

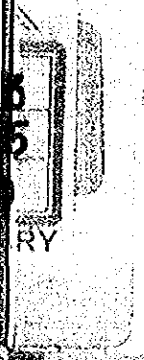
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THE FIELD SURVEY REPORT ON THE POULTRY DISEASE CENTRE

AUGUST 1972

OVERSEAS TECHNICAL COOPERATION AGENCY



国際協力事業団		
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In compliance with the request of the Syrian Government for cooperation of the Japanese Government in the field of controlling the poultry disease in Syria, this survey was made as part of the technical cooperation services by the Overseas Technical Cooperation Agency on behalf of the Government of Japan.

Everyone of the Team is more than pleased that an extremely smooth survey was able to be made thanks to the enough conveniences or assistances extended by the Syrian authorities.

I am much pleased to present the report on the subject prepared by the survey team headed by Dr. H. Sazawa. I sincerely hope that the report will prove to be useful for the establishment of the poultry disease centre and will contribute to the promotion of the poultry industry in Syria.

Taking this opportunity, we would like to express our heartfelt appreciation to Dr. Ramsy (Vice Minister of Agriculture and Agrarian Reform) who took directly charge of receiving our Team and other officials concerned of the same Ministry.

Respectfully submitted,

Keiichi TATSUKE
Director General
Overseas Technical
Cooperation Agency

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The Field Survey Report on the
Poultry Disease Centre

Syria: November 23 to
December 10, 1971

Contents

	Page
I. Introduction	1
II. Progress of Survey	2
III. Survey Conducted and the Results Thereof	11
1. General situation in Syria	13
(1) Geography (2) Climate (3) Population	
(4) Industry (5) Agriculture	
(6) Technical cooperation extended so far by Japan	
2. Condition of livestock industry	16
(1) Condition of keeping livestock	
(2) Condition of livestock production	
(3) Measures to promote livestock production	
3. Poultry raising	22
(1) Actual state of poultry-raising industry	
a. Status of poultry raising in agriculture	
and livestock industry b. Breeds of poultry	
raised c. Trends of the number and production	
of poultry raised d. Size and type of manage-	
ment e. Consumption and distribution	
f. Exports and imports of poultry raised	
g. Condition of poultry raised for breeding	
h. Condition of chicks hatched i. Condition	
of demand and supply of feedstuff j. Profit-	
ability	

- (2) Actual status of the management of poultry raised
 - a. Natural environment
 - b. How to keep poultry
 - c. How to manage poultry raising
 - d. Sanitary condition
 - e. How to dispose of poultry droppings
- (3) Actual status of the occurrence and prevention of poultry diseases

- 4. Poultry-raising promotion project and its enforcement, etc. 50
 - (1) Promoting measures taken place thus far, etc.
 - (2) Driving forward of new projects, etc.
- 5. Problems in the survey results 60
- 6. Measures to be taken in your country 60

- IV. Japan's Cooperation 63
- V. Information 65
 - (1) Poultry Development Plan in Syria;
 - (2) Sanitary situation of poultry;
 - (3) Poultry-raising condition by province, 1971
 - (4) Poultry-raising condition in the vicinity of Damascus.
 - (5) Livestock Administrative Organ

I. Introduction

Japan's cooperation with Syria in the livestock sanitary field has been carried on for the past 10 and odd years, with a Japanese veterinarian resident at present.

A request for technical cooperation was offered from Syria in May, 1970 about the following subjects:

(1) Preventive measures against poultry infectious diseases; (2) Center on the artificial fertilization centering on cattle.

2. When Mr. Ramzy, Vice Minister visited Japan in September, 1970, he asked Japan for a cooperation in livestock sanitary field.

3. A technical cooperation in the following subject against poultry diseases alone was requested in July, 1971: Control and prevention of poultry diseases.

4. Against the above-mentioned background, survey has turned out to make this time.

Members of Survey Team:

Dr. Hiroshi Sazawa - Ministry of Agriculture and Forestry

Mr. Takayuki Muraoka - "

Mr. Takakata Okamoto - "

Mr. Hideo Takei - Overseas Technical Cooperation Agency

II. Progress of Survey

1. The purpose of survey this time is to consider the feasibility of technical cooperation relating to the Poultry Disease Centre from the viewpoint of finding ways and means of any effective cooperation thereof. We, keeping the following in mind, carried out surveys:

(1) Matters of survey

- a. Actual status of poultry-raising industry;
- b. Present condition of poultry raising promotion project;
- c. Administrative system on poultry raising; d. Condition of the occurrence and prevention of poultry raising;
- e. Condition of the poultry-keeping management; f. Condition of the experimental research into poultry raising.

(2) Scope of survey

- a. Actual state of poultry-raising industry, poultry for breeding, type of management, total production, trend of consumption, overall condition of poultry raising (scale of household numbers, etc.), supply of poultry for breeding, number and capacity of artificial incubators, number of farms of poultry for breeding, supply of feed and so on; b. Actual state of poultry raising promotion project; c. Administrative system relating to poultry raising -- relationship of central and local agencies, experimental or research institutions, colleges or universities (faculty of veterinary science), technologist training facilities, supplying reserve of technologists, extension services of techniques, private groups for poultry raising and the activities thereof;
- d. Actual status of the occurrence and prevention of poultry diseases -- status of activities, use of vaccines, existence of systematic activities, occurrence of poultry diseases and

so on; e. Condition of the poultry-raising management ---
(i) natural environment --- weather conditions (ii) how to
raise --- enclosure poultry, cage poultry, yard poultry, etc.
(iii) how to manage by chicks and by fowls --- how to feed,
substance of feed, sanitary condition, disposal of droppings,
pollution.

Activity Itinerary of Survey Team
on Poultry Diseases in Syria

Nov. 23 (Tues.) The Survey Team left Tokyo International
Airport by flight 915, B.O.A.C.

" 24 (Wed.) Arrived in Damascus, Syria at 04:30 a.m.
local time (difference in time --- 7 hours)

(In the morning)

(1) Visited the Japanese Embassy at 09:30
a.m.

a. Paid a courtesy visit to the Ambassador.

b. Made arrangements with a secretary in
charge.

(2) Visited the Ministry of Agriculture and
Agrarian Reforms (under a guidance of
the above-mentioned secretary) at 10:00
a.m.

a. Paid a courtesy visit to the Minister
(because of his absence, to the Vice
Minister and the Director of Department
in charge).

b. Made arrangements for activity itinerary
with the Vice Minister.

- (3) Made an inspection of Saydanaya (State-run poultry farm) at 11:30 a.m.

(In the afternoon)

Made an inspection of the Central Veterinary Laboratory, Damascus at 01:30 p.m.
Put up Hotel Cuttan, Damascus.

Nov. 25 (Thur.)

(In the morning)

- (1) Visited the Planning Agency at 10:00 a.m.
 - a. Paid a courtesy visit to the Minister and the Vice Minister.
- (2) Made an inspection of Dommar (State-run feedstuff combining plant) at 11:00 a.m.
- (3) Made an inspection of a private chick-hatching farm at 11:30 a.m.

(In the afternoon)

- (1) Made an inspection of a private farm of poultry for eggs at noon.

(In the evening)

Dinner-party sponsored by Survey Team at 08:30 p.m.

Nov. 26 (Fri.)

(In the morning)

- (1) Visited the Agricultural Office, Al-Nabek County, Damascus Province at 10:00 a.m.
- (2) Made an inspection of a private broiler farm in the Al-Nabek district at noon.

(In the afternoon)

- (1) Made an inspection of the Homs Poultry

Farm, Homs Chamber of Agriculture at
02:00 p.m. Invited to the luncheon
party held by the Homs Chamber of Agri-
culture at 04:00 p.m.
Put up a hotel in Hama.

Nov. 27 (Sat.)

(In the morning)

(1) Made an inspection of the State-run
Hama Farm of Poultry for Breeding at
09:00 a.m.

(2) Made an inspection of the State-run
Marj Kuraem Sheep Farm at noon.

(In the afternoon)

Made an inspection of the State-run
Jobramleh Dairy Cattle Stock-Farm at
02:00 p.m. Put up Hotel Tourist,
Aleppo.

Nov. 28 (Sun.)

(In the morning)

(1) Visited the Agricultural Affairs Depart-
ment, Aleppo at 09:00 a.m.

a. Paid a courtesy visit to the Director
of Department (because of his absence,
to the Vice Director).

b. Made arrangements for the activity itin-
erary in Aleppo District.

(2) Visited the Syria Meat Public Corpora-
tion, Aleppo at 11:00 a.m.

(3) Made an inspection of the Aleppo District
Veterinary Laboratory at 11:30 a.m.

(In the afternoon)

(1) Made an inspection of the poultry farm of Aleppo Chamber of Agriculture at 00:30 p.m.

(In the evening)

Gathering at 08:30 p.m. with Aleppo local political and financial circles, sponsored by the Japanese Embassy.

Nov. 29 (Mon.)

(In the morning)

(1) Revisited the Agricultural Department, Aleppo at 09:00 a.m.

a. Offered greeting to the Director.

b. Received a briefing of the local administrative organization and agricultural cooperatives.

(2) Made an inspection of a small-size private poultry farm, Tarafat at 11:00 a.m.

(In the afternoon)

Luncheon party, invited by the Director of Agricultural Department, Aleppo at 02:30 p.m.

Nov. 30 (Tues.)

(In the morning)

(1) Visited the Aleppo Chamber of Agriculture at 09:00.

(2) Made an inspection of the farm affiliated to the University of Aleppo (Moussalamieh) at 10:30 a.m.

(In the afternoon)

- (1) Made an inspection of a private poultry farm, Fefin at noon.

(In the evening)

Put up Hotel Lattakia.

Dec. 1 (Wed.)

(In the morning)

- (1) Visited the Agricultural Department, Lattakia at 09:00 a.m.

a. Offered greeting to the Director.

b. Received a briefing of the condition of poultry raising in Lattakia.

- (2) Visited the Lattakia veterinary office, Beuka at 10:00 a.m.

- (3) Made an inspection of the poultry farm, Lattakia Chamber of Agriculture, Beuka at 10:30 a.m.

(In the afternoon)

- (1) Made an inspection of the State-run Fediyo Dairy and Poultry Farm at noon.

- (2) A private farm of poultry for eggs at 02:00 p.m.

(In the evening)

Dinner party sponsored by the Director of Agricultural Department, Lattakia at 07:30 p.m.

Dec. 2 (Thur.)

(In the morning)

Made an inspection of the State-run Tartous Broiler farms at 10:00 a.m.

(In the evening)

Dinner party, invited by the Japanese Embassy at 08:30 p.m.
Put up Hotel Cuttan.

Dec. 3 (Fri.)

(In the morning)

Off-day

(In the afternoon)

- (1) Made arrangements for the adjustment of itinerary at 03:00 p.m.
- (2) Arrangement of survey substances at 03:00 p.m.

Dec. 4 (Sat.)

(In the morning)

- (1) Visited the Ministry of Agriculture and Agrarian Reforms at 09:00 a.m.
 - a. Received a briefing of the poultry farm condition from the Director of Animal Husbandry Department.
 - b. Received a briefing of the preventive measures of poultry diseases from the Director, Animal Health Department.
- (2) Arrangement of the survey results at 03:00 p.m.

Dec. 5 (Sun.)

(In the morning)

- (1) Visited the Japanese Embassy at 10:00 a.m.
 - a. Report of the general program of survey.
 - b. Arrangement of our return home.

Dec. 6 (Mon.)

(In the morning)

(1) Revisited the Central Veterinary Laboratory at 09:30 a.m.

a. Received a briefing of the study-substance.

(In the afternoon)

b. Fittings.

(2) Arrangement of the survey-substance at 03:30 p.m.

(In the evening)

Dinner party, invited by the Ministry of Agriculture and Agrarian Reforms at 08:30 p.m.

Dec. 7 (Tues.)

(In the morning)

Visited the Ministry of Agriculture and Agrarian Reforms at 09:00 a.m.

a. Report of the general program of survey.

b. Expression of the Survey Team's view on technical assistances.

Dec. 8 (Wed.)

(In the morning and evening)

Made an inspection of the poultry farm belt in Lebanon at 08:30 a.m.

(In the evening)

Dinner party, invited by the Japanese Embassy at 08:00 p.m.

Dec. 9 (Thur.)

(In the morning)

(1) Visited the Japanese Embassy at 10:00 a.m.
a. Exchanged farewell greetings on our return home.

(2) Visited the Ministry of Agriculture and Agrarian Reforms at 11:00 a.m.
a. Exchanged farewell greetings on our return home.

Left Damascus Air Port for Japan by Flight 918, B.O.A.C. at 08:00 p.m.

Dec. 10 (Fri.) Arrived at Tokyo International Air Port at 09:00 p.m.

Guides on occasion of Team's field inspection:

Messrs.

- G. Orita - a Japanese expert for animal health to the Ministry of Agriculture and Agrarian Reforms, Syria.
- A. H. Zakalier - Officer in charge of the Animal Health Department, the above Ministry.
- S. Jaby - Assistant head of Central Veterinary Laboratory.

III. Survey Conducted and the Results Thereof

1. General situation in Syria

(1) Geography

Syria lies between lat. $32^{\circ}00$ N. and lat. $37^{\circ}00$ N.; and it borders on Turkey in the north, on the Mediterranean Sea and Lebanon in the west, on Irak contiguous to the Syrian desert in the east and on Israel and Jordan in the south. Syria has an area of $185,180 \text{ km}^2$ (about a half that of Japan) and a circumference of 2,274 km. A major, fertile farmland is formed in the basins of the Euphrates in the northeast and of both the Orontes and the Litania running north on the east side of the Ausariye Mountains.

