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**SYRIA:
AN ECONOMIC SURVEY**

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PART ONE.

THE LAND AND ITS INHABITANTS.

I. *The Land.*

Area.—Syria, in the larger sense of the term, inclusive of Palestine, extends from Egypt and the Arabian Desert in the south ($31^{\circ} 30'$ north lat.) to the Amanus in the north (37° north lat.), which divides it from Asia. It is bounded by the Mediterranean Sea on the west, and by the Syrian Desert and the Euphrates on the east; its length varies from 435 to 497 mi., its breadth from 62 to 186 mi. Its area in round numbers is 124,200 sq. mi.

Surface Configuration.—Geographically Syria may be divided into four longitudinal zones extending from north to south:

1. The flat, extremely fertile, coastal plain, with a maximum breadth of 18.6 mi., on which lie the harbors Alexandria, Seleucia, Latakia, Tripoli, Beirut, Sidon, Tyre, Acre, Haifa, Jaffa, Gaza, and Khan Yunus;

2. The western mountain range, extending from the Giaur Dagh in the north over the Ausan Range and the Lebanon to the Galilean, Samaritan, and Judæan mountains, (average height of plateau, 874 yards, highest point, Jebel Makmal in the Lebanon, 3,344 yards), from 18 to 31 mi. in breadth, on which lie the cities Beilan, Safita, Safed, Nablus (Shechem), Jerusalem and Hebron;

3. The famous depression, formed by the Orontes, the Litani, and the Jordan, from 6.2 to 18.6 mi. wide, falling 437.2 yards below sea level toward the south, in which lie numerous lakes (Amuk, Homs, Huleh, Tiberias, Dead Sea), and the cities Antioch, Hama, Homs, Baalbek, Zahleh, Tiberias, Beisan, and Jericho; the Orontes Valley forms its northern part, its central part through which the Litani flows is called Beka'a (Coelesyria in ancient times), and the southern section through which the Jordan flows is called Ghor;

Palestine is not an administrative province. The historic Palestine extended west of the Jordan from El Arish in the south to Tyre in the north. East of the Jordan it extended from the southern extremity of the Dead Sea to the Yarmuk, its eastern boundary being the desert. It was about 3,000 sq. km. in area, and comprised the present Mutessarifiks of Jerusalem, Nablus, Acre, and Kerak.

4. The eastern mountain range, with a maximum breadth of 31.05 mi., running parallel to the western mountain range; its average height is 983.7 yards, its highest point (Mt. Hermon) 2,916.7 yards in height, whence it extends southward over the Jolan and Ajlun mountain ranges into the Trans-jordanian plateau. In this eastern mountain range lie the cities Aleppo, Damascus, Es Salt, and Kerak. The plateau of El Leja and the Hauran Mountains may be considered an annex of this zone. This region, as well as the tableland of En Nukra is famous for its fertility, thanks to the formation of the soil, which is covered by disintegrated basalt and lava. In the east the mountain range gradually merges into the Syrian Desert.

Temperature.—The mean annual temperature of the coastal plain is 70° F. (57° in January, 84° in August), of the western and eastern mountain ranges 61° (43° in January, 73° in August). The Jordan Valley has a sub-tropical climate, the mean annual temperature being 24° C.

There is never any frost in the Jordan Valley. It is rare in the coastal zone, but frequent in the mountain ranges and in the northern part of the plain which lies between them. Here snow occasionally falls, but it melts immediately except in altitudes of more than 1,093 yards. The difference in climate between the coastal zone and the Lebanon (a distance of only 12 to 18 mi.) is remarkable.

Rain.—Rain falls only from October to April. The average yearly rainfall varies from 400 to 900 mm., according to locality, being smallest in the south and largest in the north. (Gaza has 420 mm., Jaffa 510 mm., Haifa 610 mm., Beirut 880 mm., Alexandretta 900 mm.) The mountain ranges have a greater rainfall than the coast, (Jerusalem 660 mm., Hebron 650 mm., Damascus 700 mm.), whereas the depression has much less, especially the Jordan Valley (Tiberias 440 mm., Jericho 200 mm.). The rainfall varies greatly from year to year.

The rainy season may be divided into three parts:

1. The autumn (former rains), usually beginning in the middle of November and lasting 3-4 weeks (3/9 of total rainfall);

2. The winter rains, during January and February (5/9 of rainfall);

3. The late winter (latter rains), lasting from the middle of March to the end of April (1/9 of rainfall).

Dew.—In summer a heavy dew falls in the coastal plain and in the mountains, which is indispensable for the summer crops (durrha, sesame).

Winds.—The winds are fairly strong throughout the year. The prevailing wind is from the southwest and brings the winter rains. In spring and fall the sirocco (Chamsin) blows from the Arabian Desert. In summer there is a sea breeze in the daytime and a land breeze at night.

Lakes and Streams.—The important lakes are the Lake of Antioch, fed by the Kara Su and the Apherin Su, the Lake of Homs, formed by the Orontes, the prairie marshes near Damascus fed by the Barada, the salt lakes near Jebbul, and the three lakes of the Jordan Valley, Merom, Tiberias, and the Dead Sea. Syria has no navigable streams. Its deepest rivers are barely a yard in depth and from 30 to 50 yards wide, with a swift current. The three main rivers of Syria are the Orontes, (about 186 mi. long), with its source in the Lebanon near Baalbek, which flows into the Mediterranean near the Lake of Antioch; the Litani, which also has its source in the Lebanon and flows into the Mediterranean near Tyre; and the Jordan (124 mi.), which coming from Mt. Hermon, flows through the Lakes of Huleh and Tiberias and empties into the Dead Sea. Besides these longitudinal streams there are several small transverse streams, the Nahr el Kebir (near Latakia), the Kadisha (near Tripoli), the Nahr Ibrahim and the Nahr el Kelb (near Beirut), the Brook Kishon (near Haifa), and the Aujah (near Jaffa), all flowing from the western mountain range into the Mediterranean. The Barada and the Nahr el Avadj flow toward Damascus from the eastern mountain range, while the Yarmuk and the Zerka flow into the Jordan from the Ajlun. The Kuveik flows through Aleppo into a prairie marsh, and the Kara Su and the Apherin Su flow into the Lake of Antioch.

Health Conditions.—In general the land may be considered healthy. The only diseases which are constant and epidemic in certain sections are malaria and trachoma. Malaria is prevalent in (a) the coastal zone, where swamps are formed by the rain water which is dammed up by sand dunes and rocks, (b) valleys with an impervious sub-stratum and imperfect drainage, (c) the banks of shallow streams, and (d) mountain districts where rain water is preserved in badly made cisterns for use in summer. Both these diseases could be successfully combated. (International Health

Bureau founded in Jerusalem in 1912 by Nathan Straus.) Besides these diseases there are the so-called Aleppo-plague and Jericho-plague, confined to certain localities, and directly attributable to the poor water supply. Other epidemics have occurred from time to time, chiefly bubonic plague and cholera brought by ships or by the pilgrims to Mecca.

Administrative Divisions.—Syria is composed of the following administrative provinces:

Vilayet of Aleppo (consisting of the Mutessarifiks of Aleppo and Aintab).....	35,397* sq. mi.
Vilayet of Syria or Damascus** (consisting of the Mutessarifiks of Damascus, Hama, Hauran, and Kerak)	55,890 “ “
Vilayet of Beirut (consisting of the Mutessarifiks of Beirut, Tripoli, Latakia, Acre, and Nablus)	18,941 “ “
Mutessarifik of Lebanon	2,111 “ “
Mutessarifik of Jerusalem	12,420 “ “

The head of a Vilayet is called a Vali, the head of a Mutessarifik (Sanjak, Liva) is called a Mutessarif. The Mutessarifs of Jerusalem and the Lebanon are directly subordinated to the Minister of the Interior. Each Mutessarifik is divided into a number of Cazas or Kaimakamliks, with a Kaimakam at their head.

Population.—No reliable census has ever been taken in Turkey. Since 1902 there is a law compelling all Ottomans to record their names in the official register, from which source the following information was obtained:

POPULATION OF SYRIA IN MARCH, 1915

	Men	Women	Estimated Nomadic Population (not registered)	Total
Vilayet of Aleppo.....	336,384	320,555	212,463	869,402
Vilayet of Damascus.....	456,031	468,774	.....	924,805
Vilayet of Beirut.....	408,628	414,679	.....	823,307
Mutessarifik of Lebanon.....	225,580	182,170	.....	407,750
Mutessarifik of Jerusalem....	343,362		55,000†	398,362
				3,423,626

* These figures are only an approximation.

** We shall call it Damascus to avoid confusion.

† Caza Beersheba.

S y r i a : A n E c o n o m i c S u r v e y

KERAK		HAURAN	
Caza	Population	Caza	Population
Kerak	19,551	Hauran	27,691
Salt	37,235	Ajlun	61,500
Maan	5,752	Basr el Harir.....	26,448
Tafleh	7,750	Sueda	24,260
		Azrua	29,382
Total.....	70,288	Masmieh	13,825
		Total.....	183,106

ACRE		NABLUS	
Caza	Population	Caza	Population
Acre	40,897	Nablus	76,426
Haifa	30,629	Jenin	41,442
Nazareth	20,801	Beni Saab	35,901
Tiberias	13,102		
Safed	31,735	Total.....	153,749
Total.....	137,164		

JERUSALEM	
Caza	Population
Jerusalem	123,017
Gaza	82,614
Jaffa	81,490
Hebron	56,241
Beersheba	55,000
	398,362

Population of Some Cities.

Aleppo	200,000	Tripoli	50,000
Aintab	70,000	Nablus	30,000
Antioch	30,000	Haifa	20,000
Alexandretta	12,000	Nazareth	20,000
Damascus	300,000	Zahleh	150,000
Homs	80,000	Jerusalem	80,000
Hama	70,000	Jaffa	40,000
Es Salt	15,000	Gaza	30,000
Beirut	200,000	Hebron	25,000

It is generally estimated that the percentage of non-registered Ottomans and of non-Ottomans may be reckoned as being equal to 25 per cent of the registered population. Thus in round numbers the population of Syria would amount to four million. Of these,

1¾ million form the urban population and 2¼ million the rural population, that is, the population living in villages and tents. In the smaller towns as well as in the villages a large number of the inhabitants are farmers and are to be considered as part of the rural population.

With the exception of Aleppo and Damascus practically all the Syrian cities and towns developed only in the nineteenth century, especially after 1880.

	1880	1915
Beirut	80,000	200,000
Jaffa	10,000	40,000
Alexandretta	2,000	12,000
Jerusalem	35,000	80,000

Density of Population.*

Vilayet of Aleppo.....	15	to the square kilometer	
Vilayet of Damascus.....	13	“ “ “	“
Vilayet of Beirut.....	34	“ “ “	“
Mutessarifik of Jerusalem.....	25	“ “ “	“
Mutessarifik of Lebanon.....	159	“ “ “	“

Religion.—The predominant religion of Syria is Islam, embracing about 4/5 of the total population. There are about ¾ million Christians of various sects, especially in the Lebanon, and in Beirut, Nazareth, Bethlehem, etc., where they form the majority of the population, and also in Aleppo, Damascus, Jerusalem, etc. The Jews of Syria number about 115,000 souls, concentrated in Jerusalem (45,000, 60 per cent of total population), Aleppo (15,000), Damascus (10,000), Beirut (5,000), Safed (8,000), Tiberias (4,000), Jaffa (10,000), Haifa (3,000), Hebron (1,000), Sidon (500), and about 40 agricultural colonies in Palestine.

Language.—The language of the country is the so-called Syrian dialect of Arabic. Turkish is the official language, spoken by government officials and the more cultured classes, as well as by part of the population in the district between Aleppo and Asia Minor. The Jews speak either Arabic, Spaniolish (Ladino), or Judeo-German, according to their origin, in addition to Hebrew which is known to almost all. French is spoken by the upper classes in the coast towns, and German in Haifa, Jaffa, Jerusalem, and the German colonies.

* The population is very unevenly distributed.

Cultural Status of the Population.—Thanks to its geographical situation and the peculiar religious interest attaching to it, Syria is rather European than Turkish from a cultural point of view. Among the prominent factors in its cultural development may be mentioned: (1) the Crusades and the medieval immigration of the Jews from Spain and Central Europe; (2) the immigration of Genoese, Venetian, and Greek merchants (Levantine) who settled in the coast towns and assimilated with the population; and (3) the influx of pilgrims, monks, nuns, and missionaries, and in modern times the German Templars and the Zionist Jews. Culturally the Syrian population may be divided into three types: the inhabitants of (1) the coast towns which are the regular stopping-places of steamers, and Jerusalem; (2) the coast towns to which there is no immigration, and Damascus and Aleppo; and (3) the cities untouched by European influences, such as Homs, Hama, Nablus, Gaza, etc.

Fluctuation of the Population.—There are no reliable statistics at hand regarding births, marriages, and deaths in Syria. The large number of births is counterbalanced by high infant mortality, especially among the Mohammedans, so that the population either remains stationary or increases very slowly. It is equally impossible to secure exact information about immigration and emigration. In general, it appears that in the last three decades there has been a noticeable exodus of Christians from the Lebanon to America, and a marked influx of Eastern European Jews into Palestine, especially into Jerusalem. During the last 30 years approximately 40,000 Jews have immigrated, of whom 12,000-15,000 left in 1914 and 1915 because of the war. The number of Lebanon emigrants seems to have reached over 100,000, about $\frac{1}{4}$ of the total population of the Lebanon. The majority of them go to North and South America. Many of them either send money home to their families or else return and invest their earnings in real estate. Bethlehemites and other Christians likewise immigrate to America, and numbers of Mohammedans to Egypt. The Jews have brought considerable sums into Palestine, amounting to 5-7 million francs annually. (Halukkah, religious and benevolent institutions, etc.) Besides, those who became bankers, merchants, and farmers, have increased the wealth of the country by 3 to 5 millions annually. There has also been an immigration of Oriental Jews into Palestine, from Morocco, Persia, Bokkhara, and the Yemen. The Moroccan and Persian Jews (about 5,000 in number) are poor and feeble, whereas the Bokkharans (1,000)

are strong and well-to-do. The Yemenites (4,000) have settled not only in Jerusalem (about 2,000) but in Jaffa and the colonies as well.

In enumerating the monetary advantages which have accrued to the country as a result of migrations, the sums received from Christian churches for the support of their Syrian institutions must not be omitted; it reaches 10 million francs annually, at a moderate estimate.

PART TWO.

THE ECONOMIC STRUCTURE OF SYRIA AND THE VALUE OF ITS PRODUCE.

Syria is emphatically an agricultural country. The vast majority of the population lives by husbandry, that is to say, by its three main branches, agriculture properly speaking, arboriculture, and cattle-raising. Mining plays a small role, and both silviculture and fishery bring inconsiderable returns.

The industry of Syria consists of three more or less important branches: (1) silk-spinning in the Lebanon and vicinity; (2) weaving and dyeing of silk, cotton and wool in the Lebanon and in Damascus, Homs, Hama, and Aleppo; and (3) the production of olive oil and soap in Palestine, Tripoli, and Antioch. Other industries such as tanning (Beirut, Zahleh, Homs, Aintab), rope making (Damascus, Aleppo), manufacture of religious articles (Jerusalem, Bethlehem), craftsmanship in copper and wood (Damascus), cigarette-making (Damascus and the Lebanon), the making and repairing of machinery, and the manufacture of wood, building stones and tiles of cement are relatively unimportant. The majority of artisans working for the local trade are shoemakers, saddlers, smiths, joiners, and tinkers. Traffic enterprises, with the exception of the harbor of Beirut and the railroads, are limited to electrical plants for the tramways and lighting purposes in Damascus and Beirut, a gas plant in Beirut, a horse car service in Tripoli, and a number of water-works.

The commerce of Syria consists in providing the country with European commodities (especially dry groceries, sugar, dress materials, coal, kerosene, timber, hardware, cement) and with the sale within and without the country of the agricultural and the few industrial products (export of silk, oranges, grain, sesame, domestic dress materials, soap, raisins, wine).

The lack of reliable data makes it difficult to give an exact estimate of the value of the annual produce of Syria and of the sums sent into the country as benefactions.

I. *Husbandry.*—Husbandry in Syria has developed in two directions: grain tillage (in which the two year crop rotation system is used, the field being allowed to lie fallow one year or else planted with sesame, durrha or legumes, and planted with

wheat or barley the following year), the chief product being wheat; and arboriculture (olives, mulberries, oranges, lemons, vines, figs, apricots, pistachios, almonds). Grain tillage predominates on the plateaus, arboriculture on the slopes; both play important roles on the coastal plain. In addition to these, commercial plants (cotton, tobacco, tombeki, and hemp) are cultivated, cattle are raised in the Vilayet of Damascus and in the Lebanon, and sheep and goats in the Vilayets of Aleppo and Damascus.

The value of the annual produce may be estimated approximately at 695,000,000 francs, to which must be added about 5,000,000 francs which accrue to the farmers from agricultural by-industries such as desiccation, etc., by means of which perishable products are preserved (raisins, grape honey, figs, apricots, apricot-paste, table olives), making a total of 700,000,000 francs.

II. *Silviculture*.—(Forestry and its products.) The products are limited to fuel, charcoal, etc., and the sweet pine kernel, and do not exceed 5,000,000 francs in value.

III. *Fishery*.—The value of the annual catch of sea and lake fish amounts to about 10,000,000 francs.

IV. *Mines*.—The value of the products of mining properly speaking (asphalt) is inconsiderable, not amounting to more than $\frac{1}{4}$ million francs. To this must be added $1\frac{1}{2}$ million francs, the value of the building stones from quarries, making a total of about 2,000,000 francs.

