over the period. This amount is less than 5% of the cumulative expected value of animal products which will be imported to these countries up to the year 2000 to meet local demand for these products. Capital output ratio in these investments will be less than 1.5, while annual rate of investment return would not be less than 21%. To make the programme more effective, cooperation between these countries is required to solve many problems related to trade, pricing and marketing policies of various commodities involved in this industry. Cooperation is also required in the field of training and 'veterinary services between these countries.

## **REFERENCES**

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- (3) FAO Production Year Book, Rome 1979  
FAO Trade Year Book, Rome 1979
- (4) FAO Agricultural Commodity Projections 1975-1980
- (5) Various FAO Field Reports on Poultry Development in Arab Countries by H.F. El-Issawi (1968-1979).

**Table 1.****Objectives and Investments of Proposed Development Programme for Broiler Production in Near East Countries**

Country	Base year consumption Kgs. 1976-1978	Projected per-capita consumption (Kgs)		Additional production required (000) tons		Proposed self-sufficiency Rate (%) In 2000	Investment costs requirements (million dollars)						
							1977-1985		Total	1985-2000		Total	Grand Total 1977-2000
		1985	2000	1985	2000		Local Finance	Foreign finance		Local Finance	Foreign Finance		
<b>Bahrain</b>	12.9	16.7	20.5	1.15	6.4	73.5	3.0	0.0	3.0	9.0	0.0	9.0	12.0
<b>Iraq</b>	4.2	11.0	16.9	110.0	286.5	99.0	144.0	0.0	144.0	432.0	0.0	432.0	576.0
<b>Kuwait</b>	19.7	24.9	33.5	11.8	88.5	110.7	16.0	0.0	16.0	135.0	0.0	135.0	151.0
<b>Qatar</b>	15.0	19.0	29.6	4.0	7.2	110.8	5.0	0.0	5.0	12.0	0.0	12.0	17.0
<b>Saudi Arabia</b>	17.2	24.7	33.2	178.9	413.5	108.0	240.0	0.0	240.0	621.0	0.0	621.0	861.0
<b>U.A. Emirates</b>	21.0	31.0	36.0	5.9	90.7	104.0	8.0	0.0	8.0	135.0	0.0	135.0	143.0
<b>Lybia</b>	5.3	9.8	16.8	27.9	85.7	100.0	7.5	0.0	7.5	28.0	0.0	28.0	35.5
<b>Jordan</b>	12.3	14.6	17.2	15.3	45.0	100.0	3.0	8.0	16.0	96.0	36.0	72.0	88.0
<b>Lebanon</b>	4.6	12.8	18.0	16.3	50.8	100.0	12.0	12.0	24.0	36.0	36.0	72.0	96.0
<b>Oman</b>	7.7	9.7	13.5	5.0	16.3	100.5	4.0	4.0	8.0	13.5	13.5	27.0	35.0
<b>Syria</b>	3.0	4.8	13.1	22.4	174.0	98.6	16.0	16.0	32.0	130.5	130.5	261.5	293.0
<b>Egypt</b>	3.4	5.6	15.7	142.0	877.0	100.0	96.0	96.0	192.0	679.0	634.0	1314.0	1506.0
<b>Morocco</b>	3.1	4.9	9.3	58.9	241.8	100.0	40.0	40.0	80.0	180.0	180.0	360.0	440.0
<b>Tunisia</b>	3.7	5.3	9.5	15.3	83.3	100.0	12.0	12.0	24.0	63.0	63.0	126.0	150.0
<b>A.R. Yemen</b>	2.9	8.7	14.2	10.0	133.9	100.0	0.0	16.0	16.0	0.0	198.0	198.0	214.0
<b>P.D.R. Yemen</b>	0.7	1.3	12.1	1.4	31.8	100.0	0.0	2.0	2.0	0.0	45.0	45.0	47.0
<b>Somalia</b>	1.0	1.7	2.8	1.3	5.2	100.0	0.0	...	...	0.0	9.0	9.0	9.0
<b>Sudan</b>	0.8	1.0	1.8	8.3	36.9	100.0	0.0	10.0	10.0	0.0	54.0	54.0	64.0
<b>Total</b>	4.4	7.2	12.8	636.85	2674.6	97.8	611.5	216.0	827.5	2510.0	1400.0	3910.0	4737.5

(...) values of less than one million dollars

**Table 2.**

Objectives and Investments of proposed Development programme for table Egg Production in near. East Countries