(2) Climate

The west littoral is of oceanic climate, i.e. the Mediterranean coastal type with much moisture. The desert region in the east is of continental climate type with dry weather. The inland region is of continental climate with dry weather and with a little precipitation. The seasonal changes are discerned to some extent. However, the period of April to October falls on a dry season with very little precipitation and with high temperatures. The period of November to March falls on a rainy season; and particularly a lot of rainfalls (more than 500 mm) in the west coast; and some snowfalls in the northern part and in the plateaus. Moreover, the precipitation of 250 mm to 550 mm per year can be witnessed in the northern part.

(3) Population

Syria has a total population of 6,294 million persons, and its density is 34 persons per km^2 . The majority of population is composed of arabian blood, and the remaining,

of mixed blood partly due to a frequent traffic or invasion of foreign races from ancient times. Besides Arabians, there are minority races, such as Armenians, Turkish, Persians, etc. Eighty per cent of the population are made up of Moslems, and, the remaining, of Jews and others.

(4) Industry

In the magnitude of domestic production, the order by sectors is as follows: agriculture, governmental undertakings, industry, commerce, transportation and communications. About one-third of total production is occupied by the agricultural sector. The major agricultural products involve wheat, barley, indian corn, raw cotton, sugar beet, tobacco, olive, sheep, goat, wool, etc. More than 90 per cent of the exports are occupied by agricultural products, of which more than one half are occupied by raw cotton. In this way, agriculture can be said to be the major industry. However, harvests are largely commanded by weather conditions because irrigation facilities are incomplete in parallel with the current outmoded skills or techniques. This influences directly the national income and the international balance of payments. The Government, therefore, launched a "5-year plan on the economic and social development" starting from 1960 for the purpose of developing agriculture and of driving forward industrialization. Under this plan, a large-scale construction project for multipurpose dam (irrigation, generation of electric power, flood prevention) was undertaken. For this purpose, an assistance agreement was concluded with West Germany in 1963. But this agreement was abrogated in 1965 because of a severance of diplomatic relations. After that, an agreement was entered into with the Soviets in 1968. As a

result, the dam construction has been carried on since March, 1968. Following 5-year plan has been carried on with the aim of pushing forward industrial promotion or of achieving a double increase in national income in a decade after 1966: First 5-year plan, second 5-year plan (from 1960) and third 5-year plan (from 1971).

(5) Agriculture

Syria is an agricultural country from olden times. Sixty per cent of labor population (about 1,000,000 persons) are engaged in agriculture. According to the 1970 statistics, farmland has an area of 86,619 km², or 46.8 per cent of the total land area (185,180 km²); and grazing land, of 53,617 km², or 28.9 per cent of total; and wood land, of 4,492 km², or only 2.4 per cent of total. Since the majority of farmland is non-irrigated land, more or less of a little precipitation in sowing time commands a growing in the year. Accordingly, expanding irrigated-farmland is a supreme order to agricultural policies. The construction of a dam for irrigation is being hurried up. The Euphrates dam has a capacity of 7.5 billion m³ in pondage and of 0.8 million kwh output in generating power. On the morrow of its completion, it seems that the farmland of 0.6 million km² is capable of being irrigated. Major agricultural products are such grain as wheat, barley, raw cotton and pulses.

Production of major agricultural products

Unit: 1,000 tons

Year Products	1967	1968
Wheat	1,049	600
Barley	590	512
Pulses	83.6	73.9
Peas	63.7	53.6
Raw cotton	329	400
Sesame	9.3

Notes - Source: from "Etude Mensuelle sur l'Economie et les Finances de la Syrie et des Pays Arabes"

Major exports are all agricultural products and their processed goods.

Makeup of major export goods

Unit: £s. million

Year Item	1968	1969
Raw cotton	269.1	320
Animal products	106.8	100
Food, fruit and grain	78.5	70
Fiber goods	-----	27.7
Woolen	16.3	-----

Notes - Source: from "Etude Mensuelle sur l'Economie et les Finances des Pays Arabes"

As being the case, the Syria's economy is in fact based on agriculture; and it is only natural that the consolidation of irrigation facilities and the expanded farmland become the nation's important measures against a crop failure due to droughts. Thus, such a project share large proportions in the development expenditure recently.

Expenditure for developments

Unit: £s. million

Year Item	1969	1970
Agriculture · irrigation	267.0	513.0
Mining industry	265.8	194.7
Power · fuel	143.9	242.3
Transport · communications	187.6	343.5
Public works	96.6	103.4
Others	120.0	141.0
Total	980.9	1,396.5

Notes - Source: from "Centre d'Etudes et de Documentations Economiques"

- (6) Technical cooperation extended so far by Japan:
Experts ranging over agricultural statistics, veterinary

skills or techniques, city planning have been dispatched, and necessary materials have been provided. In other words, our assistance has been offered in the aspect of technical cooperation. Particularly in the veterinary field, experts have been dispatched every year since 1964 so as to contribute much to the Syria's livestock development.

2. Condition of livestock industry

Although the development of livestock industry is now centered on sheep raising, poultry raising as well has become prosperous gradually in recent years. About a half of the nation's land is the land of desert, the greater part of which is composed of "step" land where there are some growing grasses. In this grassland, sheep or goats are being put to pasturage.

(1) Condition of keeping livestock

Varieties of domestic animals or poultry are being raised, but the raising of sheep, goats or poultry is overwhelmingly many in number.

Variety and number of livestock are as follows:

Condition of keeping livestock

Unit: 1,000 head

	Syria (1968)	Japan (1968)
Horse	62	216
Mule	64	-
Ass	235	-
Cattle	270	3,155
Buffalo	2	-
Sheep	5,938	83
Goat	743	223
Camel	12	-
Poultry for eggs	3,416	172,226
Broiler	6,005	53,742
Duck	15	?
Goose	41	?
Turkey	245	?

Notes - Source: from "Production Year Book", Vol. 23, '69, FAO; * refers to the statistic figure in 1971, estimated by Animal Husbandry Production Department, Syria's Agriculture and Agrarian Reforms Ministry; **, figure in 1971; ***, figure in 1970.

a. Sheep

Sheep are one of the most important meat resources for human consumption, which accounts for about 70 per cent of the nation's meat consumption per capita. There are some 6 million sheep at present, about a half of which (some 3

million) is kept by nomadic people (140,000 or 150,000 persons) in the "step" belt. These people are living a nomadic life with 200 to 500 head per flock throughout a whole year. Because of the changeable amount of precipitation, grass resources are not available according to the year, and, as a result, as many as 3 million sheep (some 1/3 of total) can be starved to death. Since 1970, therefore, a number of projects have been driven forward to secure necessary feedstuff particularly during the dry season. A major project of them aims at a switchover from existing nomadic sheep-keeping to settled one in the future. In other words, the project means that nomadic people make use of the feedstuff grown in arable land. On the other hand, the remaining 3 million sheep other than those kept by nomadic people are kept by settled farm households. Each of these farm households keeps a small flock of 12 sheep or so and a number of cattle or goats.

As for the breeds of sheep, almost all of them are "Awassi," and, a very few of Turkish breeds are kept in the vicinity of the frontier adjacent to Turkey.

b. Goats

Goats are kept in large numbers. As for the breeds, most of them are "Djebeli," and, besides, there are a small number of goats "Shami."

c. Cattle

There are a small number of native brown cattle, combined to be used for milk and meat. However, the majority of cattle is dairy cattle of foreign origin (Holstein, Brown Swiss, Denmark brown hair, etc.). There are now 200,000 dairy cattle (female), or 70 per cent of total, of which only 30,000 dairy cattle have milkings of more than 2,000 kg per

year. For this reason, the nation is making efforts in improving dairy cattle, for example, by introducing Hostain, etc. from foreign countries.

d. Poultry

Number of poultry raised is increasing year after year. Measures to increase poultry production are being taken positively because of the following reasons: (i) broilers in particular go with the people's taste; (ii) broilers must be substituted owing to the shortage of sheep. However, because of the insufficient measures taken for poultry diseases, various bad infectious diseases are always virulent. In particular, the damages by the Newcastle disease (hereinafter, referred to as "ND") are tremendous. And the development of poultry-raising industry depends much on a success of prevention against ND. The majority of the poultry for eggs is made up of the colored poultry of native breed, which is kept in small numbers in the yard; and the capability of laying eggs is poor with only 70 eggs per year. In the poultry farms of more than medium size, white leghorns (domestic origin or foreign commercial breeds) are being kept. Broilers are of rock breed and of its crossbreeds, i.e. of domestic origin or foreign commercial breeds.

(2) Condition of livestock production

Various livestock products are being put out. Any of them are designed for domestic demand. Especially, chicken and eggs are in much demand, and so the considerable amount of them is being imported.

Production of livestock (1968)

	Unit	Volume	Remarks
Cow milk	100 tons	110	From the 1969 FAO data.
Sheep milk	" "	128	
Goat milk	" "	30	
Wool	" "	192	
Hen's eggs	Million pieces	276	From the 1971 data, estimated by the Ministry of Agri- culture and Agrar- ian Reforms.
Chicken	100 tons	61	
Cheese	" "	299	From the data of MENA' (1970 - 71).
Butter	" "	194	
Honey	" "	2.2	
Animal fat	" "	115	

Furthermore, mutton accounts for about 68.5 per cent of the total meat consumption per capita. Also, the production or consumption of sheep milk tops that of cow milk. The consumption of sheep milk accounts for some 60 per cent of the total milk consumption. Despite the actual situation that 50 million pieces of hen's eggs are being imported from Lebanon, the per capita consumption of them is nothing but 30 to 50 pieces per year.

(3) Measures to promote livestock production

In parallel with a rise of national living standards and with an increased population, the demand for livestock products has been increasing year by year. On the other hand, the intake of animal protein is only 15 gr per capita and per diem, and it must be approached to the international level,

i.e. 54 gr. From this point of view, the nation's demand for livestock must be necessarily satisfied, and at the same time the target of animal protein to be supplied must be reached as soon as possible. To this end, the promotion of livestock or fishery production is being indispensably carried on under the 10-year plan.

a. Sheep

Securing feedstuff (grass) is a pre-requisite for the propagation of sheep. The present situation is that about a half of 6 million sheep is kept by nomadic people. For this reason, various kinds of projects have been developed for the purpose of materializing the following: (i) a switch from sheep-keeping by nomadic people to that by settled people; (ii) to feed sheep with grasses grown in arable land. It would, however, be difficult to achieve a double increase of 11 million sheep within a decade from now.

b. Dairy cattle

There are now 200,000 dairy cattle, of which only 30,000 have milkings of 2,000 kg per year, and the remaining 170,000 of native breed have poor milkings of 600 kg per year. First of all, therefore, the improvement of dairy cattle's breed is being attempted by a making of crossbreeds between the native breed and the Holstein introduced from foreign countries. Even if a rapid expansion of irrigated farmland is taken into account with the completion of the Euphrates Dam, the increased reproduction of more than 700,000 sheep will not be able to expect in 10 years.

c. Poultry

Livestock that has a high efficiency in yield with good feeding, is poultry and hogs. But hogs are not referred to

here because of the religious cause. Since poultry is easy to reproduce more and chicken goes with the nation's taste, it is advocated that chicken should be reproduced more as a newcomer of meat resources to make up for the shortage of animal protein supply. At present the supply of broilers and hen's eggs depends upon their imports. In the future, however, hen's eggs will be anticipated to be self-supporting.

Next, let us refer to the target of increasing the volume of major products in the following table.

Target of increased production in major products

Unit: 10,000 tons

	At present	Target in 10 years	Remarks
Raw milk	50	120	Cow milk, sheep milk and goat milk
Meat with bones	11	20	Mutton
Fishes	0.1	1	
Hen's eggs	2.76 million pieces	6.0 million pieces	
Broiler	0.6	1 - 1.5	Gutted carcasses

3. Poultry raising

(1) Actual state of poultry-raising industry

a. Status of poultry raising in agriculture and livestock industry

The increase of population is rapid with its growth of 3 per cent per year; and the population is expected to be

doubled in 10 years, i.e. to reach 10 million persons.

To cope with this, the Government has been carrying out an agricultural and industrial development project with an investment of £s. 1 million, which results in the increased purchasing-power of many of farming workers and other laborers and in a rise of their living standards. Accordingly, it is natural that the intake of nutritious food required for the nation has been improved, and at the same time that the consumption of livestock products has increased. Nevertheless, the per capita consumption of animal protein is as yet only 16 gr. The Government holds a line upon which this figure (16 gr.) should be raised up to an international level of 54 gr. Although the project to double livestock production is being enforced, it is really not easy to realize in the case of the livestock other than poultry, as stated in the previous chapter. Now that a hope is placed on the industrial development of the poultry-raising highest in yield efficiency, poultry raising has turned out to occupy the most important place in the livestock industry after sheep raising. Particularly broilers go with the nation's taste, and are one of the proper meat resources to cover the shortage of mutton. Also, the meat yield of broiler is extremely large. That is, 1 kg of meat is put out with 2.5 kg of feed. This represents a yield of 2 to 2.5 times that of beef or mutton.

b. Breeds of poultry raised

(a) Poultry for eggs

Most of the poultry for eggs is of "Bardi" (Arabic language meaning native breed), which has the plumage assuming various colors of black, blackish brown, reddish brown, etc. Because of the indigenous poultry, the breed of "Bardi"

is very low in productivity. The remaining few are white leghorns, which are of domestic or foreign origin. White leghorns of foreign origin are mostly imported from Lebanon; and the breed of Babcock as America's representative commercial brand and other foreign breeds are found in Syria.