V. *Industries*.—Total value of manufactures, etc., about 30,000,000 francs.

VI. *Trades*.—Total value, 30,000,000 francs.

VII. *Traffic*.—(1) Transportation, 45,000,000 francs; (2) pilgrims and tourists, 10,000,000 francs.

VIII. *Receipt of Money from Other Countries*.—Lebanon, 30,000,000 francs; Palestine (principally to Jews), 10,000,000 francs; Benevolent and religious Christian institutions, 10,000,000 francs.

The total, 882,000,000 francs, is distributed somewhat as follows:

Vilayet of Aleppo.....	222,000,000 francs
Vilayet of Damascus.....	350,000,000 “
Vilayet of Beirut.....	210,000,000 “
Mutessarifik of Jerusalem.....	50,000,000 “
Mutessarifik of Lebanon.....	50,000,000 “

PART THREE.

HUSBANDRY.

I. *A Statistical Summary of the Products of Husbandry.*

A. *The Area in Which Husbandry is Practised.*—Syria is a limestone plateau, its average height above sea level being 800 to 1,000 meters. It slopes to the sea in the west and to the steppe and the desert in the east, and is split in the center by a deep depression. The coastal plain and the border zones of the steppes as well as the depression, are, with the exception of a narrow strip of sand-dunes near the sea, suited to husbandry. Much of the mountain district, on the other hand, is not arable, as the loose stratum of surface soil formed by the disintegration of the stone is being washed away by heavy winter rains, leaving the limestone bare. But sections of the slopes and all the transverse valleys (for instance, the Esdraelon Valley) are very fertile, as are also the Hauran, where the substratum of lime is covered by disintegrated lava, and other parts of Transjordan. In the Vilayet of Damascus, as in the rest of Syria, it seems that 75 per cent of the land is mountainous. In 1915, according to the official report, 29 per cent of the Vilayet of Damascus was devoted to husbandry, of which 10 per cent was pasture land.

B. *Composition of the Soil.*—The physical and chemical properties of the Syrian soil have not been thoroughly investigated. Most of the available information is the result of researches made by the Jewish colonists in Palestine. On the coastal plain, in the depression, and in the transverse valleys the soil is generally very deep, whereas in the mountain districts it forms a very shallow surface stratum of not more than 25-50 centimeters. Grain and flatrooted trees thrive in this soil, but not deeprooted trees. Besides, the soil in the mountain districts is coarse grained and porous. On the plain its quality is not uniform. It is either very rich in clay and not porous (heavy soil) or else sandy (light soil). The sandy soil was formed by a mixture of clay and sand drifts.

Wheat and sesame thrive in heavy and moderately heavy soils, whereas barley does better in lighter soil. Orange trees require a moderately heavy soil; almond, fig, and eucalyptus trees and vines demand a light soil, and olive trees flourish in either.

The soil in the neighborhood of the Dead Sea in the Jordan Valley is salty and unfit for cultivation.

In some parts of the mountain districts the trees seem to grow directly on the rocks. This is because what seems to be a rock is nothing but a thin crust (*nari*) which is formed over loose earth, through the crevices of which the roots are able to penetrate. Another phenomenon is the luxuriant tree-plantations in the sands of the Plain of Sharon. Here the stratum of sand is only 50-80 centimeters deep, and the roots penetrate to the fertile soil beneath.

C. Dangers and Obstacles to Husbandry.

1. Natural Dangers.

Drought. The success of the crops depends upon the abundance and duration of the rain during the rainy season. The latter rains are indispensable for wheat, although a delay in the former rains is also detrimental; this frequently occurs in the neighborhood of Gaza and Beersheba.

Frost, hail, and locusts. These also constitute a menace to the crops. Frost injures trees rich in sap and evergreen trees, which can therefore be planted only in the Jordan valley and the coastal plain. Heavy frosts occur only in Northern Syria, and there at rare intervals. Hail, which falls very seldom, is injurious particularly to grapes and oranges. Locusts, which constitute the gravest menace to Syrian husbandry, are of two varieties, the Italian and the Soudan wandering locust. The former kind appeared in the Vilayet of Aleppo about ten years ago and, having domesticated, caused a deal of damage. The government has been partially successful in exterminating it. The latter kind, far more harmful, devastated the country in 1866 and again in 1915, when the damage caused was estimated at 100,000,000 francs, the Jewish colonies in Palestine alone suffering a loss of two or three million francs. Since this last onslaught the government has taken precautions, and the small hordes which appeared in 1916 were immediately exterminated.

2. Legal Obstacles to Husbandry.

The townships are divided into several sections, in each of which the property owners are compelled to plant only one sort of cereal each year. In some villages the land is in the permanent ownership of individuals, but in others the old system of communal ownership still persists, whereby the land is apportioned anew

biennially. In these villages the individual does not possess any one piece of land, but claims a certain portion of the area of the village. The disadvantage of this system is that the farmer takes no interest in fertilizing the land or improving it in any way, as it passes out of his possession in two years. Besides, he never plants fruit trees except in the town itself, where he owns the land around his house permanently.

What is more, the tenant has practically no redress against the landlord. In Northern Syria and parts of Transjordan there are no trees to be seen for miles around because the fellaheen do not trouble to plant trees on land from which they may be evicted at any moment.

Another obstacle to husbandry is the tobacco monopoly. According to the law of 1914 tobacco may be cultivated only in certain cazas of the Vilayets of Beirut and Aleppo, although the government can grant permission to any individual to grow tobacco provided he complies with a number of regulations. The tobacco fields are inspected and the crop must be deposited in a center designated by the government. Tobacco may not be sold by the producer within the country, and only under certain conditions to export merchants. The same restrictions hold good for tombeki.

Special permission must also be obtained for rice cultivation.

D. Kind, Quality, and Value of Produce.

1. Annual Food and Fodder Crops.

The following table dates from 1910, when the harvest was unusually poor, not more than $\frac{2}{3}$ of what it usually is:

Wheat	761,712 tons
Barley	381,428 "
Durrha	161,623 "
Corn	16,983 "
Vetches	32,984 "
Horse-beans	93,642 "
Chick-peas	136,633 "
Lentils	236,860 "
Sesame	20,216 "

The total area planted with annual crops amounts to 12,662,918 dunam (2,874,393 1/3 acres), of which

5,889,936	dunam	(46.5%)	are	planted	with	wheat
3,836,842	"	(30.3%)	"	"	"	barley
1,091,216	"	(8.6%)	"	"	"	durrha
723,412	"	(5.7%)	"	"	"	vetches, peas, beans, lentils
431,329	"	(3.4%)	"	"	"	cotton
255,493	"	(2.0%)	"	"	"	sesame
434,690	"	(3.5%)	"	"	"	other crops

Wheat is chiefly grown in the Hauran, which supplies Damascus, Beirut, the Lebanon, and part of Palestine, and exports some to other countries. Other wheat regions are parts of Transjordan, the Esdraelon Valley, and the Beka'a (Coelesyria). The three kinds of wheat most extensively grown are Hauran wheat, red and white Salamuni wheat (Beka'a), Baladi wheat and Nursi wheat (Damascus, Esdraelon Valley) and Douchani wheat (Beka'a and Damascus). Wheat is sowed in December or January after the first heavy rain and is harvested at the end of May on the coastal plain, somewhat later in the mountain districts. The total wheat crop of Syria may be estimated at a million tons. (Hauran and vicinity 150,000, Beka'a 100,000, Esdraelon Valley 50,000, etc.) Subtracting 10 per cent for seeding, there remain 225 kilograms per capita for the population. Up to the present time the quantity of wheat exported has been negligible. The price of wheat in the ports ranges from 200 to 250 francs per ton.

Barley, the most important crop next to wheat, is grown principally around Homs and Hama, Gaza and Beersheba, and in lesser measure throughout the whole country. The five kinds most extensively cultivated are Roumi, Arabi, the Hama-Homs variety, the Aleppo variety, and the Gaza variety. Barley is in great demand by English brewers and whiskey distillers. Its price in the ports ranges from 125 to 175 francs per ton. The annual yield is estimated at 500,000 tons.

Durrha is a summer crop. It is sowed in March or April and harvested in August or September. Durrha is used for bread by the fellaheen. Part is exported to Malta and Algiers, and to spirit factories in England. In 1912 the total yield of 200,000 tons was sold for about 30,000,000 francs.

Corn (yellow-grained) is sowed on about $\frac{1}{4}$ as much land as durra. In the Jolan it is planted in August after the wheat harvest.

Rye and oats are very infrequent, being planted only in the German, Jewish, and Circassian colonies.

Legumes, for the most part chick-peas, lentils, beans, vetches, and lupins, are sowed in February and serve to bridge over the time between winter and summer crops. Beans are harvested in April, chick-peas in June or July. Lupin is used as food, fertilizer, and dye-stuff. Chick-peas are exported, principally to Marseilles and Egypt. The total yield of legumes for household use is about 500,000 tons.

Sesame, which is planted in the vicinity of Homs and Hama, in parts of the coastal plain, in the Plain of Sharon and the Valley of Esdraelon (the latter two regions produce the best quality), is a summer crop, and is used in the manufacture of oil. It is sowed in March or April and harvested in August or September. Of a total of 30,000 tons a considerable part is exported, mainly to France and Italy. Sesame is the crop most valued by the fellaheen. It is a delicate plant and easily destroyed by heavy rains. Sesame requires thorough tillage and much care. It forms a good green crop for wheat.

Rice is planted in small quantities in the Vilayet of Aleppo and in the Jolan.

Alfalfa and clover are planted mainly in the Vilayets of Aleppo and Damascus. Alfalfa, which requires much water, is grown in large quantities in the plain of Damascus, where it is used for fodder. From March to November it is reaped every few weeks. It is used as an additional crop between olive trees.

Edible roots and tubers, for instance potatoes, play a far smaller role than in Europe. They are hardly planted at all, except in Damascus and Aleppo. Their price ranges from 80 to 100 francs per ton. The total yield of potatoes and beets is about 200,000 tons.

Of vegetables, especially melons, tomatoes, egg-plant, cucumbers, onions, garlic, carrots, cabbages, cauliflowers, artichokes, and asparagus are cultivated. Melons thrive on the coastal plain between Jaffa and Haifa. About 1,000,000 are exported yearly, worth approximately 250,000 francs. Onions (35,000 sacks in 1912) are exported from Tripoli and Latakia. The other vegetables are used in the country. The fellaheen are expert vegetable growers. Watermelons, squashes, tomatoes, egg-plant, and onions do not require watering.

2. *Commercial Crops.*

The principal commercial crops are tobacco, cotton, anise, hemp, sugar cane, fennel, and caraway seed. Caraway seed grows in small quantities near Tripoli and is exported (1,000 sacks in 1912), as is fennel. Sugar cane, which requires an abundance of water, thrives only on the coastal plain and in the Jordan Valley. It is planted in February or March and harvested in October or November. It has no industrial importance. Hemp is grown near Damascus and in the Vilayet of Aleppo on the Euphrates and is used in the rope-making industry. Hemp-seed is also used for food for poultry and in the manufacture of oil. The stalks are used for fuel. In 1912 1,300 tons valued at 1,000,000 francs were grown in the valley of the Barada. Anise is planted in the neighborhood of Damascus and is used in the production of arrack. Cotton is planted on a large scale in the Vilayet of Aleppo. Before the American Civil War it was cultivated along the whole coastal plain from Alexandretta to Gaza, and the annual yield was 19,800,000 pounds, worth 9,000,000 francs. As a result of the slump in the price of cotton after the war its cultivation was restricted to Northern Syria. In the last few years unsuccessful attempts have been made to grow cotton further south, in Latakia, Acre, Petach Tikvah, etc. The staple of the Syrian cotton is very white and elastic, but short, being about 2 centimeters in length.

The cultivation of tobacco is subject to the restrictions mentioned in a preceding paragraph. Small quantities are grown in the Vilayet of Aleppo, larger quantities in the Vilayet of Beirut. Most of it is exported to Egypt and England, the rest being made into cigarettes in the Lebanon. Tombeki, a special kind of tobacco used for the narghileh," is grown mainly around Latakia, but also in the vicinity of Beirut, Acre, Jaffa, Nablus, Tripoli, and Jerusalem. The total value of the tobacco and tombeki crops reaches approximately 5,000,000 francs.

Summary.

Annual Crops Used for Food and Fodder.

	<i>Tons</i>	<i>Value in francs</i>
Wheat	1,000,000	210,000,000
Barley	500,000	75,000,000
Durrha	200,000	30,000,000
Corn	50,000	6,000,000
Legumes	500,000	65,000,000
Sesame	30,000	12,000,000
Potatoes	200,000	18,000,000
Vegetables	—————	25,000,000
Other plants	—————	9,000,000
		445,000,000

Commercial Crops Used for Industrial Purposes.

	Tons	Value in francs
Hemp	1,500.....	1,200,000
Cotton	3,000.....	3,500,000
Tobacco	2,500.....	5,000,000
Other crops (Fennel, anise, sugar, etc.)....	—————.....	300,000
		10,000,000

3. *Fruit Trees.*

The olive tree comes first in order of importance. It thrives on the coast as well as in the mountain districts, although in Northern Syria its existence is endangered by the heavy frosts. As the roots of the olive tree require a large area for proper development, not more than nine or ten trees can be planted to the dunam. The tree becomes productive after eight to ten years. The normal yield of an olive tree is from ten to twenty okka (1 okka=2.8 pounds). In 1909-1910 there were 3,593,566 olive trees in the Mutessarifik of Jerusalem, which bore 74,384,900 okka of fruit. The olives are either preserved green (September) or else used for the production of oil (November). An okka of fresh olives generally brings 20-25 centimes, an okka of olive oil 1.25 to 1.50 francs.

Vines are grown throughout Syria. The total area covered by vineyards is estimated at 917,227 dunam (206,400 acres) which yields 270,286,150 okka of fruit, valued at 30,000,000 francs. The grapes ripen at various times between July and November, according to the climate. Most of the fresh fruit is consumed in Syria, being too perishable for transportation. Raisins are made mainly in the Vilayets of Aleppo and Damascus, in the Lebanon, at Hebron, and at Es Salt. The production of wine is restricted to Shtorah in the Lebanon (about 132,000 gal. annually), the Jewish colonies in Palestine (1,056,000 gal.) and the German colonies near Jaffa and Haifa (132,000 gal.). Besides wine the Jews make cognac, liqueurs, and arrack. Phylloxera, which caused some damage during the last twenty years, has been combated by the introduction of American vines. In damp springs the vines are subject to oidium and plasmopara (true and false mildew).

The mulberry bush is extensively cultivated on the coastal plain from Sidon to Antioch, in the Beka'a, etc. It is used for silk-worm culture. The yield of cocoons in Syria (mostly

in the Lebanon) was 13,376,000 pounds in 1911. About 85 per cent is spun into raw silk in the country and then exported to France. Because of the depressed condition of the silk industry, silk-worm culture has grown less profitable, and in recent years many mulberry plantations have made way for other plantations, especially orange.

The cultivation of oranges and lemons, especially the former, has greatly increased in the last two decades. Oranges thrive on the coastal plain and in the Jordan valley. As they require artificial irrigation in summer, they are planted either along streams or on the coastal plain between Haifa and Gaza, where water may be obtained at a depth of from three to thirty meters. According to an official report the Vilayet of Aleppo has only 18,000 orange trees bearing 180,000 okka of fruit, and 3,235 lemon trees yielding 32,350 okka, whereas the Vilayet of Beirut has 26,430 dunam of orange and lemon trees producing 21,078,000 okka of fruit. There are no statistics at hand of the area of the large orange plantations in the Mutessarifik of Jerusalem (especially around Jaffa), but it may be estimated at 30,000 dunam, producing 50,000,000 okka. The Jewish and the German colonists plant seventy trees to the dunam. The Jaffa oranges are larger than those of Northern Syria. About 8,000,000 francs worth of oranges (not counting the value of the cases) are exported to Liverpool, and smaller quantities are sent to Eastern ports. The consumption of oranges in Syria is very high. The total value of the Syrian orange and lemon yield comes to about 15,000,000 francs.

Among the other fruit trees grown in Syria are fig, apple, pear, peach, apricot, pomegranate, mulberry (red, with edible fruit), almond, pistachio, and walnut trees. The fruit of the carob tree is partly made into syrup in Damascus and Sidon, and partly exported. The value of all these fruits may be estimated at 10,000,000 francs. Almonds are cultivated mainly in Palestine. In 1913, 528,000 pounds of almonds, worth 225,000 francs, were exported from Jaffa. The total value of the almond crop is about 1,000,000 francs annually. Pistachio nuts are grown in Aleppo.

4. *Wild Fruits.*

Licorice is collected in large quantities by the fellaheen in Northern Syria and sold to an American firm in Alexandretta, by whom it is exported. Since 1914 there is a tax of 2 para (1/5 cent) on every okka of licorice that is exported. Other wild plants are buckthorn berries, galls, gum, tragacanth,

radix scammonia, and other herbs. The total value of these amounts to about 1,000,000 francs. The bitter-apple, which grows in the sandy, unplowed land around Gaza and Beersheba, is exported mainly to Germany. At the junction of the Jordan and Lake Huleh the papyrus reed grows in large quantities.

5. *Animal Husbandry.*

In round numbers there are in Syria: 270,000 horses, donkeys, and mules, worth 50,000,000 francs; 500,000 heads of neat-cattle, worth 60,000,000 francs; 800,000 sheep and goats worth 96,000,000 francs; and 180,000 camels worth 54,000,000, making a total of 260,000,000 francs.