Country	Base year consumption, kgs, 1976-1978	Projected per-capita consumption (Kgs)		Additional production required (000) tons		Proposed self-sufficiency Rate (%) In 2000	investment costs requirements (million dollars)						Grand Total 1977-2000
							1977-1985			1985-2000			
		1985	2000	1985	2000		Local Finance	Foreign Finance	Total	Local Finance	Foreign Finance	Total	
Bahrain	160	208	245	20	82	76.6	2.0	0.0	2.0	10.0	0.0	10.0	12.0
Iraq	55	118	245	1363	4322	98.6	136.5	0.0	136.5	576.0	0.0	576.0	712.5
Kuwait	222	250	302	107	703	97.6	10,5	0.0	10.5	94.0	0.0	94.0	104.5
Qatar	120	177	304	36	77	100 0	3.0	0.0	3.0	10.0	0,0	10.0	13.0
Saudi Arabia	66	150	234	1055	2793	104.5	105.0	0.0	105.0	372.0	0.0	372.0	477.0
U.A. Emirate	200	253	294	111	610	100.8	12,0	0.0	12.0	82.0	0.0	82.0	94.0
Lybia	102	169	264	450	12E0	100 0	45.0	0.0	45.0	170.0	0.0	170.0	215.0
Jordan	110	176	290	263	1955	100 0	9.0	9,0	18.0	130.0	130.0	260.0	278.0
Lebano n	93	116	133	149	279	100 0	8.0	7.0	15.0	19.0	19.0	38.0	53.0
Oman	45	66	138	36	170	100 5	2.5	2.0	4.5	11.0	11.0	22.0	26.5
Syria	122	150	202	527	2144	103.6	27.5	25.0	52.5	143.0	143.0	286.0	338.5
Egypt	35	49	107	1075	5767	103 0	54.0	54.0	108.0	463.0	325.0	788.0	896.0
Morocc o	26	42	79	515	2031	100.0	26.0	25.0	51.0	135.0	135.0	270.0	321.0
Tunisia	60	100	180	312	1076	100 0	16.0	15.5	31.5	72.0	72.0	144.0	175.5
A.R. Yemen	44	94	178	93	1592	98.5	0.0	9.0	9.0	0.0	212.0	212.0	221.0
P.D.R. Yemen	38	81	146	100	252	100.0	0.0	10.5	10.5	0.0	34.0	34.0	44.5
Somalia	24	29	40	14	87	100.0	0.0	2.0	'2.0	0.0	10.0	10.0	12.0
Sudan	25	29	40	188	679	100.0	0.0	19.5	19.5	0.0	90.0	90.0	109.5
Total	45	77	128	6419	2590 0	99.5	457.0	178.5	635.5	2287.0	1181.0	3468. 0	4103.5

**Table 3:**  
Production Necessities Required For Proposed Development Programme

Country	Total-Feed Requirements		Feed Requirements (GOO) tons				Protein concentrates and Feed additives		Parent stocks requirement			
			Feed Grains & Brans		Meals & Cakes				Broiler Parents		Laying hens parents	
	1985	2000	1985	2000	1985	2000	1985	2000	1985	2000	1985	2000
Bahrain	14.1	59.7	9	39	.4	15	1	6	...	...	...	14
Iraq	1118.7	3718.2	727	2417	280	930	112	372	2320	7359	218	769
Kuwait	140.3	765.5	91	498	35	191	14	77	348	1907	20	110
Qatar	39.0	94.7	25	62	10	24	4	5	91	217	6	16
Saudi Arabia	1384.6	4165.3	900	2707	346	1041	138	417	3587	10860	182	537
U.A. Emirates	81.0	690.2	53	449	20	173	8	69	126	1721	21	99
Lybia	422.7	1196.7	275	778	106	299	42	120	.768	2275	96	259
Jordan	336.6	1105.1	219	718	84	276	34	111	721	1513	63	312
Lebanon	348.3	672.1	226	437	87	168	35	67	831	1725	55	90
Oman	34.0	168.1	22	109	9	42	3	17	..	384	.	28
Syria	578.7	2021.8	376	1314	145	505	58	202	809	3869	161	434
Egypt	1343.6	7196	873	4677	336	1799	134	720	3640	19066	156	891
Morocco	655.8	2394	426	1556	164	599	66	239	1706	6960	85	344
Tunisia	320.2	887.1	208	577	\$0	222	32	89	519	1517	58	195
A.R. Yemen	85.0	1179.5	55	767	21	295	9	118	201	2556	14	216
P.D.R. Yemen	44.9	269.1	29	175	11	67	4	27	26	585	17	49
Somalia	11.6	45.6	8	30	3	11	1	5	23	92	2	9
Sudan	171.3	463.3	111	301	43	116	17	46	302	894	40	99
Total	7130.4	27092.0	4633	17611	1784	6772	712	2707	16018	62500	1194	4471

(.. .) Broiler and/or laying hen farms do not provide significant economical scales as incentives for establishment of parent stock