(b) Broilers

Broilers are of white rock or its crossbreeds, i.e. of domestic or foreign origin. Foreign-origin broilers are imported from Lebanon like the poultry for eggs. Following representative, commercial brands of West European or American origin are being introduced: Roman, Ross, Hybro, Hubbard, etc.

c. Trends of the number and production of poultry raised

(a) Overall condition

(i) Poultry for eggs

The poultry raising in recent 5 years (1965 - 1969) is as listed in an under-mentioned table. That is to say, 0.405 million chickens were raised on an average per year, and 0.2810 billion eggs were laid on the same basis. The number of eggs laid per poultry was only 70, which did not amount to some 1/3 that of Japan.

Year	Number of poultry (1,000 head)	Estimated number of hen's eggs laid (million pieces)
1965	4,600	306
1966	4,090	222
1967	3,735	212
1968	4,246	313
1969	3,586	354
The mean number	4,051	281

The above table shows that, even in the year with the higher output than ever, one person can eat nothing but one piece of egg per week. Accordingly, unless hen's eggs were imported at all, most people could not touch even a piece of it. For this reason, hen's eggs have been imported in large numbers in recent years. These imports are estimated to have reached 50 million pieces in 1971. The fluctuation in numbers by year was mostly because of the occurrence of diseases. Particularly, owing to the yard poultry which occupy the greater part of poultry raised, it becomes difficult to prevent the spread of ND if this disease occurs. As a result, as many as 90 per cent of the poultry existent in a community can fall dead.

The current trend of poultry raising is as listed in a below-mentioned table. It will be in or after 1973 that the highest yield record of eggs in the past (3.54 million pieces in 1969) will be broken.

Year	Number of poultry	Yield in hen's eggs	Remarks
	<u>Thousand</u>	<u>Million pieces</u>	
1971	342	276	} Estimated figures
1972	370	314	

(ii) Broilers

In recent years, the broiler raising has been rapidly developed. The number of broilers raised has been doubled year by year. The proportions of self-supply by domestic chicks are very small, and a great part of chicks supplied depends upon the imports from Lebanon.

Since the exact figures of broilers raised cannot be grasped, the estimated figures given is listed as follows:

Year	Number of chicks imported	Number of broilers shipped
	<u>Thousand</u>	<u>Thousand</u>
1967	500	350
1968	1,250	1,000
1969	2,800	2,000

Notes: Weight per broiler shipped = 1 kg in carcass

Furthermore, chicken has so far been looked upon as a high class and expensive food. Of late, however, the consumption of chicken in Arab nations (incl. Syria) has gradually increased. Particularly in Syria, the demand for chicken has rapidly increased for several years. In 1969, 2.8 million broilers were fed, of which 2 million were shipped. A total output of chicken is counted 2,000 tons on a basis of 1 kg in carcass per broiler; and the per capita consumption of chicken amounts to 300 gr. per year; in comparison of this figure with that of other average nations, it is placed at an extremely low level. The following table shows a current trend of broiler raising.

Year	Number of broilers	Output	Remarks
	<u>Thousand</u>	<u>Tons</u>	
1971	6,005	6,058	} Estimated figures
1972	6,058	6,131	

Number of broilers raised indicates a sharp increase as compared with that of several years ago, or about 3 times that of 1969. For some time to come, this level will be kept invariably.

(b) Special features in output

(i) Hen's eggs

Most of the poultry for eggs are of native breed that is low in egg-laying productivity, which is being raised in the yard of farm households, i.e. at a low raising-level. The output units of hen's eggs are pretty or small in management size; and the cost of hen's eggs produced is high; and further egg-laying is hypersensitive to the seasonal changes (because of cold weather, eggs are hardly laid). Besides, because of the occurrence of infectious diseases, the production becomes changeable so much. On the other hand, the increased demand brings on a rise in egg prices. The Government, therefore, is trying to achieve a stability in egg price by the implementation of its policy to import eggs in order to cope with a domestic increased demand in spite of a domestic short supply. Furthermore, egg prices are usually low in spring and high in winter. The average egg price per piece is p. 14 or 15 throughout a year. This price level has been kept constant in the past years.

(ii) Broilers

Broilers indicate a sharp growth in demand recently. In line with this, their yield shows a jumping increase. Since the domestically self-supply setup of chicks is not satisfactory, their supply is secured by imports. Adult broilers themselves, however, are not admitted to import. In comparison with the case of hen's eggs, an approach

to raise broilers is assuming a more industrial aspect, for example, a shift to a larger size in producing unit. Since broilers as merchandise make a quick turnover and their profit margin is relatively large, the raisers' will to produce broilers is likely to be more steadfast than that in the case of hen's eggs.

(c) Actual conditions and prospects by Province

According to the Animal Husbandry Department of Ministry of Agriculture and Agrarian Reform, the trends of hen's eggs and broilers by Province are as in the following tables:

Hen's eggs

Province	Type of management	Number of poultry raised		Output of hen's eggs	
		1971	1972	1971	1972
		<u>Thousand</u>		<u>Million pieces</u>	
Damascus	C	-	15	-	1.2
	P	380	500	27.6	50.0
Derah	S	0.8	10.8	0.12	0.92
	P	102.2	107.2	12.28	12.68
Swida	S	0.4	2.4	0.06	0.22
	P	102.6	102.6	12.14	12.14
Homs	S	-	2	-	1.6
	P	449	459	35.9	36.7
Hama	S	8	18	1.2	2.0
	P	26.8	278	26.4	27.2
Tartous	P	345	345	24.8	24.8
Lattakia	S	1.5	1.2	0.22	0.225
	P	274.5	280	21.25	21.695
Idlib	P	104	104	8.5	8.5
Aleppo	S	0.8	0.8	0.12	0.12
	P	1,000	1,100	75.0	83.0
Raqqa	P	103	103	7.4	7.4
Deir-El-Zor	P	138	138	10.8	10.8
Hasake	S	0.4	1.4	0.06	0.14
	P	138	128	12.2	12.2
Total	S	11.9	36.6	1.78	5.225
	C	-	15.0	-	1.2
	P	3,404.3	3,644.8	274.27	307.115
Total		3,416.2	3,696.4	276.05	313.540

Notes: S refers to state-run; C, agricultural cooperatives-run; P, proprietary management.

Broilers

Province	Type of management	Number of broilers raised		Output of broilers	
		1971	1972	1971	1972
		<u>Thousand</u>		<u>Tons</u>	
Damascus	S	500	505	510	515
	C	-	20	-	20
	P	2,500	2,510	2,250	2,260
Dera	S	100	101	101	101
	P	140	142	154	156
Swida	S	20	20	18	18
	P	90	90	99	99
Homs	S	50	50	45	45
	P	500	500	550	550
Hama	S	100	100	120	120
	P	185	185	203	203
Tartous	P	315	315	347	347
Lattakia	S	85	86	77	78
	P	200	200	220	220
Idlib	P	110	110	133	133
Aleppo	S	60	65	54	59
	P	800	820	880	900
Raqqa	P	95	95	114	114
Deir-El-Zor	P	70	70	84	84
Hasake	S	10	20	10	19
	P	75	75	90	90
Total	S	925	947	934	955
	C	-	20	-	20
	P	5,080	5,112	5,124	5,156
Total		6,005	6,079	6,058	6,131

Notes: S refers to state-run; C, agricultural cooperative-run; P, proprietary management.

When the numbers of poultry for eggs and of broilers raised are put in order out of the previous table, the following table is available:

Order	Item	Poultry for eggs			Broilers		
		Province	Number (Thousand)	%	Province	Number (Thousand)	%
1	Aleppo	1,000	29	Damascus	3,000	50	
2	Homs	449	13	Aleppo	860	14	
3	Damascus	380	11	Homs	550	9	
4	Tartous	345	10	Tartous	315	5.2	
5	Hama Lattakia	276	8	Hama Lattakia	285	4.7	

As seen in the above table, poultry for hen's eggs are numerous in the order of Aleppo, Homs and Damascus; and broilers, in order of Damascus, Aleppo and Homs. Total number of poultry for eggs plus broilers is overwhelming many, i.e. 3,380 thousand in Damascus, followed by 1,860 thousand in Aleppo and 999 thousand in Homs. At any rate, the districts embracing big cities as consuming centre for a background, are large in numbers of poultry raised; and the 3 Provinces out of 12 across the nation (Damascus, Aleppo and Homs) alone, account for a majority of total numbers in poultry for eggs (53 per cent) and a great part of broilers (73 per cent). Thus, these 3 Provinces comprises a major, poultry-raising belt in Syria.

Also, consideration being taken into about the position that broilers are looked upon as important more than poultry for eggs, Damascus Province embracing Damascus as a capital city can be said to be the largest poultry-raising belt.

d. Size and type of management

(a) Poultry for eggs

Because of the greater part of poultry for eggs being raised in the yard of farm households, the size of management is small, i.e. the management unit of 10 to 15 fowls. Large sized poultry farms number 40 across the country, each of which keeps 1,000 to 20,000 fowls. The types of management are roughly divided into the following 2: state-run and private-run; and in turn the latter is divided into both of agricultural cooperatives-run management and proprietary management units. Primary producing-units are mostly made up of proprietary management, which accounts for 99 per cent of the total management units. It is a fact that only a few of agricultural cooperatives just have set out to raise poultry this year (1972). In addition, the proprietary management consists of various types of management, such as joint, full-time, part-time and yard poultry.

(b) Broilers

Broiler raising as part-time management of farm households has a size of more than 100 fowls, which is larger than the size in poultry for eggs.

Large-size broiler farms number 246 throughout the country, whose size is of 1,000 to 15,000 fowls. Renewed feeding is conducted every 2 months, and a 4 or 5-time shipping takes place throughout a year. The types of management are of state or private-run like the case in poultry for eggs. Primary type of management is of private-run (proprietary management), which accounts for 85 per cent of total.

e. Consumption and distribution

The channels of consumption and distribution are not in

a satisfactory alignment. The whole route: producers → agricultural cooperatives → markets → retailers → consumers. Also, the types of shipping by producers are the following 3: big-lots contract, transaction through middlemen and direct sales. And a standard trade is not yet carried out. Hen's eggs are counted in pieces, and broilers in weight. Moreover, the producer prices are decided on 2 times a year by the Price Decision Commission composed of representatives from Government and producer organizations (who are appointed by the Ministry of Agriculture and Agrarian Reform).

The market-prices set 3 months ago are:

Hen's eggs:

£s. 16 per 100 pieces (50 gr per piece)

Notes - The fact is that eggs are likely to be traded at

£s. 13 or 14 per 100 pieces.

Broilers:

Gutted carcasses per kg:

Producer price - £s. 3.5

Wholesale " - " 3.75

Retail " - " 4.05

For reference

Mutton:

Meat with bones - £s. 5/kg

Fresh meat - £s. 7/kg

Next, chick prices are not regulated by Government but committed to prices set on Beirut Market.

Prices of chicks just hatched:

A chick for poultry for eggs - £s. 1.75 (inoculated with MD & ND)

A chick for broiler - p.70 to 80 (inoculated with MD & ND)

However, prices at the yard are increased by 10 to 20 per cent, transport charges being added.

f. Exports and imports of poultry raised

Poultry products are being liberalized in view of the promotion of poultry raising. although the shortage of egg supply is covered by imports because of the impossible self-supply at home, the Government will take measures for suspending imports from overseas on the morrow of the accomplished self-supply.

The exports and imports of hen's eggs of late are as follows:

Year	Imports		Exports		Increase or decrease £s. 1,000
	Volume	Value	Volume	Value	
	<u>Tons</u>	<u>£s. 1,000</u>	<u>Tons</u>	<u>£s. 1,000</u>	<u>£s. 1,000</u>
1965	58	95	576	860	+ 765
1966	209	341	759	1,168	+ 827
1967	749	1,327	99	207	- 1,121
1968	2,208	3,098	25	43	- 3,098
1969	113	799	21	85	- 714

Unlike the past trends, the hen's egg trade has turned to an excess of imports over exports since 1967. This is due to both causes of the decreased domestic output and the increased domestic demand and at the same time due to the Governmental policy to actively promote egg imports, which aims at achieving a stability of egg prices. Thus, egg prices are being maintained on a constant level throughout a year. From the viewpoint of furnishing the nation with needed animal

protein, the Governmental policy counting on imports will be implemented now or in the future as well. However, this approach by Government, is not a healthy thought as the Government recognizes because of various reasons; coupled with the reason that hen's eggs are a sort of merchandise which deteriorates quickly in quality. On the other hand, that policy adversely affects small-size poultry raisers in particular. In other words, the fact is that petty, small-size management units deal a heavy blow because home-produced eggs cannot favorably compete with imported eggs owing to the former's high cost in production.

In this respect, although the import of chicks just hatched is being authorized, the import of broilers themselves is not the case from the standpoint of the protectionism of domestic industry. Also, chicks can be purchased free duty. The quarantine is not being enforced at all, confidence being placed on exporters. At the export time from Syria, however, the quarantine of products is one-sidedly conducted for the sake of her counterpart nation. The situation is that the seed chicks for broiler must count on the imports in great portions. As stated in the previous paragraph, the imports of seed chicks for broiler, in line with the increased demand for broilers, were sharply increasing year by year, i.e. 500 thousand chicks in 1967; 1,250 thousand in 1968 and 2,800 thousand in 1969. In addition, duty-free steps are taken for implements and feedstuffs related to poultry raising the same with the case of chicks.

g. Condition of poultry raised for breeding

Relating to farms of poultry for breeding, there are only two of respective state-run farms of poultry for breeding in

Hama and Fedio. Of these, the latter was just authorized three months ago and the former alone is now in operation. This farm (Hama) has been trying to achieve sustained or increased reproduction of varifying breeds of breeding-poultry at a 10,000-fowl raising level since 1960 (when it was created), while introducing such breeds as white leghorn, rhode, new Phamshire, Rite Sussex and white cornish from European nations such as Britain, Italy and Denmark; and, white leghorn, rhode, white cornish and white rock are only being raised now. Stress was placed on the improvement of indigenous breeds in the past years. However, since these breeds are only too low in productivity, unlike the utility poultry for breeding, the improvement of native-breed poultry are not being made at present. The Hama farm takes charge of producing chicks of commercial brand, of delivering 350,000 chicks per year and of giving a technical guidance, and, is raising parents, which has been improved year by year. Existent parents as poultry for eggs are of 11,000 fowls introduced from Denmark last year. and renewed parents were likely to arrive in Syria from Denmark the late November. As for broilers, roman parents are being introduced from Lebanon. For the time being (for a decade from now), the Government will not take into consideration the improvement of breeds.