The horses of Syria are good, although thoroughbreds are rare.

Donkeys are used both for transportation and plowing.

The oxen in Damascus and the Lebanon are of a fairly good breed, but in the rest of the country they are small and neglected. The Damascus cow gives a maximum of 3,171 to 4,228 quarts of milk annually.

Sheep are the mainstay of the classes which live by animal husbandry. There is only one kind, the fat tail sheep. The shearing takes place in April or May. The average yield is 6½ pounds of wool per head.

There are two varieties of goats, the mambrina and the horned mountain goat.

Camels are used only for transportation purposes. They are purchased from the Bedouin.

Swine are to be found only in the Christian villages.

Animal husbandry suffers severely from frequent murrains. The annual receipts of the whole country from animal husbandry (including milk, etc., goat's hair, hides, etc) amount to about 36,000,000 francs. To this sum must be added the profits derived from rearing the young of the various animals, about 67,000,000 francs, making a total of over 100,000,000 francs. Most of the young animals are kept in the country, although some are exported to Egypt.

Cow's milk is used in the Vilayet of Damascus and in the Lebanon, as well as in the Palestinian colonies. The rest of the population use sheep's milk and goat's milk.

Wool is brought in large quantities to the markets of Damascus, Homs, etc., by the Bedouin. The Hauran wool is very strong, and suitable for carpets. Almost all the wool is exported to Western Europe and America.

6. *Poultry-Raising and Apiculture.*

Poultry-raising does not play an important role in Arabian husbandry. Chickens, pigeons, and turkeys are relatively abundant, geese and ducks very rare. A Jewish colonist in Rishon l'Zion has attempted to introduce ostrich-farming, but the results have not yet been ascertained.

Eggs are exported (about 22,500,000 annually) and bring in about 900,000 francs.

Apiculture is practised in a primitive way by the natives, modern methods being employed only by the Palestinian colonists. A hive yields about 33 pounds of good honey annually.

7. *Agricultural By-Industries.*

Among agricultural by-products the following must be mentioned: raisins, grape sugar, dried figs, dried apricots (also apricots passed through a sieve, dried, and used as a substitute for sugar) and preserved olives.

II. *Unit Farming: Scope, Method and Returns.*

A. *Forms of Land Possession.*—The greater part of the land in Syria is in the hands of large proprietors who live either in the country or in the city. According to Auhagen, about 20-30 per cent of Northern Syria, 15 per cent of Transjordan, 20 per cent of Northern Galilee and 50 per cent of Judaea is still in the possession of the peasantry. Many of the orange plantations around Jaffa (exclusive of those in the Jewish colonies) belong to Effendis who live in the city. The Turkish law demands that all arable land which remains uncultivated for three consecutive years revert to the state; this happened very frequently until recent years. The tracts of land were then auctioned off and acquired at a low price by the absentee capitalists.

The usual size of a Syrian farm is 100-200 dunam. Many fellaheen do not possess more than one-half or one-fourth of this, whereas some proprietors own at least 100,000 dunam. It is customary for the owners of estates to rent out their land to speculators who in turn sublet it to the fellaheen. These generally pay their rent in crops, on a share system. As a rule they are exploited by the speculators.

B. *Methods.*

1. *The Season Program of Farm Work; Crop Rotations.*

The agricultural methods of the fellaheen are practically

those of Biblical times. For instance, the plow is most primitive, consisting of a wooden board with an iron nail at the end, with which the farmer scratches the surface to a depth of 10-15 centimeters. The system of rotation has not been changed for centuries. Generally speaking, the program of the fellah inhabiting the coastal plain near Jaffa is as follows:

Planting of clover and lupin immediately after the first heavy rainfall	Second half of November and first half of December
Barley	first half of December
Wheat	December-January
Lentils	January
Chickpeas	February
Weeding of wheat, barley, and legume fields	February-March
Planting of durrha.....	Second half of March-April
Planting of sesame	Second half of April and first half of May
Gathering in of clover and lupin.....	Second half of May
Mowing of barley	End of April and first half of May
Gathering in of lentils.....	End of April and first half of May
Mowing of wheat	Second half of May and first half of June
Gathering in of chickpeas.....	June
Weeding of sesame	June and July
Picking of durrha	August
Gathering in of sesame	August-September
Threshing of winter and sum- mer crops	May to October

The widespread belief that the same field will yield two crops a year is erroneous, except in the case of artificially irrigated soil. It is true that there are two harvests, one in April or May, the other in August or September, but not on the same field. The fellaheen employ the system of two-year crop rotation, according to which they plant sesame, durrha or (on small fields) legumes the first year, and wheat or barley the second year. In the regions where the dew-fall is not sufficiently heavy for sesame or

durrha, the soil is not plowed until the summer, but is allowed to remain as black fallow. At the end of the summer it is planted with winter crops. The fellah tries to maintain an equilibrium of nutritive substances by planting first nitrogen collectors (legumes) and deep-rooted plants, and then nitrogen consumers and shallow-rooted plants. He is careful to loosen and clean his soil by means of repeated plowing and frequent black fallow.

2. Agricultural Implements.

The farms of the fellaheen, unprogressive as they are, have the merit of being well-balanced and adapted to natural and economic conditions, whereas the dairy farms of the German colonists depend on the proximity of a large town, and the vineyards and orange plantations of the Jewish colonists require capital, co-operative production, a market, and easy access to a port. Moreover those Jewish colonies whose chief product is grain (especially those around Tiberias) have not yet evolved a successful *modus operandi*. A new system of husbandry will have to be found, with other crop rotations and other branches of husbandry, so that the individual may produce his own requirements (vegetables, fruit, poultry, eggs, honey, milk, etc.). The primitive implements of the fellah are suited to conditions; his plow conforms with the small dragging power of his oxen, which could not begin to move a European plow; his sickle can be used on stony ground, where the cutting machine is valueless. He would gain nothing by replacing his threshing-drag with a threshing-machine, as his time costs nothing. In a word, innovations must be introduced gradually, as Syrian agriculture becomes more European in character. Many of the machines imported by the Palestinian colonists were found to be impractical. Among those, however, which proved useful, are the European plows, reaping machines (on cleared and even soil), harrows, sub-soil plows, rotary plows and chaff cutters. Several threshing machines are in use in the Jewish colonies, as well as cultivators and diskplows.

3. Draft and Breeding Animals.

Animal husbandry is much neglected by the fellaheen. In the Jewish colonies horses and mules are used in preference to oxen.

4. Land Improvement and Fertility.

In certain sections of the mountain regions the declivities have been skilfully terraced in order to prevent the soil from

being washed away. Thus arable tracts of land are created. This terracing was much more resorted to in olden times. The fellaheen do not usually trouble to clear the land of stones. Much attention has been given to this phase of land improvement in the Jewish colonies, where the stones are used to build walls around the fields.

Drainage by means of pipes has been attempted only in one place, namely, along the banks of the Aujah (north of Jaffa). The Jewish colonists of Hudeirah partially drained their marshes by planting eucalyptus forests. The large swamps along the coastal plain could only be drained by means of canalization, those on the banks of Lake Huleh by regulating the course of the Jordan.

Afforestation has not been undertaken anywhere except in the vicinity of cities and in the Palestinian colonies.

Fertilizing is unknown to the fellaheen. They do not keep cattle to any extent, and what little dung they have is dried and used as fuel, or else is heaped up on the ground and remains unused. The Palestinian colonists used to buy these manure heaps from the Arabs, who are now, however, beginning to awaken to a realization of their value.

5. Irrigation.

During the dry season irrigation is indispensable for oranges, lemons, etc. It is accomplished either by water from the streams or by pumps. Along the coastal plain from Gaza to Haifa, there are wells where water is found at sea-level. Lately the natives have followed the example of the Palestinian colonies and have used suction pumps and kerosene or coal-gas motors. The Jews were also the first to introduce the so-called "dry wells," which have been widely copied.

In Petach Tikvah a large pumping station was constructed some years ago by the *Palaestina*, an irrigation company of Charlottenburg. In 1916 the works supplied 1,500 dunam of orange plantations with water, charging from 15 to 35 francs per dunam according to the distance from the pumping station. The works are capable of irrigating 3,000 dunam. From 1911 to 1915 numerous attempts were made to introduce new systems of irrigation. The maximum depth of the wells along the coastal plain was 55 yards. Several Jews sank two wells 100 yards deep on the slopes of Mount Carmel. In the colony Huldah (Judaea) a well of 200 yards was sunk by means of an American drilling machine. Among the many irrigation projects of recent years special mention

should be made of those which deal with utilizing the Jordan and the Aujah. The Jordan project is not easy of accomplishment because from Beisan to the Dead Sea the river bed lies very deep, and the water would have to be pumped up over 100 yards, unless a long canal were built from the upper course of the river. The utilization of the Aujah for irrigation purposes presents no serious difficulties.

C. *European Influences in Syrian Agriculture.*

The influence of the Palestinian agricultural colonies has been far greater than the number of their inhabitants would lead one to suppose.

1. *The German Agricultural Colonies of Palestine.**

	Founded	Pop.	Area	Value (in francs)	Principal products
Sarona (near Jaffa)	1871	225	8,000	4,000,000	Dairy products, wine, oranges, vegetables.
Wilhelma (near Jaffa)	1902	229	10,000	2,000,000	Dairy products, oranges, cereals.
B'er Salem (near Jaffa)	1890	10	3,538	500,000	Wine, almonds, (Agricultural orphanage.)
Bethlehem (near Nazareth)	1907	60	7,500	750,000	Cereals, timber.
Um el Amed (near Nazareth — also called Waldheim)	1907	100	7,500	750,000	Cereals, timber.

(The German urban population of Palestine in Haifa, Jerusalem, and Jaffa, which also engages in husbandry to a certain extent, numbers approximately 1,400 souls.) The German farmers introduced the European system of crop rotations with fodder cultivation and fertilizers. They use artificial fertilizers imported from Germany. They have met with signally good results in diversified farming.

2. *The Jewish Agricultural Colonies of Palestine.*

The Jewish agricultural settlement of Palestine began in 1870 with the establishment of the Agricultural School Mikveh Israel near Jaffa by Charles Netter, the representative of the Alliance Israélite Universelle. In 1878 the first colony, Petach Tikvah, was founded by Jerusalem Jews, in 1882 Rishon l'Zion was founded

* Founded by Templars from Württemberg.

by Russian Jews, and two other colonies by Roumanian Jews, namely Zichron Jacob in Samaria and Rosh Pinah in Galilee. The colonists went through tremendous sufferings because of sickness and poor harvests, and would have succumbed had it not been for the help tendered them from 1885 on by Baron Edmund de Rothschild of Paris. The colonies in Upper Galilee made attempts to introduce silk-worm culture and the production of rose oil, later tree-plantations and grain cultivation, whereas the Judaeian and Samaritan colonies engaged in wine growing. Wine cellars costing several millions of francs were constructed in Rishon l'Zion and Zichron Jacob. But despite the superior quality of the wine the sale did not keep pace with the production, and the producers were faced by a crisis. For a time Baron Rothschild bought the wine himself and either stored it or else sold it at an enormous loss. This state of things was untenable. Finally, considerable tracts of vineyards were replaced by other trees (especially almond trees). In 1910 the failure of the European wine crop made it possible to dispose of the stored-up wine, and the wine-growers, who had meanwhile formed an association of Jewish vintners and taken over the cellars in Rishon l'Zion and Zichron Jacob, began to gain a firm footing commercially. They arranged for the sale of their wines by founding special agencies in various countries, and created an important and remunerative market for themselves in Egypt. They produce from 792,000 to 1,056,000 gallons of wine, cognacs, and liqueurs, worth about a million francs. In the meantime, other plantations were founded in the colonies—orange, almond, olive, and eucalyptus. The cultivation of oranges has assumed considerable dimensions, and has been successful, with very few exceptions. The center of orange growing is Petach Tikvah, 11.2 miles north of Jaffa. The orange growers have also organized two associations, Mercas and Pardes, for the sale of the fruit. In 1913 the total yield of oranges in the Jewish colonies amounted to about 600,000 cases, valued at 2,000,000 francs.

Besides the above-named colonies, which devote themselves mainly to orchards, there are three colonies in Judaea, and about twenty in Samaria, Lower Galilee, and Upper Galilee, which are occupied mainly with grain cultivation and animal husbandry. The colonies in Lower Galilee were founded in the years 1902-1910 by the Jewish Colonization Association with funds provided by Baron Rothschild, who had given over the administration of the colonies he was supporting to the J. C. A. in 1900. Although these colonies are pervaded by an atmosphere of enthusiasm, the results of grain

cultivation have so far not been brilliant. Therefore, there is a tendency to devote part of the land to orchards, as in the Judæan colonies, and to engage in so-called diversified farming. As a matter of fact, grain cultivation in Palestine is less profitable for the European immigrant than orchards and, moreover, the Jew seems to have a greater aptitude for the care of trees than for grain cultivation. In any case, the excellence of the tree plantations in the Jewish colonies is admitted without a dissenting voice. They are generally considered models, whereas grain cultivation and animal husbandry as practised by the Jews leave much to be desired, and have not as yet proved unquestionably profitable.

Since the administration of the colonies has been in the hands of the J. C. A., an effort has been made after a fifteen-year period of support to set the colonists on their own feet again. The J. C. A. succeeded in reducing the subsidies accorded the colonists by a considerable amount, and in rendering some of the colonies entirely independent. This task was facilitated by the immigration, even before 1900, of a number of rich Eastern European Jews, adherents of the Hovevei Zion (Friends of Zion) movement, who either founded their own plantations or else formed societies in Europe whose representatives were sent to Palestine for that purpose. The number of private plantations has grown since 1908, when several stock companies founded under Zionist auspices began to establish farms, and so to popularize cultivation on a large scale, of which there was only one instance in Palestine before that, the farm school of the J. C. A. in Sedjera, founded in 1899. As a result Jewish agricultural colonization not only was enriched, but it acquired a spirit of independence which had a salutary effect on the "dependent" colonies.

It has sometimes been asserted, especially by German agriculturists, that the Jewish colonists are not real farmers, but rather manufacturers of and dealers in fruits. Unquestionably the Jewish plantation colonies have a strong commercial tinge. In this respect they differ from the German colonies and approach American farms in character. The proprietor does not participate in the work himself, but undertakes the bookkeeping and the sale of the fruit. It may well be asked whether in Palestine that which the German farmer, judging by German standards, considers a defect, may not represent a higher grade of agricultural activity. In one respect, however, this commercial tendency is a great drawback, for it keeps the planter from growing requirements which

he is forced to buy, thus spending a considerable part of his earnings. If the colonists, with the help of their wives, were to produce vegetables, dairy products, poultry, etc., their situation would be far less hazardous.

The farmhands in the plantation colonies are Arabs from the neighboring villages, and also Jews. The Jewish farm hands are either young people from Eastern Europe whose love for Palestine and for agriculture has induced them to become laborers, or else Circassian and Yemenite Jews who have immigrated to Palestine in the last ten or twenty years, and are used to a very frugal existence. The wages of the laborers ranges from 1.25 to 2 francs a day; expert laborers are paid higher wages for special jobs. The Jewish laborers who have been drafted from urban callings do not accustom themselves rapidly to farm work in the hot Palestinian climate; many are unable to do so, and others persevere in the work only at the cost of a tremendous effort, despite which their work is inferior to that of the native Arab laborer. Nevertheless, in March, 1915, there were 2,381 laborers and their families in Judaea, including 941 Yemenites. Before the war, besides these Jewish laborers, there were two or three times as many Arab laborers. In the colonies of Lower Galilee where grain cultivation is the rule, there are numbers of Jewish laborers, in contrast to Upper Galilee, where the Jewish colonist usually leases his land to the Arabs.

The following table gives a list of all the Jewish agricultural settlements, exclusive of those which are no longer inhabited (Yehudiyeh near Petach Tikvah, and Tantura near Zichron Jacob) and of the land which is owned by Jews, but has not yet been settled, namely, about 56,000 dunam in the Hauran and 30,000 dunam in Western Palestine.

**THE JEWISH AGRICULTURAL SETTLEMENTS OF PALESTINE
IN 1914.**

Name	Founded	Area	Pop.	Principal products	Remarks
I. In Judaea, near Jaffa.					
1. Mikveh Israel	1870	2,612	100	Wine, oranges, vegetables, cereals, milk.	Agricultural School of the A. I. U.
2. Rishon l'Zion*	1882	10,926	1,500	Wine, oranges, almonds.	Big wine-cellar.
3. Wadi Hanin (Ness Tslonah)	1882	2,390	200	Oranges, wine, almonds.	

* Including the laborers' settlement Nachlat Yehudah.