At the outset of business, even though chicks of commercial brand had been provided, the greater part of chicks delivered would have fallen dead at the launching time of feeding because of a low technical level in chick raising, little knowledge about feeding methods and the occurrence of diseases. Afterward, although 4-year-old chicks were delivered anew, this case as well came to a failure because of their

inadequate raising. For three years from 1968, it has been decided that 6-month portions of combination feedstuff (12 kg per chick) should be delivered together with a delivery of 4-weeks-old chicks. In case of young females, the combination feedstuff of 8 kg per female has been added to deliver.

Besides, in the state-run poultry farm now under construction in Saydanayo, 30,000 of poultry for breeding are expected to introduce from abroad next spring. It is likely that the selection of brands raised was decided upon a basis of egg-laying capability and others. Besides, farms of poultry for breeding are expected to set up at the three spots of Aleppo, Homs and Hasake.

h. Condition of chicks hatched

There are 13 of private-run hatcheries across the country, whose hatching capability is 21,000 chicks per hatchery, or 6 million per year. Five hundred thousand chicks kept by state-run hatcheries being added to those chicks, the total number of newborn chicks amounts to 6.5 million per year. Upon completion of the Saydanaye hatchery now under construction, 8 million of newborn chicks are estimated to keep, which means a possible supply of some 10 million per year. In order for the domestic demand to be met, however, the number of adult poultry or broilers shipped is needed to become 18 to 19 million. The survival yield during raising being into account here, the number of newborn chicks needed amounts to 20-21 million. But the fact is that the estimated supply meets only a half of the total demand.

i. Condition of demand and supply of feedstuff

Since Syria is an agricultural nation, the following commodities are fully self-sufficient: corn such as Indian

corn, wheat and barley as well as simple-taste feedstuff such as soy-bean cake and cottonseed cake. On the contrary, the following commodities cannot be produced: animal-protein feed such as fishmeal, inorganics, anti-biotics, vitamins and additive feed such as disease-preventive medicines. These, therefore, depend on the imports. These are imported from France in a package manner of concentrated feedstuff (two varieties of products: the 10 to 12% and the 20 to 30% content in rough protein; and these products are called "Concentrate."). For output of the perfect combination-feedstuff put on the market, there is only one plant (semi-governmental) in Dommar at the outskirts of Damascus. The yield of this plant is 160,000 tons per year, which meet the half of the nation's demand. In the course of 5 years from now, feed-making plants are expected to set up in Homs and Hama Cities, respectively. Each of these plants can put out 72,000 tons per year. Nevertheless, the demand for sheep and poultry is estimated at 0.6 million tons, of which 0.4 million for poultry. As being the case, even though the above-mentioned plants have been completed, about one-third of the total demand can only be satisfied. Most of the poultry raisers purchase domestic feedstuff and concentrated feedstuff, which they combine with their feedstuff at hand, for their own use. In addition, if their management details are made public they are allowed to purchase feedstuff free-tax. It seems likely that the National Feedstuff Inspection Office (set up under the assistance of West Germany) makes an inspection of feedstuffs and that the Ministry of Health makes an inspection of poisonous medicines.

j. Profitability

(a) Hen's egg management

The net profit per hen's egg amounts to p.1 or 2. The net profit per poultry for eggs (incl. income of poultry disposal) amounts to £s. 7 or 8 at the maximum. On a basis of 1.5 years for adult-poultry raising, the net profit per adult poultry is £s. 4 or 5 per year. Accordingly, the net profit of £s. 4,000 to 5,000 per year is estimated on a basis of 1000-fowl raising.

(b) Broiler management

Broilers shipped are 40-to-60 days old. They average 50 days old. The body-weight of a broiler shipped is 1.25 to 1.75 kg per live broiler, i.e. 1.5 kg on an average. The profitability of broiler depends largely on age and body-weight. For example, if a broiler of 1.5 kg in live-body weight is produced and shipped, the profitability will be as follows: The sale price averages £s. 2.75 as against £s. 2.0 to 2.5 in production cost. The net profit of a broiler, therefore, is p.25 to 75, i.e. p.50 on an average.

Therefore, assuming that the reproduction is carried on 4 or 5 times per year on a 3,000-broiler raising basis, the net profit is estimated at £s. 6,000 to £s. 7,500 on an annual average.

In comparison with the management for hen's eggs, the management for broiler is more profitable because 3,000-broiler raising usually matches the 1,000-poultry for eggs raising in a manner of management scale; and in addition, broiler raising is shorter in period, which results in a less danger of loss due to diseases; and thus it is natural that broiler raising is more advisable and, as a result, that

the raisers' zeal for broilers is remarkable,

(2) Actual status of the management of poultry raised

a. Natural environment (conditions of weather and location)

Poultry raising has been developed in and around the cities in the west region. Otherwise, poultry-raising belts are roughly divided into two: the Mediterranean coastal region of the northwest sector and the inland region; and in turn the latter is divided into two: low land (Oasis region) and high land (plateaus).

(a) Weather condition

Weather condition varies greatly with those regions.

Since the latitude of Syria is about the same with that of Japan, the seasons of the year is witnessed at any rate. Ordinarily by the existence of precipitation, there are a dry season (April through October) and a rainy season (November through March).

Atmospheric temperature and humidity on an average:

	Average atmospheric temperatures (°C)		Maximum atmospheric temperatures (°C)	Humidity (%)	
	Littoral	Inland		Littoral	Inland
Dry season	28 - 30	27 - 32	35 - 38	35 - 40	10 - 15
Rainy season	15 - 20	7 - 15	20 - 25	30 - 90	30 - 90

Amount of precipitation:

There is almost little of precipitation during the dry season. Even if during the rainy season, there is only a

little precipitation. There are a lot of differences in rainfalls according to the regions. The most amount of precipitation, i.e. 750 to 875 m/m per year (less than a half the rainfalls of Tokyo) is witnessed in the Mediterranean littoral; about 225 to 375 m/m, in the inland region; and 125 m/m or thereabout, in the desert region.

(b) Condition of location

Syria's poultry raising is being carried on in the weather condition as stated in the previous paragraph. As for the condition of location, it can be said that there are many poultry farms easy of access to consuming centres (except for yard poultry). There are scattered communities in the farming districts; and the distance between these communities each other is mostly 20 to 30 km. In such farming districts, apart from yard poultry, there are many inconveniences in the aspects of feed procurement and of shipping in the management of more than middle scale.

(c) Structure of henhouse

Most of the henhouses are made of stone, stone and clay, concrete or block, but not of wood. A henhouse is one-storied with its flat roof of the same material with that of house body.

In the farm-village districts, it is essential to utilize as henhouse outhouses or barns of stone or stone-clay; and these henhouses are found on the farm-household premises. The ceiling is high as usual or even fairly high. And some of the henhouses are of a structure just as a warehouse. From the standpoint of the measures taken against the high temperature in summer, that structure seems to be effective in cutting off heat. Henhouses are generally of a

structure with less open spots, which results in a bad ventilation. In other words, there are hardly modernized open henhouses. There is a big project in Damascus, under which will be built super-modern henhouses without no windows, capable of environment being adjusted; in addition, most ground floors of henhouses are made of concrete.

b. How to keep poultry

Yard poultry of farm households in Syria refers to a keeping of poultry partly at large. And the remaining keeping way is all enclosure poultry with a henhouse. Cage poultry has not so far been conducted at all. However, there is a big project of poultry for eggs, under which cage poultry is to take place. Moreover, at the inception of raising chicks, examples of battery poultry are seen.

c. How to manage poultry raising

(a) How to manage chick raising

Although, in a big-scale management, chicks are raised in a manner of battery poultry and the chicks after their second-stage growth are partly in a manner of enclosure poultry, most chicks are raised in a manner of enclosure poultry with umbrella-shaped incubators using petroleum or propane gas. Generally, chick-raising houses are not independently built. Instead, part of a henhouse is substituted as chick house. According as chicks grow, larger space is occupied by chicks in the henhouse. Up until shipping takes place as to broilers or up until poultry is disposed of as to the poultry for eggs, the chicks continue to be raised in the same henhouse. Halfway, chicks are never moved to another place. Accommodation density of chicks is likely to be proper. Wheat or barley straw and sawdust are used for the laying of

materials. Because of low temperature and dry weather, the warmth of ground floor is hardly witnessed. In case of broilers, products of 1.25 to 1.75 kg, i.e. averaging 1.5 kg are shipped after chicks have been raised for 35 to 50 days.

(b) How to manage adult poultry

After the chick-raising stage, their grown up chicks (adult poultry) continue to be raised in the same henhouse. Two-storied nests made of metal are placed along both walls. In part because of the occurrence of poultry diseases during raising as well as of the maladroit raising skills, we have been given the impression that chicks' growth is not uniform, late in their first birth and somewhat maladroit in egg laying, despite the use of name-brand foreign chicks. Materials laid on the ground floor are properly being supplied. Some henhouses are building up litter on the ground floor. The period in which adult poultry is raised, is 12 to 18 months after the starting of egg laying.

(c) Condition of supplying feedstuff

For the poultry raised in the yard of farm households, self-sufficient feedstuffs are used. Poultry raisers of more than 1,000 fowls provide poultry with (i) combination feedstuff from state-run feedstuff plants or (ii) feedstuff of both domestic supplies and "Concentrate" combined at own home. These feedstuffs are of good quality. As the simple-taste feedstuffs combined at home, there are mainly mentioned "Concentrate," barley or wheat, bran thereof, cottonseed cake, etc.

Products of state-run feedstuff plants are of brand "Nefco" both for broilers and poultry for eggs; and in turn the Nefco-brand products for the latter refer to those for

keeping of chicks and adult poultry. Any of these products have the ingredients in parallel with an international level, and these products satisfy 50 per cent of the demand needed at present. Let us present you instances of combination feedstuffs in the following tables:

Combination Ratios of Feedstuffs (Weight ratios)

Item	For poultry for eggs	For broilers
	%	%
"Concentrate"	22.5	31.0
Indian corn	30.0	69.0
Milo	22.0	-
Barley	15.0	-
Bran	5.0	-
Calcium carbonate	5.5	-
Total		
Remarks	For adult poultry Price at plant Unit price: p.46/kg	However, to add 3.76% of fat to above- mentioned 100%, until 5-weeks-old Unit price: p.54/kg

Assured component in "Concentrate"
(imports from France)

Ingredients	For poultry for hen's eggs	For broilers
	%	%
Rough protein	17.00	20.80
Digestible protein	14.82	18.50
Fat	3.55	3.76
Rough fibre	3.20	3.12
Phosphoric acid	0.80	0.80
Heat value (calories/kg)	2,680 cal.	3,000 cal.
Vitamin A	10,225 IU (kg)	10,875 IU (kg)
" D 3	2,000	1,650
Riboflavin	5.05 mg	7.0 mg
Pantothenic acid	10.0	12.5
Niacin	40.0	40.0
Vitamin K 3	12.0	5.0
" B 12	15.0 meg.	12.5 meg.
Remarks	Contains, besides the above-mentioned, Vitamin E, folic acid, choline, methionine, arginine, etc.	Contains, besides the above-mentioned, (anti-coccidium), Vitamin E, B 6, thiamine choline, folic acid, anti- biotic, salt, such minerals as iron, zinc, copper and cobalt, etc.

Poultry in Syria are fed in a manner of mal-feeding (al mush). Feeding implements are about the same with those in Japan. That is to say, the V or U shaped feeding implements of white iron are being put in use; wooden or handmade feeding implements have not been witnessed; and the national establishment of big scale uses the cylindrical feeding implements of suspending system or the feeding installation of chain-conveyer system. Next, water-supplying implements are also all the same with those in Japan.

d. Sanitary condition

(a) Condition of poultry diseases

There are various malignant diseases, such as ND, CRD and IC at all times, and, as a result, poultry raisers suffer a big damage. Leukemia (LL, Lymphatic gland inflammation) has also been experienced from former days. On the other hand, although the damages by MD are not likely to be large, some instances of MD strikes were recognized during our investigation period. Also, Ganboro disease has struck poultry in recent years. Above all, ND has been virulent for twenty and odd years. We could observe the details of this actual condition on the spot. Although ND has not so far been rampant across the nation this year, its sporadic strikes seem to have been experienced in various districts. The condition of ND strikes, etc. was impossible to exactly grasp because of no available statistic information. According to the governmental sources, it is said that about 1 million fowls, i.e. 10 to 20 per cent of the poultry suffering from illness, are estimated to fall dead every year due to the chronic-type diseases in summer and the acute-type ones in autumn. For the sake of ND countermeasures to be taken, the Government has

been driving forward a rigid enforcement of preventive inoculation while importing a kind of raw vaccine (Komorov Strain) from former days. The fact is, however, that the satisfactory fruits have not been gained as yet.

The following is a vaccination program:

1st-time vaccination	-	8-to-10-day-old poultry	-	Dropping lotion in the eyes
2nd-time	"	- 18-to-20-day-old	"	- Providing drinking water
3rd-time	"	- 60-day-old	"	- Intramuscular injection

After that, intramuscular injections are made every 6 months. In addition, poultry are being rigidly vaccinated against diseases.

(b) Condition of sanitary management

As for the sanitation of poultry farms, the sanitary management can be pointed out to be generally unsatisfactory as follows:

- (i) Henhouses or implements are not completely being washed with water as disinfectant;
- (ii) Chicks and adult poultry are hardly being segregated;
- (iii) The setup of segregation from the outside is incomplete;
- (iv) Changing clothes or shoes of raisers is not strictly being enforced;
- (v) A certain disinfection is not rigidly being

enforced;

(vi) The environment in a henhouse --- particularly ventilation --- is generally in bad condition;

(vii) On occasion of the occurrence of infectious diseases, the immediate measures to be taken are not proper, and the preventive measures against the spread of infectious diseases are not proper, either.

(viii) Incomplete guidance on the raising skills and sanitary aspects at the end area;

(ix) Vaccination is not always given thoroughly.

Moreover, the poultry which fell dead are generally destroyed by fire or buried under the ground, and are not served for food.

e. How to dispose of poultry droppings

Poultry droppings are reduced into the soil as fertilizer. Since chemical fertilizer costs high, poultry droppings are highly valued. These droppings are utilized in the flowers or vegetables growing belt. Because Syria is sparsely populated in a vast land, there are no problems about environmental pollution.

(3) Actual status of the occurrence and prevention of poultry diseases

First of all, it must be noted that ND has been spreading in recent years. Out of the 1,600 cases of poultry of which the Central Veterinary Laboratory made an inspection last year, 200 cases suffered from this disease. On the very day when the Team landed in Syria, 2 cases were clearly diagnosed as ND, with their symptoms of bleeding and diarrhoea. That is, one case was referring to 300-poultry raising, and, the other, to 30,000-poultry raising. The raisers, therefore, were greatly

embarrassed about how to manage that disease. In addition, we were informed that halfway-grown chicks with their neck bent were mingled in some broiler farm and that about a half of broilers raised there had fallen dead thus far. Also, we were informed that all of several tyousand fowls had died in Chamber at a death-rate of several hundred fowls per day. Also, it was impossible for us to make an inspection of some farms of poultry for eggs because of the occurrence of some poultry diseases.

Besides ND, major infectious diseases seem to be leukemia (including MD) and respiratory disease. Also, in some farm of poultry for eggs where raising management was fairly good in appearance, there was the poultry suffering from tumors in liver and ovarium. Also, we witnessed the poultry with a queer voice or with a swelling on face. The Central Veterinary Laboratory's medical book tells us that there are various diseases as the above-mentioned and that there are coccidiosis and colitis in addition to the above-mentioned diseases.

As for the vaccination against ND, the Komarov-type vaccine is used with the enforcement of both dropping lotion in the eyes and intramuscular injection in large-scale poultry farms or in the national farms of poultry for breeding. It was said that drinking B₁ water was not very effective. However, we doubt whether or not such subjects as a drinking-water factor are being taken into consideration. Also, even in the well-substantiated poultry farms, there are only several kinds of medicine added to feedstuff without the preparation of execution of dissection or blood-taking. Accordingly, it is an urgent business to set up and make popular the diagnosis

of infectious diseases in a manner of serology and etiology. Views are usually stated in a manner of morbid anatomy on the sick poultry brought in the Central Veterinary Laboratory. As things stand today, it would be impossible to sever, confirm and fix virus in a manner of virusology, or further to make an attempt to thoroughly solve problems in a manner of infectious disease science. Also, if the poultry brought in was suffering from ND, the Laboratory was in danger of becoming a medium of ND.

(4) Livestock administration

a. Both Departments of Animal Husbandry and Animal Health, Ministry of Agriculture and Agrarian Reform take charge of livestock administration, together with the local Departments of Agriculture set up in 12 Provinces. In this way, livestock administration is uniformly being handled.

b. The halfway administrative guidance in terminal area, the weak organization, the lack of technologists, the absence of maneuverability, etc. ——— these factors, so far as poultry diseases are concerned, have brought about more than losses ——— which result in the lowerness of productivity, coupled with the backwardness of elementary understanding on poultry diseases and the lack of sanitary concepts.

4. Poultry-raising promotion project and its enforcement, etc.

(1) Promoting measures taken place thus far, etc.

In the light of the importance of poultry raising, the Government has recently coped with the poultry raising with its fresh determination made.

(a) The sufficiency of domestic demand and the stabilize hen's egg prices by means of a large quantity of hen's egg

imports;

(b) Promotion of broiler production by means of the import of chicks, especially seed chicks for broiler;

(c) Measures for exemption from import-duty of poultry-raising materials, such as chicks, feedstuffs and roll-shell;

(d) Establishment of state-run feedstuff combining plants;

(e) Establishment of a state-run farm of poultry for breeding; distribution of 300,000 to 350,000 commercial chicks per year; and production and sale of 80-ton broilers;

(f) Setup of poultry farms affiliated with the Chamber of Agricultural Medicines at 5 localities across the country (production of hen's eggs and broilers);

(g) Manufacture of vaccine ——— free of charge; establishment of mass-production setup for ND vaccine;

(2) Driving forward of new projects, etc.

For the purpose of achieving a complete self-supply of hen's eggs and broilers, the Government is driving forward the following projects as part of the third 5-year economic development plan (1971 through 1975):

a. Increased setup of state-run feedstuff combining plants - newly two;

b. Substantiation or expansion of the national farms of poultry for breeding (3 farms);

(a) Expansion and repletion of the Hama farm of poultry for breeding ——— to raise 9,000 to 15,000 fowls and to distribute 350,000 to 700,000 chicks per year;

(b) Substantiation of the Lattakia farm of poultry for breeding ——— to increase a distribution of chicks per year;

(c) New establishment of the Tartous broiler farm ——— now under construction under a Presidential order and to be completed in the near future; after its completion, 50,000 to 60,000 broilers will be shipped;

c. Creation of national large poultry farms ——— to be established in 4 districts across the country over the 3 periods divided; 33 million hen's eggs and 3 million broilers to be produced per year; the first-period work has been mostly completed; and the whole of 3 periods (1971 through 1972) is expected to terminate in the near future.

d. New establishment of a national poultry disease center, and the strengthened poultry-disease measures through a consolidation of the Central Veterinary Laboratory.

Out of the above-mentioned, what the Government attaches the most importance to, is the creation of national large poultry farms ——— c. whose first-period work is now under way. Outline of this work is as follows:

Purpose of setup: increased production of hen's eggs and broilers; increased delivery of chicks; production of 33 million hen's eggs per year (about 10 per cent of the total across the country); production of 3 million broilers per year (1.5 kg of a live body); and 1 million of seed chicks for broiler are to be delivered to private-run poultry farms.

Executor of this undertaking: Ministry of Agriculture and Agrarian Reform.

Operation of governmental undertakings:
Independent profit accounting.

Moreover, as for the poultry farms to be setup in Damascus, there are mentioned 4 complexes: the centre of poultry farm for breeding and hatching, the broiler farm, the

treatment place thereof and the farm of poultry for eggs; and these complexes, respectively are operated subject to their independent profit accounting and are managed vertically instead of horizontally.

Period	Site	Output target and other details
First period (1971)	Damascus	<ul style="list-style-type: none"> (i) Establishment of farms of poultry for breeding and of houses of poultry for breeding; raising 30,000 fowls on an average per year (ii) Hatching centre ——— hatching farm with 20 incubators (10,000 eggs per incubator) to hatch 3 million broiler-chicks per year. (iii) Setup of broiler farms and of the raising houses thereof to produce 1 million broilers. (iv) Treatment places for above-mentioned and other treatment facilities in order to treat 1 million fowls per year. (v) Setup of farms of poultry for eggs and of cage houses to put out 16 million fowls per year.
Second period (1972)	Homs and Lattakia	<ul style="list-style-type: none"> (i) Broiler farms (ii) Treatment place for above } Output or treatment of 50,000 fowls each per year.
Third period (1972)	Aleppo	<ul style="list-style-type: none"> (i) Broiler farm (ii) Treatment place for above (iii) Poultry for eggs - output of 16 million fowls per year. } Output or treatment of 1,000,000 fowls each per year.

Budget needed to setup the above-mentioned facilities: £s. 40 million in total.

Breakdown { £s. 30 million - For building of above facilities
£s. 10 million - For operation

Of the total budget, £s. 9 million were already appropriated for 1971 building (£s. 6.5 million) and for 1971 machines and tools (£s. 2.5 million); and £s. 9 million for 1972 estimates are being requested for operating expenses in the Damascus district as well as for construction expenses of the second-period work in the Homs district.

Number of persons required (202 in total)

Personnel \ District	Damascus	Homs	Lattakia	Aleppo	Total
Agricultural engineer	6	3	3	3	15
Veterinarian	3	1	1	1	6
Agricultural, veterinary technologist	14	4	4	6	28
Worker	58	28	28	39	153
Total	81	36	36	49	202

Business profits:

Gross yield - £s. 10.034 billion per year

" income - " 2.646 " " "

As shown in the following table, the commercial profits in the broiler-output line are larger than the hen's

egg line. As for the profits per unit, 40 per cent is expected in the broiler output but only 13 per cent in the poultry for eggs.

Commercial profits by lines

Line	Item	Volume	Unit price	Value	Percentage of left column	Production cost	Production cost per unit	Profits per unit
		Pieces	£s.			£s.	£s.	£s.
Poultry for eggs	Hen's eggs	32,000,000	0.10	3,200,000	82.90	2,738,000	0.085	0.15
	Poultry for eggs	80,000	4.00	320,000	16.58	374,000	13.42	0.58
	Laying materials on the floor	10,000	1.00	10,000	0.52	8,000	0.80	0.20
	Total			3,530,000	100.00	3,120,000	4.305	0.93
Broiler	Broilers	3,000,000	3.75	10,875,000	92.55	7,962,000	2.65	1.10
	For breeding	30,000	4.00	120,000	1.48	84,000	2.80	1.20
	Chicks	520,000	75%	390,000	4.81	276,000	0.53	0.22
	Hen's eggs	840,000	10%	84,000	1.04	60,000	0.07	0.93
	Laying materials on the floor	10,000	1,000	10,000	0.12	7,000	0.70	0.30
Total				11,479,000	100.00	8,389,000	6.75	3.75

As above-mentioned, a more epoch-making plan than ever has been established for promotion of poultry raising in Syria. This means the Government's zeal and determination for poultry raising. The Government is trying to terminate such projects through 1972; and there are also some projects that will start within 1972. The purpose of such projects is not only to form a centre where the yield of hen's eggs and broilers is increased but also to enlighten private poultry-raisers and give them indirect aid. In other words, the purpose of such projects is to form pilot-farms with the aim of materializing a modernized poultry-raising management as well as to supply home-produced chicks which are good in quality and reasonable in price.

Hereafter, on the morrow of such projects' termination, the Government will consider an alteration of its import policy implemented thus far. That is to say:

a. The import of new-born chicks (for eggs and for boilers) is indispensable at the moment. However, it will not be authorized in the year of 1972, when domestically-produced chicks are to be produced and delivered to raisers.

b. The import of hen's eggs is limited only to the quantity needed to stabilize egg prices at home. In other words, this means that the import does not take place for the time being.

c. The Ministry of Agriculture and Agrarian Reform will carry on not only a technical guidance on the import of "Concentrate" feedstuff but an enforcement of quality-inspection in order to protect the producer's interests.

d. All machines and tools related to poultry raising are exempted from tax.

e. In order to protect the interests of small-scale producers, the Government will not authorize the import of live bodies or treated carcasses except the case where the import is needed to stabilize the domestic market price.

5. Problems in the survey results

(1) Guidance on skills or techniques of up until the terminal phase is not sufficient. The guidance on the aspects of raising management and sanitation is not sufficient, either.

(2) Vaccination is not thoroughly being conducted. There remains more to be considered as to how to inoculate.

(3) The disinfection of henhouses and implements is not being enforced strictly. Sanitary measures are not fully implemented. Take this, for instance. Changing clothes or shoes of raisers hardly takes place.

(4) Sanitary concepts are lacking. Injectors are not in good arrangement even in large-scale full-time poultry farms.

(5) Raising environment which must be improved was witnessed. For the reasons of existing badly-ventilated henhouses as well as of existing undesirable utilization of outside exercise grounds, there are problems in prevention of diseases.

(6) Raised chicks are not almost being separated. This cannot be proper from the standpoint of prevention of infectious diseases.

6. Measures to be taken in your country.

(1) Strong measures should be driven forward against infectious diseases, particularly for a eradication of ND.

Concrete measures are as follows:

a. All-out vaccination (adoption of frequent vaccination, spray method, etc.)

- b. All-out disinfection
- c. Enforcement of antibody surveys
- d. Separation and confirmation of virus
- d. Establishment of how to diagnose poultry diseases
- f. Enforcement of sanitary environment surveys
- g. Occurrence of poultry diseases
- h. Rigid enforcement of separate raising
- i. Restriction of the transfer at the time of ND occurrence, if necessary, relating to poultry, eggs and food-stuffs, etc. in the localities where infectious diseases have occurred.
- j. To kill poultry suffering from ND (consideration should be taken about the relationship with the Infectious Disease Preventive Law.).
- k. Establishment of a report system to prevent infectious diseases
 - l. Early finding of diseases through enforcement of a periodic diagnosis, and an early prevention of disease-spread.
- m. All-out activity of publicity ——— To this end, to secure and substantiate its maneuverability.
- n. Establishment of a quarantine system against imported chicks.
- o. Large-scale poultry raisers should be compelled to establish a sanitary expert line.

(2) About the establishment of a poultry disease centre

- a. It is essential to set up the following centre at the earliest possible time in a major poultry farm belt: Centre having functions to control the poultry disease-related diagnosis and the prevention of diseases.

b. The above Centre should have maneuverability of its own so as to cope with diseases as the occasion demands.