S y r i a : A n E c o n o m i c S u r v e y

Name	Founded	Area	Pop.	Principal products	Remarks
4. B'er Jacob	1908	2,040	150	Almonds.	Laborers' settlement.
5. Rehobot	1890	14,193	1,100	Wine, oranges, almonds, olives.	
6. Ekron (Mazkeret Batiah)	1884	13,000	360	Cereals, milk, olives, almonds.	
7. Katrah (G'derah)	1885	5,970	180	Almonds, wine, cereals.	
8. Kastiniyeh	1896	5,623	170	Cereals, almonds.	
9. Ruhamah (Djemamah)	1911	6,000	30	Almonds.	Farm.
10. Petach Tikvah ...	1878	23,870	3,300	Oranges, wine, almonds, olives, eucalyptus, cereals.	
11. Ain-Gannim	1908	762	200	Vegetables, oranges, eucalyptus.	Laborers' settlement.
12. Kfar Malal	1912	4,220	20	Almonds.	
13. Kfar Saba	1892	7,231	100	Almonds, olives, eucalyptus.	
14. Ben Shemen	1906	2,329	120	Olives, almonds, dairy products.	Farm.
15. Hulda	1909	1,973	30	Olives, almonds.	Farm.
16. Kfar Uriyeh	1912	4,800	30	Almonds, olives.	Farm.
17. Artuf	1896	4,727	150	Grain, almonds, milk.	Farm and colony.
18. Motsah (near Jerusalem) ..	1894	750	40	Wine, olives.	
II. In Samaria, near Haifa.					
19. Hudeirah	1891	32,500	300	Cereals, oranges, olives, eucalyptus, almonds.	
20. Hephtsibah	1905	5,908	20	Oranges, almonds.	Property of "Agudat N'tayim."
21. Kerkur	1913	15,500	50	Almonds, oranges, cereals.	Farm.
22. Zichron Jacob ...	1882	30,668	1,000	Wine, cereals, almonds, oranges, olives.	Big wine cellars.
23. Shveyah	1891	6,915	50	Cereals, almonds, wine.	
24. Um el Djemal ...	1891	7,642	80	Cereals, milk, almonds.	
25. Atlit	1909	6,800	80	Cereals.	Colony and Agricultural Experiment Station.
26. Merhaviah	1911	9,415	100	Cereals, dairy products, almonds.	Farm and colony.

S y r i a : A n E c o n o m i c S u r v e y

Name	Founded	Area	Pop.	Principal products	Remarks
27. Sedjerah	1899	17,720	200	Cereals, olives, oak-forests.	Farm and colony.
28. Mes'chah	1902	10,120	250	Cereals.	
29. Yemmah	1902	23,290	300	Cereals.	
30. Poriah	1911	3,545	50	Almonds, olives, eucalyptus.	Farm.
31. Ramah	1913	5,000	30	Almonds, olives.	Farm.
32. Bedjen	1904	5,681	50	Cereals.	
33. Mitspah	1908	2,941	50	Cereals.	
34. Kinneret	1908	9,000	100	Cereals, vegetables, oranges, almonds.	Farm and colony.
35. Daganiah	1909	3,073	30	Cereals, vegetables, almonds, oranges.	Farm.
36. Migdal	1910	6,000	50	Cereals, vegetables, milk, almonds, oranges.	Farm.
37. Bethaniah	1913	600	30	Bananas, fruits.	Farm.
38. Melhamiyeh	1902	8,477	100	Cereals.	
39. Rosh Pinah*	1882	41,987	700	Cereals, almonds.	
40. Mishmar ha-Yarden	1890	7,569	100	Cereals.	
41. Yessod ha-Maalah	1883	12,228	160	Cereals.	
42. Metullah	1896	16,731	300	Cereals.	
43. Ain-Seitun	1891	6,016	30	Wine, olives.	

* Including 21,885 dunam of uncultivable land.

An investigation conducted in March, 1915, showed that in the Judæan colonies (Nos. 1-17) there were 7,499 Jewish inhabitants, including the following:

Colonists (with families)	2,735
Laborers (with families)	2,381 (941 Yemenites)
Tradespeople (with families) ...	1,268
Other callings or without calling.	1,115
Total.....	7,499

At the same period there were the following plantations in these colonies:

	Dunam	Value per Dun. in francs	Total Value
Oranges	7,900	1,200	9,480,000
Vineyards	12,000	200	2,400,000
Almonds	27,000	150	4,050,000
Olives, etc.	7,200	150	1,080,000
	<u>54,100</u>		<u>17,010,000</u>

In the other Jewish colonies in Palestine the plantations may be estimated as follows:

	Dunam	Value per Dun. in francs	Total Value
Oranges	1,300*	1,000	1,300,000
Vineyards	2,000	200	400,000
Almonds	10,000	150	1,500,000
Olives	2,000	150	300,000
Eucalyptus	2,000	100	200,000
	<hr/>		<hr/>
	17,300		3,700,000

Thus the total value of the plantations in the Jewish colonies may be estimated at 21,000,000 francs. To this must be added the value of the uncultivated land (about 340,000 dunam at 50 francs a dunam), approximately 17,000,000 francs, and that of the buildings, wine-cellars, water-works, implements, live-stock, etc., making a total of from 60 to 70 million francs.

The annual value of the crops may be estimated as follows:

	Francs
Oranges (600,000-700,000 cases)	2,000,000
Grapes (15,840,000 pounds)	500,000
Almonds (about 1,100,000 pounds)	500,000
Olives (about 2,200,000 pounds)	100,000
Other tree plantations (figs, eucalyptus, apricots, etc.) .	50,000
Cereals, legumes, and sesame	1,200,000
Vegetables	100,000
Dairy farming	200,000
Poultry raising and apiculture.....	50,000
Receipts from travel and the renting of vehicles.....	50,000
	<hr/>
Total.....	4,750,000

Taking it all in all we can say that the plantations in the Jewish colonies are models of their kind, and that the colonists, through their initiative and enterprise have not only organized the sale of their products in a new and efficient way, but that they have made their colonies into real oases of civilization, thanks to the schools, physicians, druggists, and water-works they have introduced. They have persevered in their work despite an enormous sacrifice of health, and even life, and have transformed unwhole-

* Of these orange plantations 1,100 dunam are situated in Hudeirah and Hephtsibah.

some spots like Hudeirah, for instance, by the introduction of the eucalyptus tree, which drained the marshes. Those colonies which engage in grain cultivation are not yet on a stable basis and are still groping for a suitable and profitable type of farming. A great problem is constituted by the fact that the Jews, coming from a European milieu, cannot reduce their manner of working and their demands to the low level of the Arab without injuring their health, their intellectual development, and their working capacity. On the other hand, they have not yet found a way of making grain cultivation so profitable that it will admit of being carried on according to higher technical methods. The better tilling of the soil resulting from the employment of European implements has not yet produced an increase of profits to correspond with the increase in the expense. What is necessary is a radical change in the whole procedure of farming (introduction of cattle for food and dairy purposes, etc.). Besides, the production of vegetables, poultry, dairy products, etc., with the co-operation of the farmer's wife has not yet been developed, and as a result the farmer is compelled to buy requirements. In this respect the German colonists are better situated, as their wives have been of great assistance on the farms.

The establishment of an agricultural experiment station in Atlit, near Haifa, in 1910, is due to the interest taken in Palestine by rich American Jews.

Since 1912 a Hebrew monthly, *Hahaklai*, has been appearing in Jaffa, which deals with the practical problems confronting the Jewish farmers.

3. *The Muhajir Settlements.*

Mohammedan Circassians who left Russia and Bosnia after the Treaty of Berlin settled in several sections of Transjordania (for instance, Amman, Djerash, etc.), in Kafr-Kama near Tiberias, and in the ancient city of Kuneitrah east of Lake Huleh, etc. They have introduced advanced agricultural methods and are skilled in animal husbandry. The Circassians are cleanly, diligent, and courageous.

4. *The Influence of Monks and Missionaries.*

Mention should be made of the agricultural achievements of the Christian monks and missionaries. It is they who are responsible for the terraces and olive plantations of Betjalla (near Jerusalem), the forests of Kubebeh (Emmaus), the dairy and vegetable farms of Latrun (between Jaffa and Jerusalem) etc.

D. Crop Yields and the Price of Land.

1. Grain Yields.

On the unfertilized soil of the fellaheen an average wheat crop is eight- or ten-fold; barley, beans, lentils, and peas from ten- to fifteen-fold, and durrha from sixty- to eighty-fold. A dunam of the best soil in Judaea yields 308 pounds of wheat or 352 pounds of barley. The return is much higher for fertilized or unusually rich soil, especially in the Palestinian colonies, where the yield in good years has been estimated as follows:

	Seeding per hectar in kilograms.	Gross Proceeds. Yield in comparison with seeding.	Maximum Quantity.	Price per 100 kg. (in frs.)	Value in francs.
Clover	135 kg.	8-15 times	2,025	18	364.50
Lentils	180 "	8-10 "	1,800	13	234.
Karsenne	144 "	15-20 "	2,880	15	432.
Barley	192 "	15 "	2,880	16	460.80
Wheat	180 "	10-12 "	2,000	21	420.
Chickpeas	90 "	20 "	1,800	16	280.
Durrha	18 "	100 "	1,800	12	216.
Sesame	13½ "	40 "	540	44	237.60

Synopsis of Average Yields per Dunam in the Vicinity of Jaffa.

Crop.	Quality of soil.	Gross profit.		Seed.			Cost in francs.		Net profit in francs.†
		in kele.	in francs.	kele.†	francs.	for animal labor.	for human labor, etc.	Total.	
Wheat	I*	5	30.	½	3.	6	7	16.	14.
	II	3½	21.	½	3.	5	5	13.	8.
	III	2½	15.	½	2.	4	4	10.	5.
Barley	I	8	24.	½	1.50	6	6	13.50	10.50
	II	6	18.	½	1.	5	5	11.	7.
	III	5	15.	½	1.	5	4	10.	5.
Beans	I	6	27.	½	2.25	6	6	14.25	12.75
	II	5	22.50	½	2.25	6	5	13.25	9.25
Lupine	I	7	17.50	½	1.25	5	4	10.25	7.25
	II	5	12.50	½	1.25	4	3	8.25	4.25
Vetches	I	8	28.	½	1.75	5	8	14.75	13.25
	II	6	21.	½	1.75	5	6	12.75	8.25
Lentils	I	7	28.	½	2.	6	7	15.	13.
	II	5	20.	½	2.	5	5	12.	8.
Durrha	I	6	21.	..	1.	6	4	11.	10.
	II	4	14.	..	.70	5	3	8.70	5.30
Melons	I	..	35.	..	1.	9	10	20.	15.
	II	..	25.	..	1.	9	8	18.	7.
Sesame	I	2½	22.50	..	1.	8	4	13.	9.50
	II	2	18.	..	1.	8	3	12.	6.
Potatoes	I	1,000 kg.	105.	170 kg.	24.	6	35	65.	40.
	II	700 kg.	75.	130 kg.	18.	6	25	49.	26.
Green beans and peas	I	650 kg.	67.50	..	4.	6	20	30.	37.50
	II	500 kg.	52.50	..	4.	6	16	26.	26.50
Beets	I	600 kg.	50.	..	1.	5	15	21.	29.
	II	450 kg.	37.50	..	1.	5	12	18.	19.50
Cabbage and cauliflower	I	800 heads	120.	..	2.	5	60	67.	53.
	II	600 heads	90.	..	2.	5	50	57.	33.
Tomatoes and eggplant	I	..	120.	..	2.	6	70	78.	42.
	II	..	80.	..	2.	6	50	58.	23.

* I, superior quality of soil; II, middling quality; III, inferior quality.

† One kele=about 35 liters, *t. e.*, about 25 kilograms of wheat, 20 kilograms of barley, or 23 kilograms of beans, vetches, etc.

‡ Without subtracting the osher and the wergho.

It is interesting to compare the budgets of various types of farms. Three farms belonging to fellaheen in the neighborhood of Lydda may be taken as examples of native husbandry. Type I consists of about 100 dunam, and is worked only by the fellah and his wife; the net profit amounts to about 750 francs annually. Type II, of the same size, is more elaborately run, the fellah employing two laborers for several months in the year; the annual net profit is 1,485 francs in a good year. Type III, about 500 dunam in size, requires five tenant partners (charats), two shepherds, and a watchman. The net profit is 1,780 francs. It must not be forgotten that the fellah is compelled to pay out 20 per cent of his profit for taxes, the osher, wergho, etc. The advantage of the native farm is that the income is fairly uniform, that the risk is small, and that little capital is needed to run it.

The Jewish and German farms in Palestine, on the other hand, which are run according to European methods, require a far greater investment for buildings, etc. In general it may be said that the native farmer requires an invested capital of 5,000 francs inclusive of land (100 dunam) or 1,000 francs exclusive of land; the Jewish colonist requires an invested capital of 17,000 francs inclusive of land (200 dunam) or 8,000 francs exclusive of land; and the German colonist requires an invested capital of 24,000 francs inclusive of land (200 dunam) or 14,000 francs exclusive of land.

Invested Capital (Exclusive of Land).

	CULTIVATED AREA (in hectares).				INVESTED CAPITAL PER HECTAR.										Total Cost.
	Cereals.	Vegetables.	Plantations.	Total.	Buildings.	Working Cattle.	Fixtures.	Cereal Production.	Milk Cattle.	Animal Husbandry.	Poultry.	Irrigation.			
Native farm, Type I.....	9	..	..	9	27.80	33.30	3.30	64.40	.....	11.10	.....	.....	75.50
Native farm, Type II.....	9	..	..	9	44.40	73.30	3.90	121.60	.....	13.30	.....	.....	134.90
Native farm, Type III.....	46	..	..	46	108.70	57.60	2.40	168.70	.....	4.40	.....	.....	173.10
Jewish colonist in Galilee, Type IV*.....	36	..	..	36	101.10	30.00	64.02	205.12	11.11	6.95	.55	.....	223.73
Jewish colonist in Galilee, Type II.....	22	..	..	22	181.80	31.81	5.45	219.07	18.18	11.36	.....	.....	248.61
Jewish colonist in Galilee, Type I.....	13	..	..	13	202.70	65.87	49.32	317.89	47.29	57.43	2.02	.....	424.63
Jewish colonist in Galilee, Type III.....	29	..	..	29	367.60	76.47	69.85	513.96	22.05	21.32	29.41	.....	586.74
German colonist in Saron.....	25	5	5.5	31	258.00	68.50	222.27	548.65	80.64	16.77	1.94	19.35	667.35		
German colonist in Willhelma	15	1.05	3.5	20	500.00	112.00	219.25	831.25	202.50	97.50	5.60	.....	1,136.85	

* The Jewish colonists of the Types II and IV work by means of native sub-tenants with oxen; the Jewish colonist of Type III has two mules and three oxen. The Jewish colonist of Type IV has a small capital invested in buildings because he has rented 18 hectares in addition to his own 18 hectares.

Receipts and Expenditures per Hectar.

	RECEIPTS.							EXPENDITURES.						
	Cereals.	Milk.	Animal Husbandry.	Poultry.	Vegetables.	Plantations.	Various.	Total.	Fodder.	Wages.	Running Expenses.	Taxes and Sinking Fund.	Seed.	Total.
Native farm, Type I.....	173.33	.....	3.33	.....	.....	.....	.....	176.66	6.66	.....	10.55	55.55	20.55	93.31
Native farm, Type II.....	294.44	.....	3.33	.....	.....	.....	.....	297.77	6.66	17.77	15.55	72.22	20.55	132.75
Native farm, Type III.....	177.17	.....	.....	.....	.....	.....	.....	177.17	26.95	53.26	4.35	34.78	19.13	138.47
Jewish colonist in Galilee, Type I.....	88.23	.....	36.79	7.35	.....	.....	7.35	139.72	37.50	.....	7.35	35.36	16.69	96.90
Jewish colonist in Galilee, Type II.....	172.31	.....	.....	.....	.....	.....	.....	172.31	4.66	49.90	9.54	23.74	21.40	109.24
Jewish colonist in Galilee, Type III.....	127.53	.....	6.75	.....	.....	.....	4.84	139.12	20.33	27.55	15.54	35.13	17.80	116.37
Jewish colonist in Galilee, Type IV.....	68.88	.....	.....	.....	.....	.....	27.77	96.65	50.00	12.22	8.13	21.49	17.47	109.51
German colonist in Sarona.....	198.96	135.48	18.39	1.93	125.81	92.90	29.03	602.50	101.00	61.00	50.33*	103.97	27.00	343.30
German colonist in Wilhelma.....	318.50	184.50	4.50	.....	5.00	75.00	15.00	602.50	123.23	52.60	77.62†	27.33	20.00	300.78

* Including 13.33 francs per hec tar for manure.
 † Including 25.00 francs per hec tar for manure.

Average Yield of Tree Plantations near Jaffa.

		Gross profits.								
	Quality of soil.*	Quantity.	Value in francs.	Cost of cultivation. (francs.)	Cost of picking and packing of fruits. (francs.)	Land tax. (wergho.) (francs.)	Depreciation. (francs.)	Total costs. (francs.)	Net profit. † (francs.)	
Oranges	I	80 †	200.00	70	20	2.50	17	109.50	90.50	
	II	65 †	162.50	60	16	2.50	13	91.50	71	
Almonds	III	55 †	137.50	50	12	2.50	10	74.50	63	
	I	75 kg.	62.50	10	6	.50	4	20.50	42	
	II	60 kg.	50.00	10	5	.50	4	19.50	30.50	
Apricots and peaches	III	45 kg.	37.50	8	4	.50	3	15.50	22	
	I	360 kg.	60.00	12	5	.50	5	22.50	37.50	
	II	270 kg.	45.00	12	4	.50	5	21.50	23.50	
Olives	III	180 kg.	30.00	10	3	.50	4	17.50	12.50	
	I	360 kg.	48.00	7	6	.50	4	17.50	30.50	
	II	270 kg.	36.00	7	5	.50	3.50	16	20	
Vineyards	III	180 kg.	24.00	6	4	.50	3.50	14	10	
	I	750 kg.	50.00	10	3	.50	2.50	16	34	
	II	600 kg.	40.00	10	2.50	.50	2.50	15.50	24.50	
	III	450 kg.	30.00	9	2	.50	2	13.50	16.50	

* I, good quality of land; II, medium quality; III, inferior quality.