IV. Japan's Cooperation

1. For promotion of the poultry raising industry, it is absolutely indispensable to eradicate poultry diseases. The Team made a survey of the actual status on poultry diseases in your country. As a result, it has now become clear that the poultry diseases are in grave situation.

From this, the Team made a survey has reached a conclusion that it is most advisable to extend a cooperation about the control of poultry diseases. And the stress of this cooperation should be placed on dominating poultry diseases in the open air, unlike what centered on the studies in which the Government of Japan has so far cooperated. In this sense, we have a general idea that the cooperation in the future should be directed toward practical and substantial matters.

2. Concrete substance

(1) The most importance at the moment should be placed on the control of ND.

(2) So that poultry diseases may be thoroughly controlled in the cooperation of Japanese experts concerned, some model-areas should be set up for the prevention of diseases. In this case, the model-areas should be selected centering in Damascus. However, since, as for the model-areas, etc., a further detailed consideration seems to be necessarily taken, the setup of these areas should be decided depending on experts to be dispatched.

(3) As occasion demands, advice will be given concerning on the administration of poultry diseases from the technical point of view.

(4) Since the training of technicians seems to be an

urgent business, the Japanese Government will soon consider the chance to enable your technicians to be trained in Japan.

3. Scale of cooperation

(1) Japanese experts will be dispatched so as for the following to be covered:

Diagnosis - pathology, fluorescent antibodies, serum reaction.

Prevention of diseases - Culture of tissue, vaccinn examination.

Epidemics - Survey in the open air, guidance on the spot, raising-management.

(2) Equipment and materials

(a) Facility of examination room

(b) Veterinary medecines, implements or apparatuses and materials

(c) Books

(d) Vehicles

4. Time of the cooperation to be launched

Although the substantiation of your recipient setup in Syria is a requisite, the Japanese Government considers unilaterally that the cooperation be launched during fiscal 1972.

V. Information

(1) Poultry Development Plan in Syria:

SUBJECT: A review on the Development of the Poultry Industry
in S.A.R.

DATE: 23.11.1971

(A) POULTRY PRODUCT'S PRODUCTION DURING THE PAST FEW YEARS

1-EGGS:

Agricultural statistics released by the Government on local egg production in Syria during the past few years showed strong fluctuations from one year to another with a general Characteristic of low level of production.

TABLE No. 1

<u>Year</u>	<u>No. of Birds/1000 birds</u>	<u>Estimated local egg production/million</u>
1965	4,600	306
1966	4,090	222
1967	3,735	212
1968	4,246	313
<u>1969</u>	<u>3,586</u>	<u>354</u>
Average	4,051	281

It can be seen from table No. 1 that average local egg production during the period from 1965 to 1969 was 281 million eggs per year.

In other words, if we leave out the import-export egg trade, local egg production would be only enough to make available one egg per week per capita at best estimation (Syria's population is 6 million). If we consider the factor that some people consume eggs in their meals almost daily, then it would be possible to visualize that many other people

do not eat eggs but rarely.

The problem is further more complicated by the fact that Syria's population is increasing at a high rate (3%). At the same time the Government has been giving lately increasing interest for the implementation of some large industrial and agricultural projects and spending million of pounds in this direction which eventually would result in an increase in the purchase power of many workers and farmers and the improvement in their standard of living. This naturally would lead to the improvement of their nutritional requirements and increased consumption of animal products among which eggs is an important item.

Syria has become an importing country after it used to be an exporting country for shell eggs. Table No. 2 shows the import-export trade in shell eggs in the period from 1965 to 1969. The negative egg value balance started to appear in 1967 and continued till the present time.

Table No. 2

Year	I M P O R T		E X P O R T		Value Balance in 1000 L.S.
	Quant./ tons	Value/ 1000 LS	Quant./ tons	Value/ 1000 LS	
1965	58	95	576	860	+ 765
1966	209	341	759	1168	+ 827
1967	749	1327	99	207	- 1121
1968	2208	3098	25	43	- 3098
1969	113	799	21	85	- 714

Local egg production as seen from tables 1 and 2 would be unable to cover the local consumption market needs with enough eggs and at reasonable prices all the year around. The main reason for this situation is that the main source of eggs is the farmer or the small poultry producers. Production by this type of people have three main characteristics which are:

- 1- Small size of production per unit.
- 2- Seasonal type of production.
- 3- Increased cost of production per unit.

As a result of these three characteristics and because of the increase in population size with rising standard of living and/or increasing purchase power of the working class, demand for eggs is progressively increasing leading to an increase in prices.

The Government interfered in the egg market and suggested temporary solutions for the problem by approving the importation of eggs for consumption as conditions may arise. It can be seen from table No. 2 that large importations of eggs started in 1967 and in the following years. The effect of these importations was reduction of the average annual prices and keeping egg prices more or less constant all the year around. However, to depend on importation to fulfill a nutritional consumption need is rather a dangerous and risky policy especially in such a commodity that is subject to quick deterioration. In addition this importation policy would also have bad effect on the local production and especially on small poultry projects, since production cost of eggs from these small units is usually higher than prices of imported eggs. This importation policy would create many

marketing problems and probably would cause failure of such small poultry projects.

2-BROILER MEAT:

Statistics show that per capita consumption in Syria is only 15 grams of daily animal protein, while the average requirement per capita is 54 grams/day.

Poultry meat in Syria, in the past, has been always considered as a luxury and was only used in cases of sickness or in special occasions, meanwhile poultry meat in many other countries in the world is the cheapest kind of meat. However, an increased tendency towards more consumption of broiler, by many urban people, has been noticed during the past few years in Syria. This increased rate of local consumption can be deducted from figures on importation of day-old chicks (majority of it imported from broiler strains) as shown in Table No. 3.

TABLE No. 3

<u>Year</u>	<u>Estimated imported day-old chicks/1000 chicks</u>	<u>Value in Foreign Currency 1000 L.S.</u>
1967	500	350
1968	1250	1000
1969	2800	2000

From table 3 it can be seen that producers imported in 1969 around 2.8 million day-old chicks at an estimated value of 2 million Syrian Pounds. If we assume that from this amount only 2 million broilers (one kilo dressed wt.) reached marketing age, then we can see that per capita of broiler meat consumption would average no more than 300 grams per year, which is a very low amount if compared with per capita con-

sumption in other countries.

In spite of the increasing figures in broiler chick importations lately and consequently more broiler meat production, yet the dependency of this industry on chick importation is not a wise policy for Syria and could face serious problems.

What actually happened in early 1970 confirms this statement. The Government put some restrictions on importation of many items among which were chicks and feed for a period of time. This action by the Government had caused serious deleterious effects on the broiler industry and led to a slow down or even complete cessation of activities of some producers for a period of time.

(B) DIFFERENT MEASURES TAKEN BY THE GOVERNMENT TO SOLVE SOME OF THE PROBLEMS OF POULTRY PRODUCTION IN THE PAST FEW YEARS:

- 1- The Government started a developmental programme for poultry since 1960 by building of a poultry station at Hama and another one at Fedio, for the purpose of distribution of improved strains of chicks among farmers and particularly those benefiting from the Agrarian Land Reform Law: Hama Poultry Station is distributing annually between 300 to 350 thousand chicks (part of it as one-day old chicks and the rest at one month of age) among poultry producers and farmers.

However, in spite of the fact that distribution has been going on for several years yet the effectiveness of this system on the increase of local poultry products was very limited. This is because the distributed chicks to farmers

suffer from high mortality caused by different reasons among which: malnutrition, diseases, lack of suitable housing facilities, etc.

For this reason the Government signed an agreement with the WFP early in 1968, for a period of 3 years, for the distribution of balanced feed, along with the distributed chicks, to show the farmers the importance of feeding their chicks properly and advise them on different problems in poultry keeping in an effort to increase their production of poultry products (eggs and meat).

There is no question that this project had achieved some of its objectives, however, other problems still exist on the farmers side; as lack of financial resources to improve housing conditions for their chicks and there still exists some socio-economic conditions in some parts of the country that cause less interest of many farmers in poultry production. Farmers in these areas are more familiar and are better trained in the production of some other types of agricultural production for a long period of time.

These above problems which exist in many rural areas of the country is affecting the rate of progress in the development of poultry production.

Although Hama poultry station in its effort to increase poultry production at the farmers level is facing many problems, yet its task should continue and the station should receive support and help. The Ministry of Agriculture is remodeling the station and has allocated funds in the third five-year developmental plan to increase its capacity of parent-stock from 9,000 to 15,000 layers and replace the present stock with selected commercial parent-stock. The improvement

is expected to increase the station output capacity from 350,000 to 700,000 chicks per year.

Hama poultry station is producing at the present time broiler meat (from excess males and from undistributed chicks) at a rate of 80 tons per year, which is a very small amount since it is a side line production for the station which is mainly producing chicks for distribution.

- 2- The Agricultural Chambers at Haseke, Aleppo, Lattakia, Homs and Dera had built poultry stations, on a small scale for commercial purpose. Operating these poultry stations on a small scale created some difficulties for these stations, especially they were not initially built or operated on sound commercial and technical basis, Egg and meat production from these stations is very small and not even enough to cover market needs in these provinces. In spite of some failure which faced some of these poultry stations during one period or another, and its production could not be considered important in covering any shortage in poultry products in these areas, yet these stations are taking up an important function as extension centres for farmers and poultry producers. The Government is therefore helping and supporting these poultry stations to achieve this purpose and they will be organized in the future in order to cooperate with Hama Poultry Station.
- 3- The Government is supervising the imported poultry feed and locally manufactured feed for the interest of the poultry producers. The Ministry of Agriculture is supervising activities of the National Feed Plant, at Dommar (Government owns 51% of its capital).

The annual production of this plant in 1968 was about

2000 tons/year of mixed feed, while its total capacity is estimated at 18,000 tons/year per shift.

As a result of the Government support given by the Ministry of Agriculture in advising and directing many poultry farms to purchase their needs from this plant, production in 1970 reached 7,000 tons in spite of the difficulty of the shortage of some feed ingredients. Production in 1971 will be more than in 1970, but prices did not decrease because of the unusual high prices of grains during 1971.

4- Since New Castle disease is one of the serious diseases in this area and usually causes high mortality rate among chicks, the Ministry of Agriculture is purchasing some equipments for the Veterinary Laboratory in Damascus to increase its output capacity of poultry vaccines. These equipment will make it possible for this laboratory to produce locally N.C. dry-freeze vaccine in amounts to cover all the needs of the country. The Ministry of Agriculture is also improving its Veterinary services which it extends to the farmers.

5- POULTRY PROJECT:

BRIEF DESCRIPTION OF THE PROJECT:

- a) The poultry project will produce three million broilers per year with an average live wt. of 1.5 kg. per broiler. It will also produce one million day-old chicks for sale to private producers. This, in addition to the production of 33 million eggs for local consumption.
- b) The project calls for the building of four types of centres each one represents almost an independent project but all will be vertically integrated: the first is a parent-stock for the production of good hatchable eggs, which

will be hatched in a hatchery centre. The second one is for broiler production, while the third one is a processing plant. The fourth part will be a layers centre for market eggs production.

The first phase has started at Damascus with the building of five units for parent-stock, ten units for broiler production to produce one million broilers/year, and a hatchery centre to produce three million day-old chicks/year. This first phase will also include a processing plant to process broilers produced from this part of the project and some units to produce market eggs with a total capacity of 16 million eggs/year.

The second phase will be at Homs and Lattakia and will include building for the production and processing of broilers only at a capacity of 0.5 million broilers/year at each of these two Mohafaza.

The third phase will be at Aleppo and will include units to produce one million broiler/year with processing and cooling facilities and also units to produce market eggs at a total capacity of 16 million eggs/year.

PROJECT'S OBJECTIVES:

- a) The project produces two important animal products which furnish the consumer with some of his animal protein requirements.

The anticipated total egg production from the project is 33 million eggs per year, which is approximately 10% of the total local production. Such a percentage will meet no difficulty in its marketing especially if it is marketed in large cities and at reasonable prices (suggested price 12 S.P./egg). On the contrary this production will barely meet

the increased demand for eggs and will only substitute the import trade of market eggs.

The project will also produce 3 million broilers per year. The continuous shortage of local production of broilers and the increasing demand for broiler meat in addition to the reduced price suggested for broiler meat (375 S.P./kilo of ready-to-cook meat), will not meet any marketing difficulties. In fact this production will be carried out immediately to fulfill a nutritional and economical need in the country.

There is no doubt that in implementing such a large vertically integrated commercial project to produce broilers and eggs, it could be possible to make use of the economic advantage of the large size production and of the use of mechanical equipments in production and consequently reduce cost of production per unit.

b) One of the main objectives of the project is to offer some assistance and help to the private sector so as to improve and increase its production on a technical and organized basis. This can be achieved by the following:

- 1- Implementing such a project would encourage many producers to enter the field of commercial poultry production, on more modern and technical basis, after they see the big interest the Government is giving to this field.

This had already been noticed lately in the increased activity in this field with the increased number of privately owned poultry projects (especially in Damascus area) that were built on modern technical approaches and on a large size. This development in the private sector appeared after private operators had seen the interest by the Government to develop

this type of agricultural production through the establishment of an organization for poultry.

2- The Organization will make available (inside the country) to the private sector indispensable production requisites and most important of it is the good commercial day-old chick which the producers import from abroad and suffer many difficulties in their efforts to get these chicks. The middlemen or the traders in this business usually are making large profits by demanding high prices for the chicks or even may cheat producers in the chick quality. This would reflect badly on the national income of the country coming from the poultry industry.

The expansion in production of balanced feed and the technical supervision of the Government by the Organization will result in the availability of poultry feed for producers and at reasonable prices.

3- The Organization will assist the specialized poultry cooperatives (there are 3 of them at the present time at Damascus, Yabroud and Nabek) in the field of extension training and in their financial relation with the Agricultural Bank to cover the financial needs of its member in order to improve their production methods.