† The other (12.63 per cent of the gross profits) must be subtracted from the net profit.

‡ Cases. One case contains from 100 to 150 oranges and weighs about 35 kilograms.

Profitability of the Tree Plantations in the Jewish Colonies near Jaffa.

	Oranges.	Vine-yards.	Almonds* or Apricots.	Olives.
1. Price per dunam (about).....	150	45	40	40
2. Number of trees per dunam (about)..	60	250	50	10
3. Number of years from time of planting to:				
(a) first crop	5	4	5	7-8
(b) full productivity	7-9	6	7-9	12
4. Total cost (invested capital), including 6 per cent interest up to the time of full productivity, and also including the price of the land in francs:				
(a) up to first crop.....	1,000	150	160	180
(b) up to time of full productivity (minus the receipts during the first crop)	1,200	160	200	230
5. Gross profits per dunam in the years of first crop:				
(a) in fruit (kg.)	20**	300	20 kg. †	80
(b) in money (francs)	55	19	100 kg. †	12
6. Gross profits per dunam in the years of full productivity:				
(a) in fruit (kg.)	80**	600	60 kg. †	300
(b) in money (francs)	220	38	300 kg. †	45
7. Annual cost of maintenance and harvest in the time of full productivity	80	15	20	15
8. Wergho and osher in the time of full productivity	25	5	6	5
9. Net profits in the time of full productivity	115	18	22	25
10. Interest on invested capital in time of full productivity	10%	11%	11%	11%

* The almonds considered here are the hard-shelled (Victoria) almonds. The soft-shelled almonds (Princess) which are not planted extensively take 9 years for the first crop and 13 years to reach the period of full productivity. They produce a smaller quantity but a more expensive quality than the hard-shelled almonds.

** Cases, each containing 35 kilograms.

† Almonds.

‡ Apricots.

The gross profits are smallest on the Jewish farms, where they amount to 96.65-172.31 francs per hectare; on the native farms they come to 176.66-297.77 francs, and on the German farms to 602.50 francs.

It must not be forgotten that this applies to cereal raising farms and not to tree plantations.

2. *Plantation Yields.*

Plantations are far more remunerative than cereal raising. On the Jewish plantations near Jaffa the net profits on a dunam of oranges are 115 francs, on a dunam of almonds, apricots, or olives, 18.22-25 francs. Thus the interest on the invested capital is 10-11 per cent.

In calculating the cost of cultivation the fact was taken into account that all the agricultural work is done by laborers, and that the proprietor busies himself with the commercial end of the enterprise exclusively.

The large returns of the plantations in Palestine have aroused the interest of many European Jews, who have founded a stock company, the Société Ottomane de Commerce d'Agriculture et d'Industrie (Agudat N'tayim), with a capital of 75,000 Turkish pounds (60 per cent paid in), with the object of founding and administering plantations to be owned by Jews living in other lands.

The Jewish agriculturists have been very successful with almond, eucalyptus, and olive plantations along the sand-dunes of the coast from Haifa to Gaza. The sand is excellently suited to the cultivation of the castor oil bush, as has been proved by experiments in the Jewish colonies. The castor oil bush has the advantage of not requiring much care, and of entering upon its period of productivity in the second year. The area east and west of Beersheba, where there are no trees at present, could be utilized in this manner. There are still other desert trees which could be cultivated where the sand is too deep for the castor oil bush, and used for fuel or timber. In any case it is certain that many square miles along the dune and desert territory are cultivable. In olden times the agricultural development of these tracts reached a high degree.

As a result of the higher returns of the tree plantations agriculture was completely abandoned in certain districts of the country, for instance in the Palestinian colonies which devoted themselves entirely to vine, orange, and almond raising. This led to over-production, and the products depreciated in value. Large

vineyards had to be torn up to make room for other plants. Another danger of a single crop is that when it fails or there is a crisis in the market, the planter has nothing to fall back on. The wise farmer practises grain cultivation and animal husbandry to a sufficient extent to provide the requirements of life for his family.

3. *The Price of Land.*

The price of land in the Lebanon is as high as 3,000 fr. per dunam in some cases. In the Palestinian colonies soil suitable for orange plantations (without gravity irrigation) brings as much as 300 fr. per dunam, that suitable for almond and olive plantations 25-100 fr. per dunam. The best sort of soil for the cultivation of cereals brings 30-50 fr. in Palestine, or 10-30 fr. in Northern Syria.

III. *Agricultural Credits; the Activities of the Banque Agricole.*

Mortgage loans by private banks or societies is a new thing in Turkey. Until recently mortgage loans on rural property were made by private individuals or by the Banque Agricole, which was founded in 1888. Its capital consists of the assets of the loan banks which it took over, the proceeds of a special tax of $\frac{1}{2}$ per cent levied for its benefit in connection with the osher, and its accumulated profits. The bank may lend only to farmers and only for agricultural purposes. It charges 6 per cent interest. A law passed in March, 1916, gave the bank a far larger field of activity. Up to that time it was limited as to the amount that it might lend and the period for which the loans were to run. It could not lend more than 15 Turkish pounds nor for more than 10 years. These restrictions have now been removed, and the bank has been authorized to grant loans secured by grain collateral or to make loans under joint guarantee for the purpose of buying land and subdividing it, and of acquiring live stock, seed, and farm implements, to be sold on the instalment plan. Moreover, the law provides that the supplemental tax levied with the osher for the benefit of the bank is to continue until the capital reaches 15,000,000 Turkish pounds (340,000,000 francs). The bank is also allowed to issue certificates of indebtedness.

IV. *Taxation, Land-Registry, Property Ownership, and Inheritance.*

A. *Taxation.*

The farmer is subject to the following taxes: (a) the tithe (osher), originally 10 per cent, increased in 1892 to 12.63 per cent.

The osher is collected either from each village as a whole directly or through an osher contractor, who collects the 12 per cent from each farmer in produce; (b) the land tax (*wergho*) which amounts two $\frac{4}{1,000}$ of the value of his land, plantations, improvements, and buildings; (c) the cattle tax (*aghnam*) on camels, buffaloes, sheep, goats, and pigs (4 piastres annually per capita for sheep and goats, 10 piastres annually per capita for camels, buffaloes, and pigs); (d) the road tax amounting to 20-30 piastres annually. Certain parts of Syria are exempt from the osher, paying in its stead a fixed sum, which is smaller.

B. *Land Registry.*

So far there is no land registry in Syria, but only a survey of lots made 50 years ago, inaccurate both as to size and to boundary. A law passed in 1913 provides for a new register according to European methods, but so far it has not been carried into effect in Syria.

C. *Property Ownership and Inheritance.*

The law of the Koran, according to which the land belongs to the state, has been violated in many ways. The sultan has the power of changing property leased on long terms into perpetual possessions, etc.

The law holds good only in the following cases:

(1) Real estate cannot be handed down by testament, but reverts to the state if the deceased does not leave any of the relatives stipulated by law.

(2) Real estate reverts to the state if it is not cultivated.

(3) Real estate may be held as security for the debts of the testator if he is a farmer, except in special cases.

(4) With certain exceptions real estate cannot be sold to corporations.

(5) The consent of the land registry commission must be obtained before selling a piece of land.

V. *Agricultural Training and the Introduction of Improvements.*

It is only in the last decade that the government has begun to take the question of agricultural instruction into consideration. Two schools have been founded near Aleppo and Homs respectively. The Jewish Agricultural School *Mikveh Israel* near Jaffa, founded

in 1870, has had as many as 100 pupils at a time, among them several Moslems. It has proven to be of considerable value to the Jewish colonies. Mention should also be made of the Jewish Orphanage in Petach Tikvah, where the inmates are given agricultural instruction, as well as of an agricultural school in the same colony which is just beginning to function, and finally of the Jewish school for girls in Kinneret where a two years' course is given in vegetable gardening, dairying, poultry raising, etc. Similar institutions exist in the German colonies.

In 1900, with the help of several American Jews, the Agricultural Experiment Station was founded in Atlit near Haifa.

During the period of the War the government has established a number of new schools.

The government supports in several cities depots of agricultural machines which are sold to the farmers at cost price on the instalment plan. As has already been said Syrian agriculture cannot be revolutionized at one stroke by the introduction of European machines. (See page 24.)

VI. *Measures for the Promotion of Agriculture.*

A systematic attempt to better agricultural conditions should aim not only to introduce technical improvements but also to change the laws and the taxation and credit systems.

PART FOUR.

OTHER BRANCHES OF PRIMARY PRODUCTION.

I. *Forestry.*

The destruction of Syrian forests has been going on steadily, especially in the coastal regions, the vicinity of cities, and wherever good roads or railways permit the transportation of lumber. The war has added to this destructive process, as wood has been used in the place of coal. But the worst enemy of forests are the herds of sheep and goats.

The forests of Syria consist for the most part of firs and oaks. Besides, there are cypresses, cedars, carob trees, pistachios, sumachs (in Transjordania), poplars, and plane-trees in the neighborhood of waterfalls.

The fir trees grow to a considerable height, whereas the oak trees are stunted. In the Jewish colonies, the eucalyptus tree, imported from Australia thirty years ago, has been used for the drainage of marshes, especially in Hudeirah (31 miles north of Jaffa). Though practically none of the Syrian wood is suitable for building purposes, it can be used for rough hewn beams, posts, props, etc. Finer woods must be imported. Therefore, most of the Syrian wood is used for fuel, part of it being made into charcoal. The eucalyptus trees in Palestine furnish props for the young orange trees.

II. *Fishery and Game.*

Fishery in the Mediterranean is carried on by means of small sail-boats. Not only are the waters of the Syrian coast not rich in fish, but in winter there are severe storms, and in summer it is too hot to transport the fish any distance. The streams and lakes, for instance the lakes of Tiberias, Huleh, and Antioch, are rich in comestible fish which may be caught with rods, nets, or dynamite. As there has heretofore been no means of transportation nor any factories for putting up the fish the catch has been limited to local needs. In some years the price of a kilogram of fish of the Lake of Tiberias is only one piastre; usually it is about 14 cents.

Fish smoking was recently introduced on a small scale by a Jew in Haifa, who used sea fish for the purpose. Formerly sponges were gathered to a considerable extent along the Syrian coast, but not in the last decades, as the divers emigrated to America.

Hunting is of no economic importance in Syria. It is confined to bird catching. In Southern Syria quail are caught in large quantities in the spring, and thrushes and partridges in the fall. Wild pigeons are numerous, and wild duck are to be found on the lakes.

Deer are scarce, but gazelles and boars are more frequent. In Moab ibex may be found.

The commonest beasts of prey are the jackal and the hyena, which are not hunted but shot. The badger is seen occasionally. The gray Syrian bear and the panther are found in the Hermon and near the Jebel Jermak in Upper Galilee.

III. *Mining.*

In spite of reports to the contrary there is not a single mine worth mentioning in Syria.

Asphalt is found around the Dead Sea, in Hasbeya, etc.

Chrome mines near Latakia have been abandoned.

There are small quantities of lignite in the Lebanon.

Numerous attempts to drill oil wells have been abortive so far. In 1914 the Standard Oil Company began to drill in Kurmub, about 43½ miles south of Hebron, but their operations were interrupted by the war.

It would seem probable that there are sources of bituminous substance in the Dead Sea district. Sulphur is also to be found in that region. There is rock-salt at the southwestern extremity of the Dead Sea, but it has not been utilized because of the difficulties of transportation. During the war salt has been taken from the frontier at El-Arish to Gaza. It is also produced in small quantities by evaporation at the northern end of the Dead Sea. The following analysis of the water on the northwestern shore of the Dead Sea was made in 1910:

Specific gravity	1.124%
Weight of solid constituent parts.....	23.85 %
Sodium Bromide .....	.52 %
Potassium Chloride	1.52 %
Magnesia Chloride	10.03 %
Sodium Chloride	7.855%
Calcium Chloride	1.52 %
Calcium Sulphate .....	.146%

The phosphate mines discovered in Es Salt (in Transjordan) were to have been operated by a Turko-Italian company.

Limestone and marble quarries are frequent.

The hard basalt stone of the Hauran is used for millstones.

Plastic clay is found in many places (Gaza, Ramleh, Jerusalem, etc.) and is used in the making of domestic pottery.

It is hard to say whether the lack of mines in Syria is due to an absence of minerals or to the fact that no search has been made for them.

PART FIVE.

INDUSTRY.

I. *Type and Scope of Syrian Industries.*

The industries of Syria do not play nearly so important a part in economic life as agriculture. While 60-70 per cent of the population live from agriculture, only 10-15 per cent live from industries and trades, about the same percentage from commerce, and 10 per cent from other callings. The existing industries consist almost exclusively of home industries and trades. In all Syria there are not 100 industrial enterprises employing more than 50 laborers in a single factory, hardly a dozen employing more than 100, and not one employing more than 300. Only a very few mills, machine factories, and silk spinning establishments may be considered factories in the technical sense.

Many of the chief industries are in the hands of Europeans, especially machine factories and mechanical workshops (Germans, Jews), silk spinning establishments (French), and mills (Germans, Levantines). The trades and the peculiarly Syrian industries are almost exclusively in the hands of natives.

So far the only existing vocational organizations are those of several kinds of artisans, for instance that of the shoemakers of Damascus. There is no protection for workmen, nor is there any system of apprenticeship. Children are employed in the domestic industries. Trade marks and patents were regulated by laws passed in 1880 and 1888.

II. *The Main Branches of Industry.*

A. *Textile Industries and Dyeing.*

The chief industry of Syria is the textile industry, including the following branches:

- (1) Silk spinning;
- (2) Silk, half-silk, and cotton weaving;
- (3) Carpet and stocking weaving;
- (4) Dyeing.

These industries are engaged in principally in Aleppo, Homs, Damascus, the Lebanon, etc. In Gaza and Mejdal, however, cotton goods are woven and dyed for the use of the native population.

According to the English Consular Report of 1910 there were 500 looms in Mejdal and 50 in Gaza for which 10,000 lbs. of cotton yarn were imported from Manchester.

Carpets with Jewish emblems are woven in the workshop of the Bezalel School in Jerusalem by Jewish girls.

B. *Oil.*

(1) The production of olive oil and soap is the next most important industry of Syria. There are oil presses all over the country. The olives are picked in October and November. From 220 pounds of fresh olives about 20-31 pounds of oil are obtained from the first pressing, and 7-13 pounds from the second and third pressing, making a total of 27-44 pounds (sansa oil). In some neighborhoods the olives yield more oil than others, especially around Nablus. There remain 66-86 pounds of water, and 110 pounds of a dry residue (called *jift*). These 110 pounds of *jift* contain 9-11 pounds of oil which are extracted by a chemical process (sulphur oil) and used for soap making. If there are no facilities at hand for this chemical process the *jift* is used as fuel. In the last 20 years iron screw-presses have been introduced to replace the primitive wooden presses. Recently hydraulic presses have come into use. More than half of the olive oil produced in Syria (10,000,000 okka out of 17,500,000) is used for soap making. The rest is made into table oil, and is either used for domestic consumption or else exported to Egypt and France. The latter costs 1.25-1.70 francs per okka, the former 0.85-1.25 francs per okka.

At an approximate estimate there are from 600 to 800 oil presses in Syria. It costs only a few thousand francs to set one up, and not much human labor is required. According to Weakley 17,450,000 okka of oil were produced in Syria in 1909, of which 5,500,000 okka in Palestine. The Syrian olive oil is inferior to the French because of the primitive method of production. Two factories established for the purpose of making oil by a chemical process from the residue (*jift*) by the Russian Jewish company "Atid" in Lydda and Haifa were unsuccessful because they were planned on too small a scale, and the transportation of *jift* from remote villages proved to be too expensive.

(2) Part of the sesame growing around Jaffa and Haifa is made into table oil in about 40 small factories, most of which are in the Mutessarifik of Jerusalem. When treated according to primitive methods sesame yields about 45 per cent of oil. Two Jewish factories in Jaffa using hydraulic presses produce a better

quality of oil which sells for 300-335 francs per hundred pounds, whereas the oil made by the natives brings only 95-125 francs per hundred kilograms. The untrodden residue is used in the fabrication of *halvah*, the trodden residue being used for fodder.

(3) The production of volatile oils, for instance perfumes from mimosa, has been attempted in various parts of Syria. A French company founded branches on Mt. Carmel, in Zichron Jacob, Petach Tikvah, and Jaffa, where fats were perfumed with mimosa, etc. This company ceased its activities several years ago. Besides mimosa oil, thyme oil was produced in the Jewish colony Artuf, and geranium oil in Rishon l'Zion and Petach Tikvah (Baron Rothschild).

Laurel oil is made from the fruit of the laurel bush in Antioch, the southern part of the Vilayet of Aleppo, and recently in the Jewish colony of Rosh Pinah. Anise oil is made in Galilee. A Jewish factory uses the domestic essences in the preparation of eau de Cologne and other perfumes.

(4) Jewish agriculturists are experimenting with castor oil, but so far all attempts to produce it have been on a small scale.

C. *Soap.*

The olive oil which is not used for consumption serves for the manufacture of soap. The demand for oil for this purpose is so great (about 12,000-15,000 tons annually) that in some years additional quantities have to be imported. The centers of soap manufacture are Tripoli, Antioch, Nablus, Jaffa, and Aleppo. The best soap is that of Nablus. The total soap production of Syria amounts to 20,000 tons, worth about 15,000,000 francs. There are 150 soap factories, employing from 2,000-3,000 laborers.