It can also help these cooperatives in the field of marketing their products through the facilities of the processing plant (killing, processing, cooling, and deep freezing) which will make it possible to freeze part of the production and store it for certain periods of time to organize marketing broilers at more constant prices all the year around.

It can be seen from the above that the Organization will have a positive effect on the activities of the small private producers since the middlemen are always the only beneficiary either if he is importing chicks or feed or marketing of poultry products.

(C) THE FUTURE IMPORT-EXPORT POLICY:

The Government has taken important steps towards developing the poultry industry in order to make poultry products available on the market. In this respect it has allocated some funds and established an organization to implement a poultry project to achieve this objective. Therefore, the Government future policy in respect to import-export policy in poultry products, should be within the following general frame or outline:-

- 1- Importation of day-old chicks (for layers or broiler production) should continue within the regulations now enforced by the Ministry of Agriculture till the Organization would be producing good quality commercial chicks, which is expected to be at the end of 1972.
- 2- Market egg importation should also be limited only to a level to balance local prices only, and not as a general policy all the time.
- 3- The Ministry of Agriculture should continue its technical supervision on feed concentrate importations and should check the quality of these products as a measure for protecting the producers interest.
- 4- Importation of all poultry equipment should be allowed with no restriction without custom taxes.
- 5- No importation of live or processed birds should be allowed,

unless in some special cases in order to balance, to a certain degree, local market prices so as to protect the interest of the small producers.

(2) Sanitary situation of poultry:

Speaking about the diseases which are spread among poultry, we should take in consideration the presence of two kinds of breeding:

- 1) The modern stock poultry industry.
- 2) The old system in villages poultry breeding and while the diseases which are spread among the poultry in the first system which included imported breeds from abroad are nearly the same diseases which found abroad. Play the second system reservoir for these diseases.

We mention here the most important diseases which could be found in the first system according to the important and not to the classical classification:

- 1) New castle specially among chicks up to two months. Where the K, vaccine protects the older stocks.
- 2) Leukosis including Marek Disease specially among egg's layers.
- 3) Coccidiosis.
- 4) C.R.D. specially in farms where sanitary condition are not taken in consideration.

Besides these we can find:

- 1) A.E.
- 2) Spirechotosis
- 3) Pullorus
- 4) Fowle Pox.

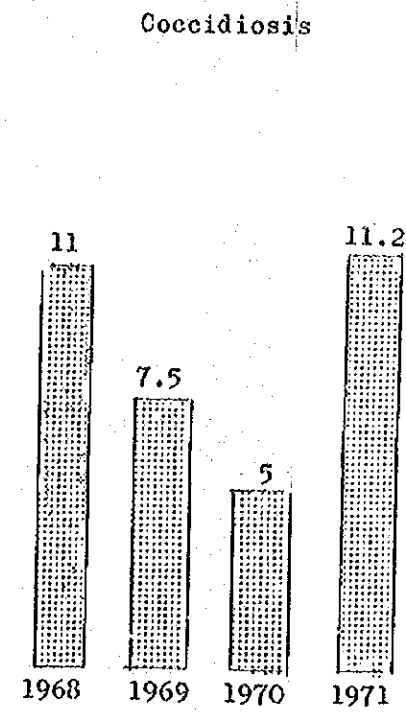
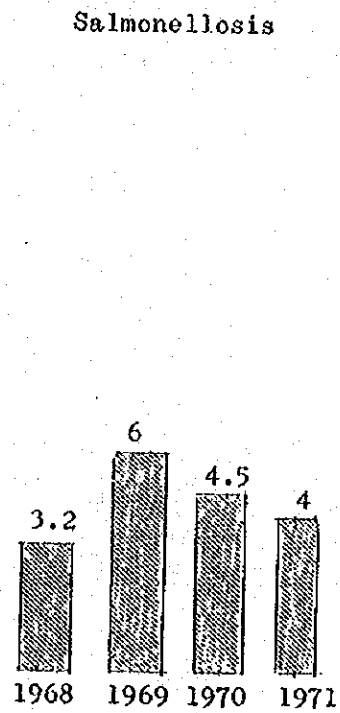
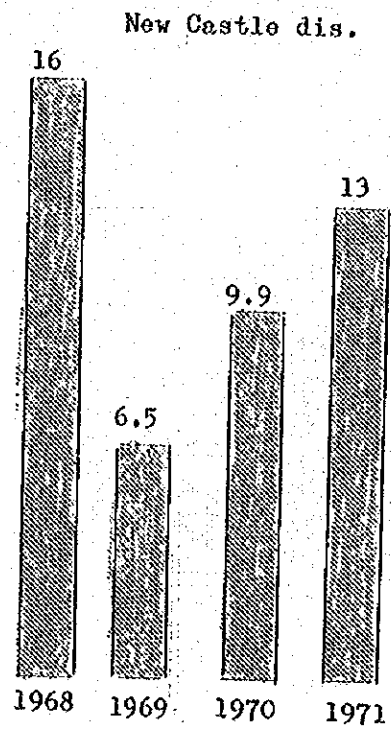
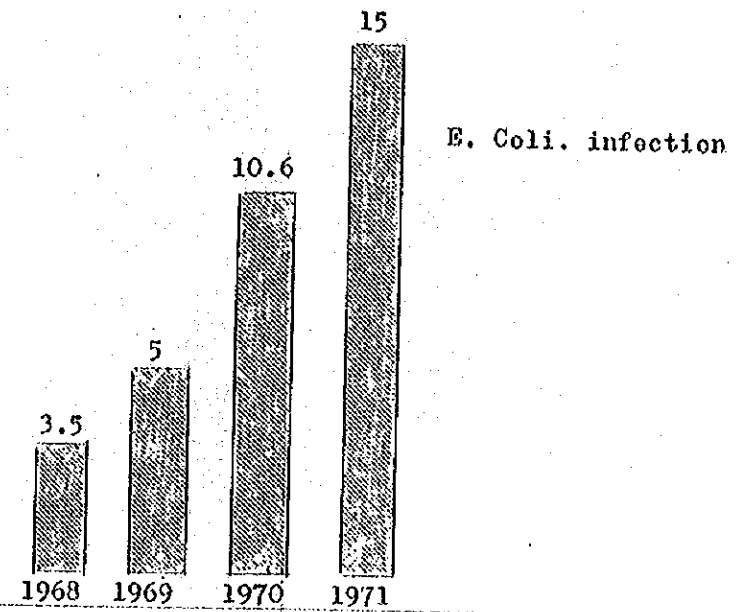
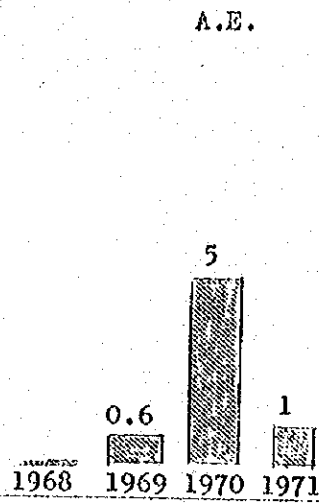
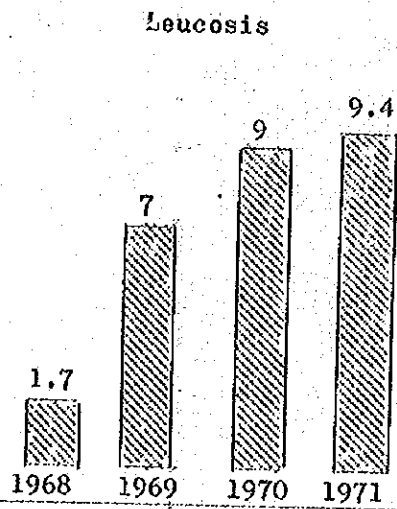
5) Bacterial diseases.

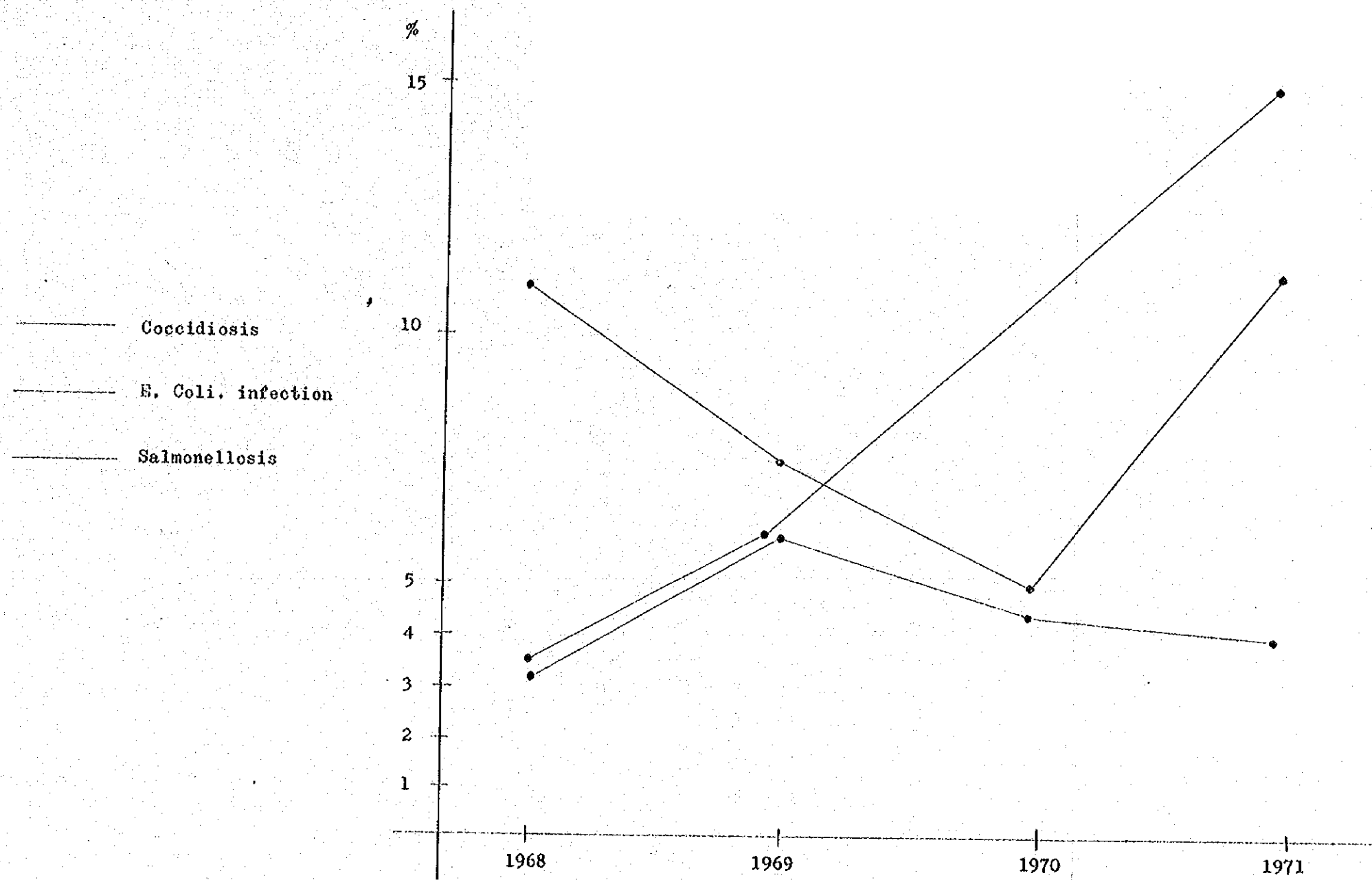
Among broilers the most important problem are nutritional where disease of vitamins deficiency, specially Vit. A, E. and minerals deficiency together with faulty nutrition disease like gout are to be present.