D. *Milling.*

Milling is one of the most progressive and remunerative of Syria's industries. Formerly there were only water mills or hand mills, the latter worked by the wives of the fellaheen. In the middle of the nineteenth century windmills were introduced in several cities, for instance in Jerusalem, which have now been replaced by steam engines and by kerosene and coal-gas motors. The milling industry in Damascus and Jerusalem has decreased since railways were built. Macaroni, for which the Syrian wheat is well suited, is manufactured in Jaffa, Jerusalem, and Beirut, in factories equipped with hydraulic presses. Wheat starch is made in Aleppo and Damascus, and burghul (wheat grits) in Southern

Syria. The production of pearl-barley has not yet been attempted, but would probably prove very profitable.

E. *Wine and Other Alcoholic Beverages.*

The production of alcohol and alcoholic beverages is the only branch of industry subject to a special ad valorem tax of 15 per cent, of which half is refunded in case the beverage is exported. On the average the tax amounts to 15 to 20 centimes on every gallon of wine, and 1 franc to 1 franc, 18 centimes, on a gallon of the finest brandy. The total production of Syria amounts to about 3,510,000 gallons (worth about 5,000,000 francs), of which the Jewish colonies produce about 1,040,000 gallons. The average price of the dry wine is 1 franc per gallon, that of arrack,* 6 francs per gallon. In 1910-1911, 9,938,360 pounds of wine were exported, 8,621,180 pounds of which from the harbor of Jaffa, including the wine of the German colonies. Several by-products, such as dregs, tartaric acid, and tartar, are exported from Rishon l'Zion to Europe. Beer of an inferior quality is made in small German breweries.

F. *Building.*

The fellah builds his house of whatever material happens to be at hand, sometimes of stones, especially those gathered from the ruins, using a mortar made of clay and lime. Otherwise he uses a sort of clay brick, dried in the sun, over which he spreads a mixture of clay, ground straw, and dung. In the cities better methods prevail, and there are some skilful masons, especially stone masons. The building stones of Jerusalem, Tantura, and Latakia are beautiful. In Jaffa, on the other hand, an unattractive porous tuff is used. In the European quarters of certain cities, for instance in Tel-Aviv, the Oriental style of architecture has been discarded.

Lime is burned throughout the country, mostly in a primitive manner. However, there are European lime-kilns in the larger cities. In the last decade the production of square-stones, bricks, stair-stones, door and window frames, blocks of cement and sand has increased considerably in Jaffa, Haifa, Jerusalem, Tiberias, and Aleppo. This industry was mostly in the hands of Jews and Germans. Before the war began a silicate brick factory was being erected in Jaffa.

Timber is imported almost entirely from Europe and Asia Minor, as the domestic woods are not suitable for building purposes.

* A brandy.

Heretofore the Syrian builders have had no capital at their disposal, nor have they a thorough knowledge of their trade.

G. *Arts and Crafts.*

Damascus is the center of the wood-carving, inlaid wood, and copper industry.

The Bezalel School in Jerusalem has about 30 employees.

Rosaries, crucifixes, etc., are made in Jerusalem and Bethlehem, and are either sold to tourists or exported.

Laces, etc., are made by Armenian women, by Christians in Jerusalem and Nazareth, and by Jewesses in Jaffa, Jerusalem, Tiberias, and Safed.

H. *Other Industries.*

There are two machine factories in Jaffa and one in Beirut. They are chiefly engaged in the fitting out of irrigation plants, mills, and oil mills. Each one has a foundry connected with it. In almost all the larger towns, there are repair shops, smithies, etc. There are 1,000-1,500 kerosene and coal-gas motors for irrigation and industrial purposes in Syria. Kerosene is more popular than steam because it is cheaper and more easily transported.

Printing presses are to be found in all the larger cities.

Eggs are shipped from Tripoli and Latakia, the whites and yokes being separated and packed in tin boxes.

Artificial ice is made in all the larger cities (Aleppo, Beirut, Damascus, Haifa, Jaffa, Jerusalem).

Soda water is manufactured in Beirut, Jerusalem, Haifa, and Jaffa.

I. *Trades.*

Rope-making has its centers in Damascus and Aleppo.

Tanning is carried on in Beirut and Zahleh (ox hides), Homs (sheep and goats' hides), and Aintab (goats' hides). The Aintab leather is used for shoes, saddles, etc.

Tailoring is of importance only in Beirut, where the population wears European clothes. The Singer Sewing Machine Co. has branches all over Syria, and sells machines on the instalment plan.

Smithies are in the hands of the fellaheen, who work in a primitive way but are considered very deft.

Cartwrights, as such, are rare. Carriages and wagons are made by the combined efforts of smiths, carpenters, etc.

Tinkers are for the most part Jews, especially in Jaffa, Jerusalem, Sidon, and Damascus.

Carpentry and turnery are in a very undeveloped state. The native population uses no furniture. What furniture there is is mostly imported from Europe, or else made in Jaffa or Beirut. There are practically no turneries except in Jerusalem, where candlesticks, etc., are made from olive wood by Jewish turners. The manufacture of cases for the orange trade has attained considerable dimensions. As none of the cases are returned, except those sent to Egypt, they have to be made every year. Shortly before the war a factory was founded in Jaffa where cases were made from eucalyptus wood.

Pottery is made throughout the land by the Arabs. Two kilometers from Jerusalem, on the Jaffa Road, there is a large claypit.

Basket and mat weaving is engaged in by the natives. On the Lake of Merom the women weave mats of papyrus.

III. *Abortive Attempts to Introduce Industries.*

Syria is, industrially speaking, a new country, and has to meet the problem of establishing an economic and industrial equilibrium. A country which wants to build up its industry must have a protective tariff in order to compete with established industries. This Syria has not had up to now. Besides, the following points must be taken into consideration:

(1.) Raw products of good quality must be obtainable in the country in sufficient quantities and at a reasonable price;

(2.) There should be as great a demand as possible for the manufactured products in the country itself;

(3.) The newly introduced industries must be conducted according to the most up-to-date methods;

(4.) A factory must be so located that the cost of transporting the raw material to it and the finished product from it be as small as possible;

(5.) The invested capital must be large enough to allow for unexpected difficulties. Similarly, the working capital must be larger than in European concerns, to allow for delays in financial operations;

(6.) The undertaking must not be planned on too small a scale, for otherwise the administrative expenses weigh too heavily upon the undertaking;

(7.) It is an important question whether industrial enterprises should be under European or native management. Gener-

ally speaking, it is better that a small enterprise be under native management and a large one under European management;

(8.) The needs and desires of the consumer should be carefully studied.

These observations may be illustrated by several examples: The manufacture of glass flourished on the Syrian coast from the Phoenician period to the time of the Crusaders. Now it has practically disappeared. In 1890 Baron Rothschild built a large, up-to-date glass factory in Tanturah, thirty miles south of Haifa, where bottles were to be made for the wine produced in the Jewish colonies. This factory had to be shut down because the sand proved unsuitable for the manufacture of bottles. Another attempt was made in 1910 to establish a glass factory in Damascus; this failed because the capital was not sufficient to tide it over the beginning.

About ten years ago a Russian Jewish limited liability company, "Atid," established two factories in Haifa and Lydda respectively for the chemical extraction of oil from the residue (jift) of the olives remaining in the Arabian oil presses. The factories operated several years, at a considerable loss to the company. A similar factory in Motsah (near Jerusalem) failed also, whereas an Arab factory in Tripoli succeeded, the reason being that the latter was larger and had a smaller outlay in proportion.

The manufacture of rose oil was carried on twenty years ago in the Jewish colonies on the Sea of Merom, with the help of Baron Rothschild, but it proved unremunerative because of the high cost of the rose plantations and had to be discontinued. A silk spinning establishment in Rosh Pinah had the same fate, probably because the lack of transportation facilities made the securing of cocoons and of coal very expensive.

IV. *Industrial Training.*

Among the trade schools in Syria mention should be made (a) of the Ecole Professionnelle, founded in Jerusalem thirty years ago by the Alliance Israélite Universelle, for smiths, carpenters, weavers, etc. This school had 200 pupils before the war; (b) of the Arts and Crafts School *Bezalel*, where thirty pupils are instructed in drawing, painting, modelling, and wood and metal work; (c) of the Syrian Orphanage in Jerusalem with departments for the instruction of the blind, etc. The Turkish government has recently founded two trade schools in Damascus and Aleppo, where the pupils are clothed and fed gratis.

A large polytechnical school, built in Haifa by Jews, has not yet been opened because of the outbreak of the war. It is to consist of six preparatory grades and complete courses in architecture, engineering, chemistry, etc.

V. *Trade Taxes.*

The trade tax of 1914 is either a fixed tax on the net profit or else it depends on the rent and the amount of wages paid by the tax-payer. All transportation companies pay a fixed tax of 5 per cent; fire and transportation insurance companies pay 3 per cent of their annual premia besides a fixed supplementary tax of 150-1,000 piastres. Life insurance companies pay .03 per cent annually of the newly insured capital. All employees with a fixed salary are assessed 3 per cent.

The following are assessed according to the rent paid for their business offices:

Bankers	20%
Merchants, commission merchants.....	15%
Wholesale dealers	12%
Retail dealers	10%
Retail dealers in foodstuffs.....	8%
Artisans	8%
Millers, factory-owners, printers.....	5%

Men engaged in certain occupations, for instance bankers, pay 10 per cent on the rent of their homes. Tax-payers must also pay a supplementary tax in proportion to the number of their employees. There are special regulations regarding livery-men, peddlers, etc. Other occupations are assessed according to a fixed rate, ranging from 15-300 piastres.

VI. *Measures for the Promotion of Industry.*

Since 1913 the government has furthered new industrial enterprises having

- (a) Motive power of at least 5 H. P.,
- (b) at least 1,000 ltq. invested in land, buildings, and machinery,
- (c) a sufficient number of employees to do at least 750 days work annually,
- (d) none but Ottoman employees or laborers (excepting technicians),

by putting five dunam of state land at their disposal, by exempting them from duty on imported machinery, building materials, and raw products, and exempting them from taxes until 1928. This provision has not gone into effect because of the outbreak of the war, but in order to make it efficacious the following measures should be taken :

- (a) Increase of protective tariff for domestic products, and conclusion of favorable commercial treaties ;
- (b) Foundation of an industrial bank to facilitate the securing of capital for industrial enterprises ;
- (c) Official inspection of industrial undertakings.

PART SIX.

COMMERCE.

I. *The Extent of Commercial Activities in Syria.*

(a) Foreign trade, including import of requirements, and export of domestic products;

(b) Inland trade, within Syria;

1. Transmission of domestic products from producer to consumer, of imported commodities from importer to consumer;

2. Purchase of excess domestic products and transmission to exporter.

(c) Trade with the Bedouin on the eastern boundary of Syria, where the products of animal husbandry are bartered for Syrian and imported commodities.

Import and export are conducted almost exclusively by water, even with other parts of Turkey because of the lack of railways and the slowness and expense of transportation by camel.

The merchants of Syria belong to several different categories:

1. Levantines. They are proverbially shrewd, usually well-to-do and enterprising;

2. Europeans, (French and Germans in Beirut and Aleppo, Germans in Haifa, Jaffa, and Jerusalem, Jews throughout Palestine);

3. Christian and Moslem Arabs, together with a number of Sephardic Jews, control almost the whole inland commerce;

4. Armenians in Aleppo and especially in Aintab.

There are no Turks among the Syrian merchants.

The natives manage their business in Oriental fashion, without offices or employees.

Commerce is conducted according to the French Code de Commerce. There is a special ruling of 1888 applying to brokers.

The formation of unlimited joint stock companies and limited liability companies is effected by legal registration; one of the only large export houses of Syria is a stock company, namely, the Etablissements Orosdi-Back, with its seat in Paris.

II. Foreign Trade.

A. Ways and Usages.

Import.—Syria depends on other countries for minerals (iron, petroleum, coal, etc.), timber, industrial products (cotton goods, wool, etc.), and dry groceries (sugar, rice, coffee, etc.). The importer buys the merchandise from a foreign firm either by correspondence or through a travelling salesman, or indirectly through an agent or commission merchant. Part of the imported commodities are bought in Egypt instead of in the country where they are produced. Alexandria and Port Said are centers for textiles and groceries, coal, hardware, etc.

Beirut is the main port for woolen yarns and woven goods, which are mostly imported from Manchester. Groceries, etc., are generally sent direct to the smaller ports from Europe.

Export.—For the most part the same firms handle both import and export. The chief articles exported are: silk (cocoons or spun silk), domestic woven goods (silk, half silk, wool), soap, oranges and lemons, wheat, barley, sesame, chickpeas, wine, and religious articles. Silk is exported to Lyons, barley (from Gaza, Homs, Hama) to London and Hull, religious articles to America, soap and butter to Egypt and Constantinople, oranges to Liverpool, wine to Egypt, etc.

There are neither stock nor produce exchanges in Syria.

B. Import and Export Statistics.

Unfortunately, the official import and export statistics do not deal with each individual harbor, but group the Syrian harbors as follows: (1) Beirut; (2) all other harbors belonging to the customs district of Beirut from Khan Yunus to Latakia; (3) the harbors belonging to the customs district of Alexandretta. In the year 1910-1911 the total import and export of Syria amounted to about 248,000,000 francs.

	Value of Imports in Piastres.*		
	Dutiable.	Duty free.	Total.
Through ports belonging to the customs district of Alexandretta.....	129,443,046	33,760,287	163,203,333
Through the port of Beirut.....	413,330,453	5,695,085	419,035,538
Through other ports belonging to the customs district of Beirut.....	147,330,720	15,353,007	162,683,727
Total.....	690,104,219	54,808,379	744,913,598
	Value of Exports in Piastres.		
	Dutiable.	Duty free.	Total.
Through ports belonging to the customs district of Alexandretta.....	157,733,379	4,158,950	161,892,329
Through the port of Beirut.....	111,473,670	1,607,726	116,031,396
Through other ports belonging to the customs district of Beirut.....	97,578,312	150,690	97,729,002
Total.....	366,785,361	5,917,366	375,702,727

* 4.52 piastres=1 franc.

General Survey of the Most Important Articles Imported and Exported.

Port.	Imports.	Source.	Exports.	Destination.
1. Alexandretta.	Cotton Yarns and Cotton Goods. Sugar. Flour. Iron and Hardware. Silk Yarn. Woolen Articles. Silks. Petroleum. Tobacco. Wool. Ties. Leather and Hides.	England. Austria, Russia. Russia, Roumania, France. Sweden, Belgium, England, Germany, Austria. China. England, Austria, Belgium. France. Russia, America, Roumania. Through Constantinople. Austria, Russia. Marsellies. India and China.	Wool. Wheat. Barley. Durrha. Oats. Morocco Leather. Cotton. Italy, Austria. Pistachio Nuts. Butter. Hides. Licorice. Copper Ore. Oxen and Sheep. Cocoons. Domestic Silk and Woolen Goods. Soap. Eggs and Albumen. Durrha. Tobacco. Cocoons and Silk Yarn. Domestic Dress Goods. Oranges and Lemons. Soap. Wool. Legumes. Eggs. Cocoons and Silk Yarn. Domestic Dress Goods. Preserved Apricots. Barley. Hides and Wine.	England, France, Italy, Constantinople. Italy, France, Algiers. Turkey, Egypt, France. Turkey, Egypt, France. Turkey, Egypt, France. Egypt, Tunis, Turkey. Italy, Austria. England, America, Turkey. Egypt, Turkey. Germany, Austria. America. Belgium. Egypt. France. Egypt, Turkey. Turkey, Turkey. Turkey. France. England, Egypt. Egypt, England. France. Turkey, Egypt. Turkey, Russia, England. Turkey, Egypt. America, England, Italy. Egypt, Malta, England. Marsellies. France. Egypt, Turkey, Roumania. England. Turkey, France. Egypt.
2. Latakia.		Same as Alexandretta.		
3. Tripoli.	Petroleum. Dyes. Cement. Sugar. Rice. Coal.	Russia, America. Germany, India. France, Belgium, Austria. Austria, Russia. Egypt, India. England, Asia Minor.		
4. Beirut.	Textile Goods. Coal. Petroleum. Alcohol. Cement. Rice. Sugar. Wood. Dyes. Metal- and Hardware. Glass and Glassware. Marble. Flour. Coffee.	England, Italy, Austria, Belgium. England, Turkey, Germany. Russia, America, Roumania. Russia, Austria. France, Belgium, Austria. Egypt, India. Roumania, Austria, Russia, Asia Minor. Germany, India. England, Germany. Belgium, Austria. Italy. Russia, Roumania, France. Brazil, Arabia.		

• Because of the government monopoly.

General Survey of the Most Important Articles Imported and Exported.—(Continued)

Port.	Imports.	Source.	Exports.	Destination.
5. Sidon.	Petroleum. Coffee. Rice. Tiles.	Russia, America. Brazil. India, Egypt. Marseilles.	Oranges and Lemons. Figs. Eggs.	Constantinople, Odessa, England. Trieste. Egypt, Constantinople.
6. Haifa.		Same as Jaffa.	Legumes. Sesame. Wheat.	Marseilles, Egypt. Marseilles, Hamburg, Trieste. Marseilles.
7. Jaffa.	Yarns and Textile Goods. Wood. Sugar. Rice. Petroleum. Flour. Cement. Tiles.	England, Italy, Austria. Roumania, Russia, Asia Minor. Austria, Russia. India, Egypt. Russia, America. Roumania, France. Marseilles, Belgium, Austria, Germany. Marseilles.	Oranges. Soap. Wine. Sesame. Religious Articles. Durrha.	England, Egypt, Turkey. Egypt. Egypt. America, France. England, America. England, Egypt.
8. Gaza.			Barley. Quinces.	England. Germany.