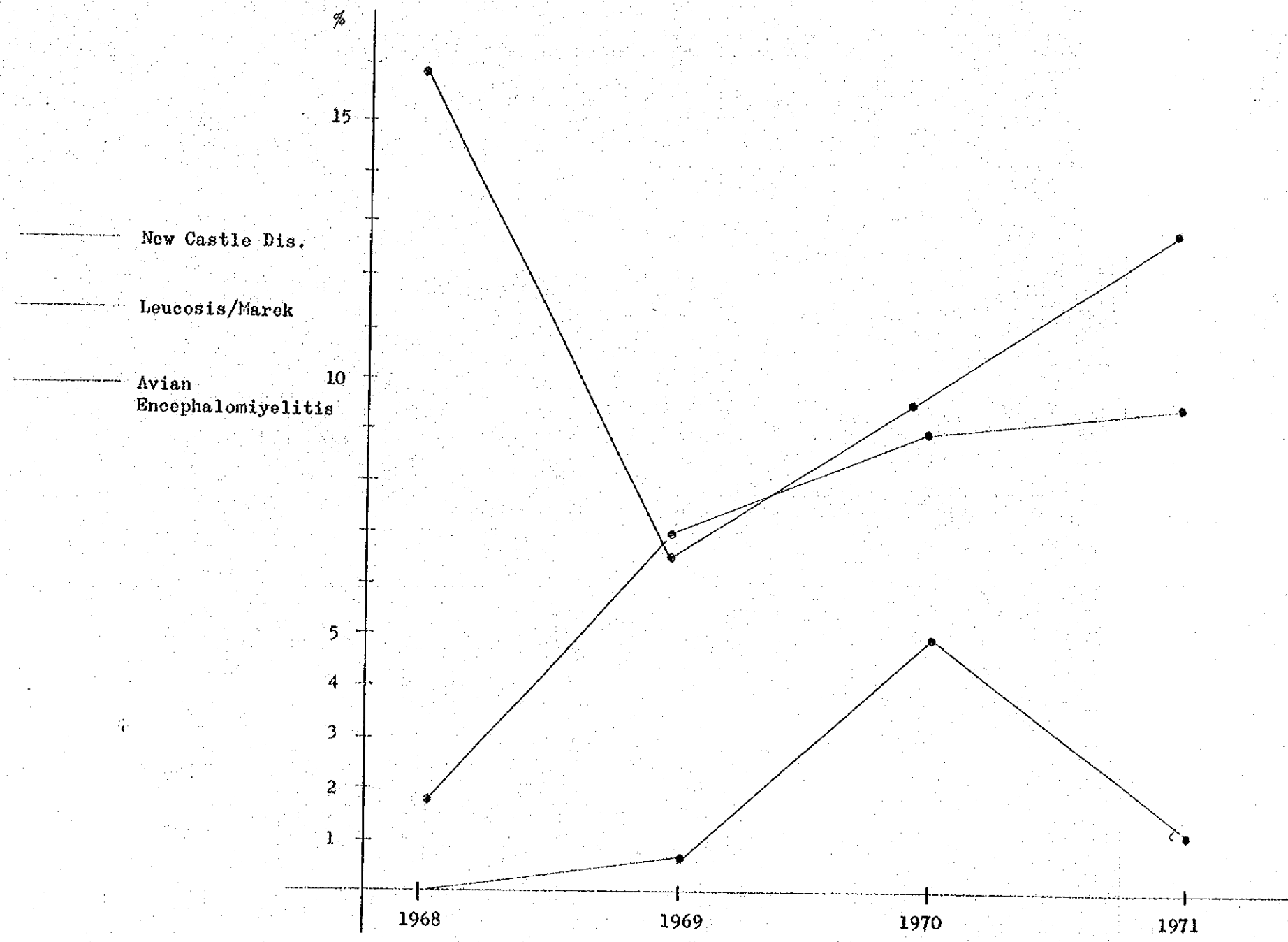
In the second system we can find various kind of Parasitic Bacteria and viral diseases, sometime in latest case:

Mainly:

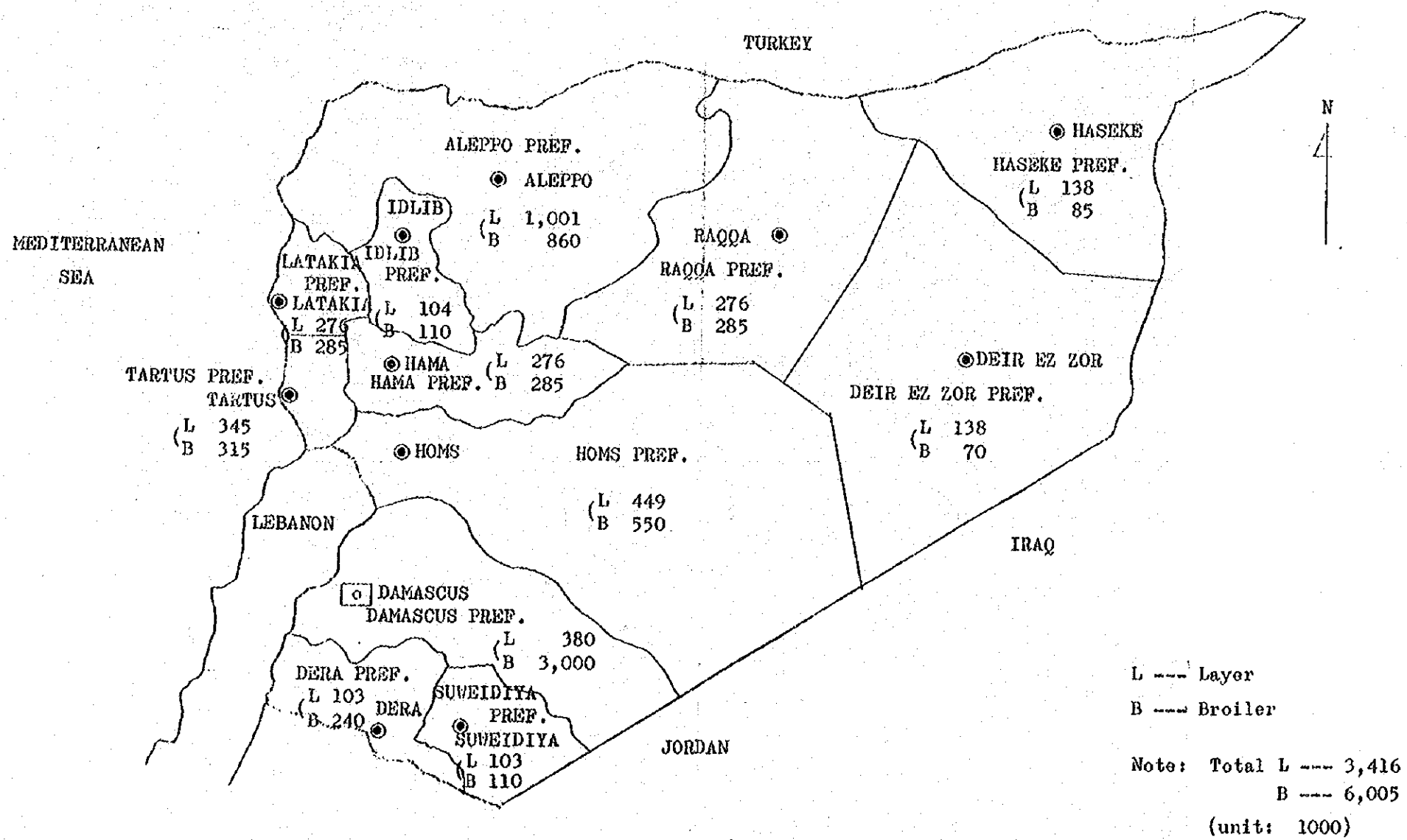
- 1) N. D.
- 2) Pullorum dis.
- 3) C. R. D.
- 4) Coccidiosis
- 5) Internal Parasites (Ascaridia and Cestode)
- 6) External Parasites
- 7) Blood Parasites
- 8) Fowle Pox.



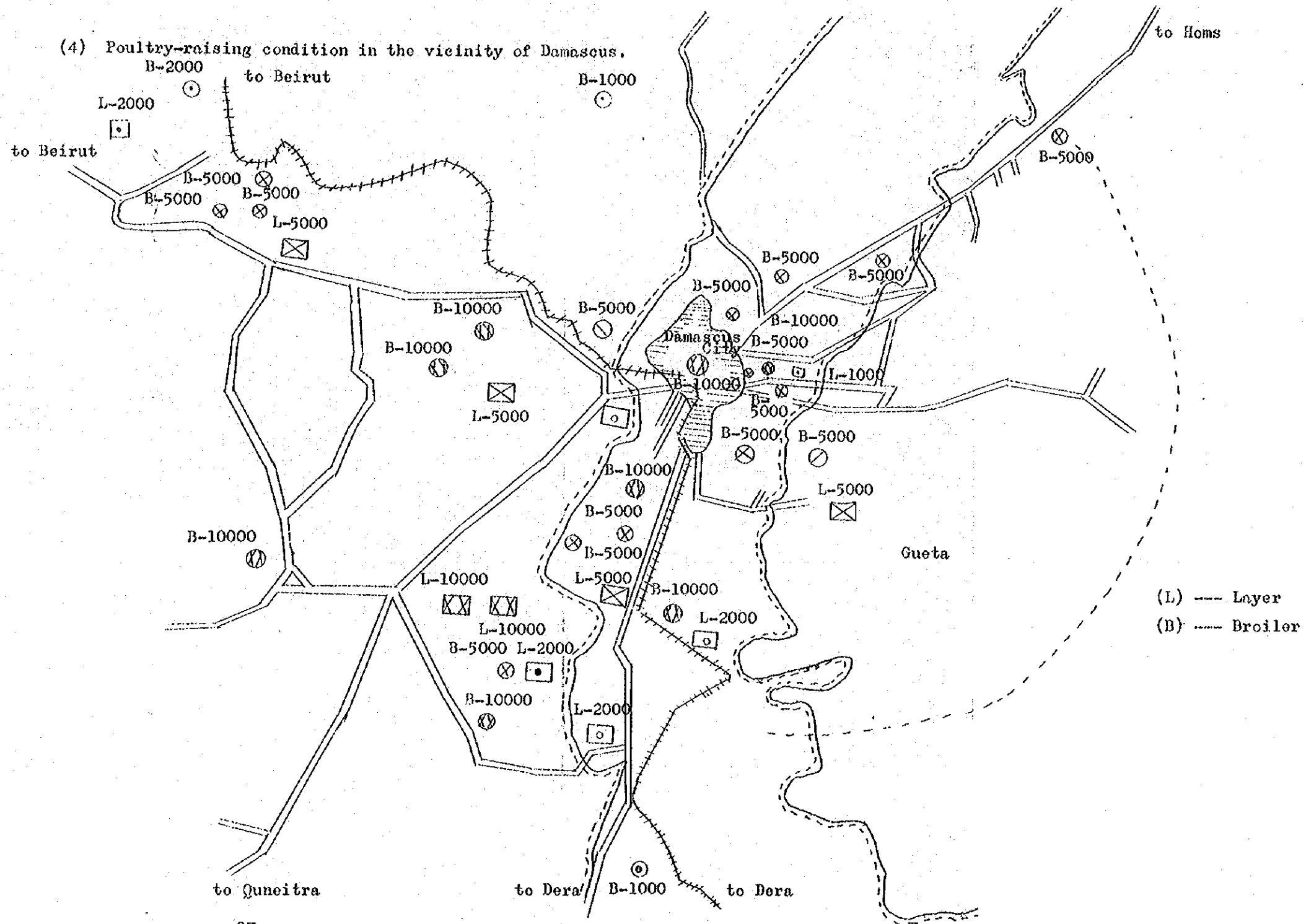




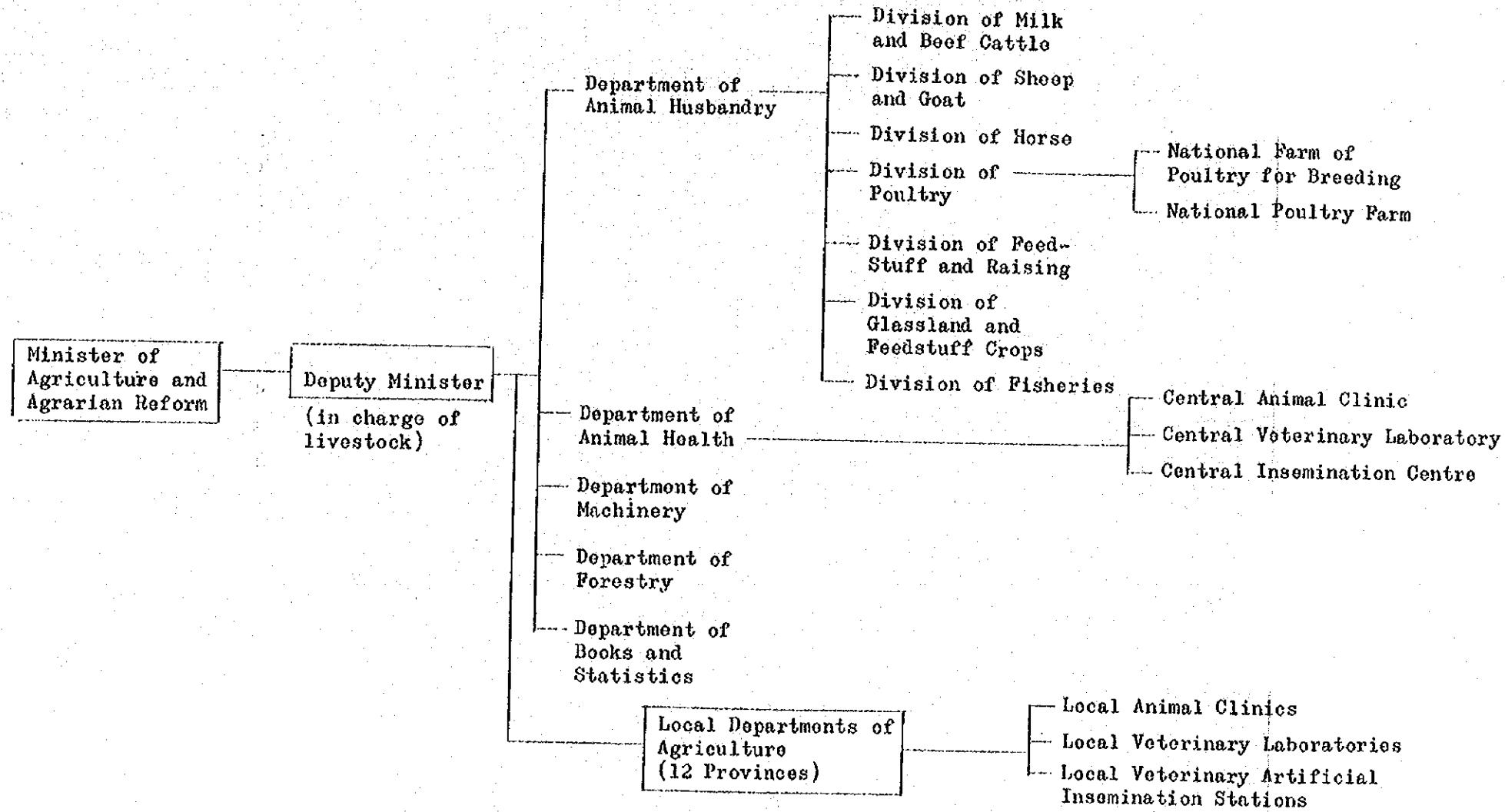
(3) Poultry-raising condition by province, 1971



(4) Poultry-raising condition in the vicinity of Damascus.



(5) Livestock Administrative Organ (Ministry of Agriculture and Agrarian Reform)



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