C. *The Main Branches of Foreign Trade.*

Import:

1. Victuals and delicacies.

1. *Flour*.—The Syrian wheat flour is not suitable for fine pastry. Flour is imported from Russia, Roumania, and Bulgaria, especially by the Palestinian Jews. In years when the crops fail inferior qualities are imported from other countries as well.

2. *Sugar* is imported from Austria, Russia, etc.

3. *Rice* is extensively used by the well-to-do natives, and is imported from Egypt.

4. *Coffee* comes mostly from Santos (Brazil). The Arabian coffee from the Yemen is of a superior quality, and has been much used during the war.

5. *Tea* is brought from China, India, and Java. Recently a large Moscow firm established a branch in Palestine.

6. *Cocoa* is not much used in Syria, except by Europeans.

7. *Pepper* is extensively used, especially the domestic red pepper. The black pepper of the Peruvian pepper tree growing along the coast is not used, but real black pepper is imported from the East.

2. Alcohol and beverages.

Alcohol is imported from Russia, Austria, and Java. *Beer*, etc., is imported from Germany and Austria, *mineral waters* from France, Austria, etc.

3. Coal and petroleum.

Coal is used (1) to fire trains, (2) to make gas in Beirut and electricity in Damascus, (3) for coal-gas motors, (4) for steam machines, (5) for heating purposes. Practically all the coal used in Syria is imported from England, small quantities coming from Heraclea (Turkey) and Germany. In 1910-1911 the amount of coal imported was 143,530,833 pounds, valued at 8,671,198 francs. According to the official statistics, 87,966,173 pounds of *petroleum* were used in Syria in 1910. Forty years ago American petroleum was used in Syria exclusively, but it has been forced out of the market by Russian petroleum from Baku. In recent years it has partially regained its former popularity, due to the efforts of the Vacuum Oil Com-

pany. Smaller quantities of petroleum are also imported from Roumania and Galicia. Petroleum is used for illumination, partly for cooking in the cities, and in large quantities for petroleum motors. Petroleum cannot be imported in tank ships, but is brought in in cases. A case (about 66 pounds) costs 8-12 francs in the harbor towns.

4. Various Commodities.

Paper is imported mostly from Austria-Hungary, *matches* from Austria-Hungary, Italy, Germany, etc. *Window-glass* comes almost exclusively from Belgium.

5. Building Materials.

Wood is brought largely from the Bukovina. According to the official statistics about 3,000,000 francs worth was imported into Syria in 1910-1911.

Cement is much used in building, and is brought from Marseilles, Belgium, etc.

Lime, gypsum and hydraulic lime come from France and Cyprus.

Flag-stones and tiles are brought from Marseilles.

Marble is imported from Italy, mostly on sailboats.

6. Metal, Metal Ware, and Machines.

Iron, hardware, enamel ware, are sent to Syria from Belgium, as well as from Germany and France. Iron bedsteads come from England, enamel ware from Austria-Hungary and Belgium.

Copper, zinc, tin, lead, are imported from England, Germany, Belgium, etc.

Machines and pumps valued at 3,850,000 francs were imported into Syria in 1910-1911, including locomotives, locomobiles, steam motors, agricultural machines, pumps, sewing machines, etc.

7. Woven Goods, Fezes, and Ready-made Clothes.

Woven goods worth about 55,000,000 francs were brought into Syria in 1910-1911, mostly from England. In the last years India has begun to crowd England from the cotton yarn market, and other countries have participated in the import of cotton goods.

Burlap and empty sacks are brought from India, England, and Austria-Hungary.

Stockings are imported from England, although they are manufactured in considerable quantities in Syria.

Fezes are imported from Austria, where there is a syndicate of fez manufacturers.

Ready-made clothes are imported mostly from Germany and Austria.

8. Chemicals, drugs, dyes.

The main chemicals imported are soda, potash, alum, nitric acid, sulphur, sulphuric acid, and glucose. Drugs are imported from Germany and other countries, especially quinine.

Dyes.—Synthetic indigo and all chemically prepared dyes are imported from Germany. Natural indigo comes from India.

9. Oranges and Lemons.

The English Consular Report gives the following table for the export (including export to Turkey) of oranges and lemons from Syrian ports:

Number of cases.					
From	1909	1910	1911	1912	1913
Jaffa ...	744,463	853,767	869,850	1,418,000	1,608,570
Tripoli ..	134,000	218,000	135,000	140,000	.....
Sidon ...	188,000	125,000	70,000	79,600	.....
Beirut ..	3,200	1,200	4,800	1,860	.....
Value in francs.					
Jaffa ...	4,650,000	5,875,000	5,440,000	7,100,000	7,450,000
Tripoli ..	600,000	900,000	600,000	600,000	.....
Sidon ...	800,000	500,000	300,000	300,000	.....
Beirut ..	10,000	5,000	15,000	6,000	.....

The Jaffa oranges, which can be transported for long distances, are packed in cases containing about 77 pounds (144 pieces) and sent to Liverpool in boats which come to Jaffa for the purpose. The freight usually amounts to 1.50 francs per case. The packing and bringing the oranges to the port cost the planter about 2-2½ francs per case. In Liverpool a case generally brings 7-8 francs, so that the planter makes 3-4 francs net on each case. Oranges are also sent to Egypt as well as to Smyrna, Constantinople, and Odessa.

Orange Export from Jaffa in 1913-1914.

To Liverpool	887,481	cases
“ Manchester	400	“
“ London	4,626	“
“ other English ports	3,361	“
“ Marseilles	3,412	“
“ Hamburg	9,487	“
“ Trieste	58,492	“
“ Odessa	148,409	“
“ Egypt, Australia	149,846	“
“ Turkish ports	268,942	“
“ Roumania and Bulgaria....	19,405	“
<hr style="width: 20%; margin: 0 auto;"/>		
Total.....	1,553,861	“

The Jaffa oranges are exported partly by dealers who buy the fruit from the planters before it is ripe. The Jewish orange planters in the vicinity of Jaffa are organized into two associations (*Pardess* and *Merkaz*) which determine where the oranges are to be sent. Each member marks his cases with his own name, so that he may be reimbursed according to the quality of his fruit. In the year 1913-1914 the *Pardess* exported about 270,000 cases, the *Merkaz* 112,000 cases, and the German colonists about 40,000 cases.

10. Olive Oil and Soap.

The export of *olive oil* is inconsiderable. In recent years it has not been exported but imported, and used for soap making. In 1910-1911 about five million francs worth of *soap* was exported, mostly to other parts of Turkey and to Egypt.

11. Cocoons, Silk Yarns, and Oriental Woven Goods.

Cocoons and *silk yarns* are exported from Beirut to Marseilles. (Raw silk yarn is imported into Syria from China.)

Oriental woven goods are sent into the interior of the country as well as to Egypt, Constantinople, etc.

12. Wine.

Most of the wine exported is that of the Jewish Vintners' Association, which exports Rishon l'Zion wine from Jaffa and Zichron Jacob wine from Haifa or Tanturah. The wine is exported to Egypt and in lesser quantities to Europe and to America. In 1913-1914 the Association disposed of:

Red wine	594,000	gallons
White wine	105,600	“
Sweet wine	145,200	“
Arrack	6,864	“
Cognac	22,440	“
Liqueurs	1,320	“
Total.....	875,424	“

Wine is also produced by the German colonists, by the Jewish Agricultural school Mikveh Israel, by the Trappist Monks in Latrun, and in the Lebanon.

13. Wheat, Barley, Legumes, and Sesame.

The success of the crops determines each year whether these products are to be exported or imported. *Sesame* is practically always exported. In 1910-1911, when the crops were of average size, 194,836 pounds of *wheat*, 3,853,784 pounds of *barley*, etc., were exported.

14. Wild plants. (See page 20.)

15. Cattle, Butter, Wool, Hides, Eggs, etc. (See page 21.)

III. *Inland Trade.*

The inland trade of Syria consists in

(1.) Supplying the consumer with domestic or imported wares;

(2.) Disposing of domestic products to the exporter.

The inland trade of Syria plays a much smaller role than in other countries, because the fellaheen produce their own requirements to a great extent. Their other needs are so inconsiderable that a single storekeeper can supply several villages. In the cities the inland trade is more considerable, although the urban population secures part of its requirements from the fellaheen of the neighborhood (especially vegetables, poultry, etc.), who come to the cities on market days. The bazaars are grouped according to trades.

The most important branch of the inland trade consists in supplying the cities and those parts of the country which are poor in grain with grain, legumes, oil-producing plants, and cattle. Large quantities of legumes are brought from Homs and Hama to Aleppo, Tripoli, Beirut, and the Lebanon, from the Hauran to Damascus and Haifa, from Transjordan to Haifa and Jerusalem; barley is brought from Homs and Hama to Aleppo, Tripoli, and Beirut, and from Gaza and Beersheba to Jerusalem and Jaffa.

Legumes are transported throughout the country, principally from the Beka'a and Transjordan, sesame from the Plain of Esdraelon and the coastal plain. Sheep are bought from the Bedouin by dealers in the inland cities (Aleppo, Homs, etc.) and transported west and south. The trader forms the connecting link not only between producer and consumer, but, in those cases where the production is in excess of domestic needs, between producer and exporter. Sometimes there are several middlemen. In Syria there is no clear distinction between wholesaler and retailer. The Jewish and German orange planters and the Jewish almond planters, who have formed syndicates which dispose of their products at home and abroad, depend neither on inland traders nor on exporters. The vintners around Jaffa have gone still further in forming associations both for output and sale. Their wine is made by a central agency and sold by a central agency.

The most remunerative branch of inland trade is the distribution of the wares brought into the country by the importer. Goods bought in Beirut and Aleppo are taken to smaller cities, which in their turn form distributing stations for towns and villages. Thus Damascus, Tripoli, Sidon, Haifa, Jaffa, and Jerusalem depend on Beirut, while Acre, Nazareth, Tiberias, and Safed depend in their turn on Haifa, etc. But this relationship is of a more or less temporary nature. Damascus, Haifa, and Jaffa are beginning to emancipate themselves from their dependence on Beirut and to negotiate directly with European firms. Transjordan, which heretofore did its buying in Jerusalem and Nablus, has been connected with Haifa and Damascus by the Hejaz Railway. The opening of the Afuleh-Beersheba line will cause many changes.

Inland trade is generally profitable. The dealers are shrewd business men, far more honest than their reputation would lead one to suppose. Allied with the inland trade is the overland transportation of goods to Bagdad and other places in the interior by camel. This activity amounts to about 2,000,000 francs.

IV. *Bedouin Trade.*

The centers of the Bedouin trade are Aleppo, Homs, Hama and Damascus, and in a smaller measure Zahleh, Tiberias, Safed, Hebron, and Beersheba. The Bedouin bring the products of animal husbandry, live stock (camels, sheep, goats, horses), wool, hides, butter, and eggs to the markets and exchange them for grain, petroleum, sugar, tobacco, groceries, fire-arms and ammunition, dress goods and saddles. The value of the products brought

to trade centers by the Bedouin approximates 45,000,000 francs, as follows:

600,000 sheep	10,000,000 francs
100,000 camels	25,000,000 “
Several thousand horses.....	1,000,000 “
30,000 goats	200,000 “
Wool	5,000,000 “
Hides	500,000 “
Butter (Sheep's milk)	3,000,000 “
Eggs	300,000 “
Total.....	45,000,000 “

The price of a white sheep varies from 10 to 15 francs, that of a red sheep from 20 to 30 francs. A camel brings from 250 to 500 francs. The price of a pound of unwashed wool is .57 francs, that of a pound of washed wool 1.15 francs. According to the official report 4,700,000 francs worth of wool, 900,000 francs worth of sheep and goat hides, 70,000 francs of other raw hides, and 2,000,000 francs worth of butter were exported from Syria in 1910-1911.

Peddlers from Safed, etc., go into the desert with their wares.

V. *Trade Monopolies (Salt, Tobacco and Tombeki).*

A. *Salt*.—Since 1881 the salt monopoly has been given over to the Dette Publique Ottomane, which has offices in Aleppo and Beirut. The annual income derived from this monopoly is about 2,000,000 francs. The salt is taken from Asia Minor, the Salt Lake of Jebull near Aleppo, and the Dead Sea, and is sold either at the center of production or at railway junctions and ports. Some of the salt is exported. Before the war large quantities of salt were smuggled in by the Bedouin.

B. *Tobacco*.—The Régie Cointéressée des Tabacs de L'Empire Ottoman has offices in Aleppo, Damascus, Latakia and Beirut. According to an ordinance of 1914 the monopoly consists of (1) the right to control and buy all the tobacco which is planted; (2) the right to tax imported and exported tobacco cut or treated; and (3) the right to prepare and sell cigars, cigarettes, cut tobacco and snuff.

This government monopoly is not in force in the Lebanon, where there are about 20 cigarette factories. These factories buy up tobacco both in the Lebanon and also outside the Lebanon by means of contraband, and succeed in selling their wares within the precincts of the Régie. The Régie itself imports tobacco from

Turkey and Greece and manufactures cigarettes, etc., in Aleppo and Damascus.

C. *Tombeki*.—Tombeki is the tobacco used for water pipes (narghileh). It was imported from Persia by the Société du Tombac until 1912, when the monopoly expired. Since then the importer must pay a tax of 4 piastres per kilogram to the Régie. The tombeki grown in Syria is handled by the Régie.

VI. *Banks and Currency.*

A. *Banks*.—The banking system of Syria is in the hands of the following companies, except for a few companies in Aleppo and Beirut. (See page 67.)

The Banque Impériale Ottomane is the central banking concern of Turkey since 1863. Its concession has been renewed several times, now being in force until 1925. The Banque Impériale Ottomane functions as the Sub-Treasury of the Imperial Government, and is the only bank permitted to issue notes. The circulation of notes must always be covered at least 33 1/3 per cent in metal. The notes of the Banque Impériale Ottomane have never become popular, the total circulation in 1913 not exceeding 1,000,000 Ltq., only 6 per cent of the total liabilities of the bank. In its capacity as Sub-Treasury the bank receives the income of the Government and is responsible for all its expenditures. For this it gets a fixed commission. Besides, the bank is free to engage in all branches of the banking business, so that it may really be considered a private commercial bank which has the profitable privilege of administering the finances of the government. As before the war its capital was in foreign hands and the government had no influence in its management, it did not fill the place which a National Bank does in the economic life of other countries, namely, that of a central institute which serves the interests of the country, administers its bank and currency system, etc.

The banking system in Syria is absolutely unorganized. Each bank does business according to its own ideas.

The Anglo-Palestine Company, Ltd., with its seat in London, does business exclusively in Turkey. Its object is to better the economic condition of the Palestinian Jews. Apart from its ordinary banking business the Anglo-Palestine Bank extends credits on real estate on a small scale. It was the Anglo-Palestine Bank that introduced mutual loan associations into Turkey. According to its financial report of December 31, 1913, the outstanding long-term credits of the Anglo-Palestine Bank amounted to about

Name.	Nationality.	Seat of Firm.	Capital.	Founded.	Branches in Syria.
1. Banque Impériale Ottomane.....	Ottoman (Turkish)	Constantinople	250,000,000 frcs.	1863	Aintab, Aleppo, Jerusalem, Alexandrette, Beirut, Jaffa, Damascus, Haifa, Hama, Homs, Tripoli, Sidon.
2. Crédit Lyonnais.....	French	Lyons	250,000,000 frcs.	1863	Jaffa, Jerusalem,
3. Deutsche Orientbank.....	German	Berlin	32,000,000 M.	1906	Aleppo.
4. Anglo-Palestine Company.....	English	London	120,000 £	1902	Jaffa, Jerusalem, Beirut, Haifa, Tiberias, Safed, Hebron, Gaza.
5. Deutsche Palästina-Bank.....	German	Berlin	20,000,000 M.	1899	Jaffa, Jerusalem, Haifa, Beirut, Damascus, Nablus, Tripoli, Nazareth, Gaza.
6. Banque Commerciale de Palestine...	Turkish	Jerusalem	50,000 Ltk.	1911	Jerusalem.
7. Banque de Salonique.....	Turkish	Constantinople	880,000 Ltk. (20,000,000 frcs.)	1888	Beirut.

900,000 francs, besides which it had loaned about 620,000 francs in short-term credits to 52 loan associations with about 2,300 members. Since the beginning of the war the activities of the bank have been suspended.

The Banque Commerciale de Palestine does regular banking business in Jerusalem, and recently has engaged in loaning money to farmers on a small scale.

The Deutsche Palästina-Bank became affiliated with the syndicate of the Dukes Hohenlohe and Fuerstenburg about ten years ago, when its capital was increased to 20,000,000 marks. Before the war the bank was to be separated from the ducal combination and administered by the Deutsche Orientbank, but at present it is still working under the syndicate.

The banking business done by private firms is not of great moment. In Aleppo, however, there are eight or ten bankers who do regular business, and 25 smaller bankers who discount second class bills of exchange refused by the larger banks, at an enormous rate of interest, far above the legal 9 per cent.

The volume of investment securities in Syria is very limited and the business done in them is confined chiefly to the purchase of such paper for the investment of savings. The mortgage bonds of the Crédit Foncier Egyptien are the most important, paying only 3 per cent interest, but having the attractions of lottery features. They are issued in denominations of 250 francs. Besides, Turkish and several French premium bonds are bought. Speculation in securities is practically non-existent.

The credit system is carried on by means of discounting bills or advances made on current account. Usually the paper runs for no more than 3 months. In many cases the discounted bill is not really commercial but rather a promissory note, the signature of the drawer serving as a guarantee.

As in Europe, the customer's notes of the borrower are assigned to the bank as collateral for loans on current accounts. Personal guarantees, and also pledges and mortgages, are sometimes taken as security.

The volume of commercial paper in Syria is estimated at 10,000,000 ltq. per annum. This shows how little developed the whole banking system is.

In 1910 the Beirut banks under the leadership of the Ottoman Bank agreed upon the following rates of discount for notes:

- 6½% for bankers of the first class.
- 6¾% for bankers of the second class.
- 7% for business men of the first class.
- 7-8% for other business men.

Collateral loans secured by merchandise do not as yet play an important role. The number of staples which might serve as collateral, such as grain, wool, and sesame, is as yet limited. As there are practically no modern warehouses, the banks are forced to maintain storage rooms for merchandise on which money is loaned. It is more frequent that money is loaned on shipments for foreign trade than on merchandise within the country. Loans on real estate do not exist on the whole. (The activities of the official Banque Agricole which do not have any relation to actual banking business cannot be considered in this connection.) The law makes lending on mortgages difficult and does not permit the mortgages to be recorded in the name of the bank.

The interest paid by debtors ranges from 8 to 9 per cent. In many cases a commission is charged in the form of a discount amounting to from 1 to 3 per cent per annum.

Current accounts and deposits are growing from year to year, although real estate is still the favorite investment of the rich man. The bank deposits in Syria are derived rather from private individuals than from industrial or commercial circles.

It is very difficult to estimate the size of the assets and liabilities of banking operations in Syria, as all the large firms except the Anglo-Palestine Company do business throughout Turkey and have no special reports concerning Syria. At an arbitrary estimate the total of the assets of all Syrian banks (excluding private bankers) before the war amounted to 46-49 million francs, the total of the liabilities to 23-35 million francs, an insignificant showing for a land of 4 million inhabitants. Among the other activities of the banks is trading in foreign exchange. Before the war the exchange in pounds sterling and francs played the main role. In general all the Syrian banks accept the foreign exchange prices of Beirut. In Beirut itself it is the Banque Impériale Ottomane that has a preponderant influence in fixing the rate of exchange. The exchange is reckoned in Beirut piastres (1 ltq. equals 124 piastres of 25 para Beirut standard). By far the greatest part of the export of all products is effected by documentary draft (with bill of lading attached) or by the check remittance of the recipient.

Apart from the real banks and bankers Syria has so-called money lenders both in the favorable and unfavorable sense of the word. In the favorable sense these are capitalists who want to secure safe investments at a good rate of interest by lending their money. In Palestine there are religious organizations and rich Jews who let their money work in this way. Few of the natives

engage in this business. On the other hand there are Arab usurers in the villages who make the fellaheen pay them enormous rates of interest, up to 75-100 per cent.

B. *Currency*.—Before 1916 there was a bewildering diversity in Syrian currency, as the gold lira introduced in 1844 did not permit of a uniform division, being worth from 123 piastres in Tripoli to 255 piastres in Gaza. The banks had to keep book according to the local value of their piastres. Besides, the value of the silver piastre was reckoned only on the basis of the government piastre (Piastre Sagh). Another complication arose from the fact that while in 1844 a fixed relation was established between gold and silver, the subsequent depreciation of silver caused the government to introduce free coinage of silver. The silver coins (Mejidieh) did not constitute a legal tender and consequently they could not retain their original relation to the gold lira. This resulted in a considerable discount, amounting to 8 per cent in 1880. The government subsequently recognized the mejidieh as legal currency, but fixed its value at 19 piastres instead of 20 piastres. This unpopularity of the mejidieh resulted in a lack of change.

Besides the mejidieh and the half and quarter mejidieh of silver, there is the copper bishlik, used especially in Beirut and in Palestine. The bishlik is worth $2\frac{1}{2}$ government piastres and is divided into ten metalliks of ten para each. Half bishliks and quarter bishliks exist as well, also silver one and two piastre pieces, and metalliks, two metalliks, four metalliks and half metalliks of nickel.

In April, 1916, the government fixed the lira at 100 piastres and the mejidieh at 20 piastres of 40 para each. Silver coins must be accepted as payment up to the amount of 300 piastres; other small currency up to 50 piastres. Up to the time of the war Turkey had no paper money other than the notes of the Banque Impériale Ottomane, but now the government has issued its own paper money (50.5 ltq., 1 ltq., $\frac{1}{2}$ ltq., $\frac{1}{4}$ ltq., and 20.5, $2\frac{1}{2}$, 2 and 1 piastres).

VII. *Insurance.*

The insurance business is mostly in the hands of foreign companies with agencies in Syria. There is one Turkish company, the Société Générale d'Assurance of Constantinople, which writes life, fire and transportation insurance. In Palestine the sums insured by life insurance companies amount to about 15,000,000 francs, with yearly premiums of 600,000 francs. The business is remunerative, as the mortality is very low, there being few acci-

dents and no drunkenness. Fire insurance is also profitable, as there are rarely any fires, the houses being built of stone. The Arabs are too fatalistic by nature and religion to resort to insurance, particularly life insurance. Most of the business is done with Europeans.

The insurance of live stock has not been introduced by companies, but has been attempted in the Jewish colonies on a co-operative basis.

Foreign insurance companies are subject to government inspection, in accordance with a law passed in 1914.

VIII. *Commercial Schools.*

The commercial schools of Syria are : (1) The Commercial School of the Syrian Protestant College in Beirut, opened in 1900, which had 66 pupils in 1913-1914; (2) Two Jewish commercial schools in Jerusalem with about 60 pupils (one supported by American Jews, the other by the Hilfsverein der Deutschen Juden); and a government school in Beirut. The following program has been used by the commercial schools in Jerusalem:

Subject	Number of Recitations per Week			
	IV*	III	II	I
Hebrew	9	7	6	6
German	6	6	6	6
Arabic	4	5	5	5
English	3	3	3	3
Turkish	3	2	2	2
French	—	3	3	3
History	2	} 4	2	2
Geography	2		2	2
Mathematics	5	2	3	3
Zoölogy and Botany	2	2	2	1
Physics	1	1	1	1
Chemistry	1	1	1	1
Physical Training.....	2	2	2	2
Drawing	2	2	2	2
Singing	1	2	2	2
Arts and Crafts	3	2	3	3
Stenography	1	—	—	—
Bookkeeping	—	2	—	3
Typewriting	—	—	—	1
Total.....	47	46	45	48

* Lowest.

Commercial schools are urgently needed in such cities as Aleppo, Haifa, and Jaffa.

IX. *Chambers of Commerce.*

According to an ordinance of 1885, Chambers of Arts and Trades were to be established in Constantinople and other cities, but they never materialized in Syria. However, there are Ottoman chambers in Syria established by an ordinance of 1880, of which any reputable business man may become a member by the annual payment of a small sum. The chambers have other sources of income, namely, fees for the issuance of certain certificates and for the attestation of certain documents. The Chambers of Commerce of Aleppo, Damascus, Beirut, and Jerusalem, exist only on paper. The last-named, founded in 1909, for a time published a monthly report in French. The membership dues of the Jerusalem chamber are 50, 150 or 200 piastres according to the business of the member, and up to 500 piastres for bankers.

The main difficulty in establishing Chambers of Commerce in Syria lies in the fact that the business men are of different nationalities, have different customs, and speak different languages. This difficulty will have to be overcome gradually.

X. *Measures for the Promotion of Commerce.*

Neither commercial schools nor other measures will serve to develop commerce in Syria unless the Syrian business men work in closer co-operation and have greater confidence in one another. This might be brought about by the establishment of exchanges in commercial centers.

What is most important of all is the development of the Syrian harbors, Jaffa, Haifa, Tripoli and Alexandretta, the development of roads and railways, the introduction of telephones, etc.

PART SEVEN.

TRAFFIC AND TRANSPORTATION.

I. *Harbors.*

The only good harbor on the Syrian coast is that of Beirut, which was built by a French company. The gross profits amounted to 586,593 francs in 1896 and to 1,038,695 francs in 1909. Second class harbors with regular steamer traffic are: Jaffa, Tripoli, Alexandretta, Haifa, Latakia, and Sidon. All these harbors have only open roadsteads. Frequently winds render them unapproachable. The following third class harbors have no regular steamer traffic: Gaza, Caesarea, Acre, Tyre, Juni, Jebull, Tarsus, Banias and Suediah. In the grain season steamers call at Acre and Gaza. Unfortunately, as the town of Gaza is about 4 kilometers from the shore and there is no connecting road, loads must be carried through the deep sand on camels. The other harbors have none but sail boat traffic.

As the sea is rather shallow along the Syrian coast, steamers are forced to anchor from one-half a mile to a mile from the shore, except in Beirut. In all the harbors the ships must pay dues for health and light house service, in Beirut for use of the harbor as well. Every harbor is under the jurisdiction of a harbor master and a customs official.

From a technical standpoint there does not seem to be any great difficulty in the way of building the harbors of Alexandretta, Haifa, and Jaffa. The building of the harbor of Alexandretta, which is protected from winds and waves by nature, was begun in 1912 by the Bagdad Railway, but interrupted by the outbreak of the war.

The harbor of Jaffa presents greater difficulties than the other two, for as it is quite unprotected it will be necessary to build moles quite far out to sea. A plan has been broached to fill in the sea 109.3 yards out, as far as the famous and much feared reefs, or perhaps still further out, in order to gain valuable land for quays and to decrease the labor of dredging. The government has already had the harbor surveyed. The cost of building the harbor is estimated at 15-20 million francs. According to a report of the Austrian Consul in Haifa, made in 1912, the building of the harbor

of Haifa, to be 30-40 hectares in size, would also come to 15-20 million francs.

Almost all the merchandise imported and exported through Alexandretta and Haifa is or will be transported by rail; consequently any increase of traffic brought about by the building of the harbor will be advantageous to the railways. But this is not the case in Jaffa. It happens that most of the oranges, wine, and soap exported from Jaffa come from places which do not lie on the Jaffa-Jerusalem Railway. The same is true of imports. This condition will be changed after the completion of the Lydda-Tulkarem and Wadi-Serar-Beersheba lines. In any case it is advisable to have the harbor built by railway companies which are materially interested in its success.

II. *The Road System.*

The building and maintenance of roads in Syria has been effected either by concessions to private companies or by government undertakings. The Beirut-Damascus road and the Tripoli-Homs-Hama road were built in the former way, both proving very profitable to the companies which undertook them. All other roads in Syria were built by the Turkish government which laid taxes in kind, amounting to about 600,000 ltq. per annum, on the population. 10 per cent of the receipts of the Banque Agricole (about 35,000 ltq. annually) are devoted exclusively to road building.

The system of taxes levied in kind was not successful, and before the war the road system of Syria (with the exception of the Lebanon) was very backward. During the war Djemal Pasha has accelerated the work of road building in extraordinary fashion. The following roads have been built since 1911:

Damascus-Kuneitrah (37); Rosh Pinah (22); Tiberias (17); Semach (6)	83 mi.
Nazareth-Afuleh (6); Jenin (9); Nablus (22).....	37 "
Jericho-Es Salt (27); Amman (21).....	47 "
Hebron-Beersheba (31); Hafir (45).....	76 "
Latrun-Djulis-Gaza (not yet completed).....	62 "

The road system of Syria consists of the two main thoroughfares running from north to south, and the transverse roads which connect them. The coastal road is not complete, there being no connection between Haifa and Tyre, and Tripoli and Alexandretta. In June, 1916, the most important roads of Syria were:

The Coastal Road.

Gaza-Jaffa-Haifa	112 mi.
Tyre-Sidon-Beirut-Tripoli	106 "

The Highway.

Hafir-Beersheba (45); Hebron (31); Jerusalem (24)....	99 "
Jerusalem-Hablus-Nazareth	75 "
Nazareth-Tiberias (21); Rosh Pinah (17); Kuneitrah (22); Damascus (37)	97 "
Damascus-Homs-Hama-Aleppo-Aintab	217 "

The Transverse Roads.

Gaza-Beersheba	27 "
Jaffa-Jerusalem	40 "
Jaffa-Tulkerem (Nablus)	19 "
Haifa-Nazareth	22 "
Haifa-Tulkerem-Nablus	50 "
Sidon-Merjayun-Safed	43 "
Beirut-Damascus	78 "
Tripoli-Homs	58 "
Alexandretta-Aleppo	98 "

A few of these roads extend further to the east, namely:

Jerusalem-Jericho-Es Salt-Amman	73 mi.
Aleppo-Meskeneh (on the Euphrates).....	62 "
Aleppo-Bab-Biredjik (on the Euphrates).....	62 "

It is important that several roads, for instance that between Safed and Acre, begun in May, 1916, should be completed. This will serve to awaken Safed from its lethargy and connect Acre with the Hinterland.

III. *Railways.*

The Syrian Railway System consists of the following lines:

	Length in mi.	Gauge	Opened in
Hejaz Railway			
Damascus-Dera'a (76); Maan (211).....	287	105	1902-1904
Haifa-Dera'a	100	105	1904-1905
Dera'a-Bosrah-Eski Sham	24	105	1912
Haifa-Beled-Acre	11	105	1913
Afulah-Jenin-Massudiyeh-Lyddda	62	105	1913-1915
Massudiyeh-Nablus	9	105	1915
Wadi-Serar-Beersheba (52); Hafir (44).....	96	105	1915-1916

	Length in mi.	Gauge	Opened in
Bagdad Railway			
IslahiyeH-Muslimiyeh-Aleppo	88	143.5	1912-1914
Muslimiyeh-Jerabulus (Euphrates) ..	58	143.5	1912
Toprak Kaleh-Alexandretta	37	143.5	1913
	<hr style="width: 10%; margin: 0 auto;"/>		
	183		

Companies founded with
French capital:

1. Société Ottomane du Chemin de Fer Damas-Hama et Prolongements.			
Beirut (Harbor)-Rajak-Damascus ...	92	105	1895
Damascus-M'zerib	63	105	1895
Rajak-Aleppo	206	143.5	1902-1906
Tripoli-Homs	63	143.5	1911
	<hr style="width: 10%; margin: 0 auto;"/>		
	424		
2. Société des Tramways libanais.			
Beirut-Mamilten	12	105	1898
	<hr style="width: 10%; margin: 0 auto;"/>		
	12		
3. Société Ottomane du Chemin de Fer			
Jaffa-Jerusalem	54	100	1891-1892
	<hr style="width: 10%; margin: 0 auto;"/>		
	54		
	<hr style="width: 10%; margin: 0 auto;"/>		
Total	1,262		

At the beginning of the war the Turkish Government took over the French railways. The rails from Jaffa to Lydda on the Jaffa-Jerusalem Railway were torn up and used in the construction of the Jenin-Lydda, Wadi-Serar-Beersheba-Hafir lines. Besides, the gauge from Lydda to Jerusalem was changed from 100 to 105 cm. The Syrian railway system is poor compared with that of European countries, but far more developed than that of any other part of Asia Minor.

The Jaffa-Jerusalem Railway was opened in 1892 and proved so unprofitable at first that it had to be shut down for a while. Since then the traffic has increased considerably. The gross profits, 51,949 francs in 1895, had risen to 1,388,755 francs in 1911.

When the two Asia Minor tunnels of the Bagdad Railway are completed, which should be in 1917 or 1918, Aleppo will be connected with Constantinople, that is to say there will be direct railway communication between Syria and Europe. The economic value of a direct connection with Africa over Port Said is doubtful, as it would take longer and be more expensive to go from Aleppo to Port Said by rail than by boat. On the other hand it would be valuable to connect the Syrian Railways with Akabah. Another useful line would be from Rajak to Afuleh which would shorten the trip from Aleppo or Beirut to Haifa or Jaffa by about 124 miles, Safed and Nazareth could easily be linked up with this line.

IV. *Transportation.*

Transportation overland is effected by means of railways or animals; on the sea by means of steamboats and sailboats. Sailboats are not much used except for fishing. They are sometimes used in preference to steamboats to carry loads between neighboring harbors, as they can load and unload on the shore, whereas the steamboats must anchor at a considerable distance from land. The sailboat traffic is mostly in the hands of natives, the steamboat traffic almost exclusively in the hands of foreign companies.

A. *Shipping.*

1. Steamship companies.

The following steamship companies entered Syrian ports up to the time of the war:

(a) Société des Messageries Maritimes (Marseilles) with a weekly service, Marseilles-Alexandria-Port Said-Jaffa-Beirut-Haifa (Marseilles-Beirut in 10 days) and a bi-weekly service Marseilles-Constantinople, touching at Beirut, Haifa, Tripoli, Alexandretta, and Mersina.

(b) The Oesterreichische Lloyd in Trieste. The steamships of this company make the trip from Trieste, Alexandria and Port Said to Jaffa, Haifa, Sidon, Beirut, Tripoli and Latakia, taking 12 to 15 days from Trieste to Mersina.

(c) The Russian Steamship Line in Odessa with a weekly service from Odessa via Constantinople and Smyrna, to Mersina, Alexandretta, Latakia, Tripoli, Beirut, Haifa, Jaffa and Port Said (Odessa-Beirut, 8-9 days).

(d) The two Italian companies, Marittima Italiana and Servizi Marittimi, with bi-weekly boats from Venice or Genoa

via Rhodes to Beirut and via Piraeus to Beirut. The regularity of the traffic is sometimes interrupted by storms and the quarantines made necessary by cholera epidemics in Egypt. Besides the above mentioned steamship lines there are a Roumanian, a Bulgarian, and German lines which run less frequently and two English lines which have only freight steamers.

It is interesting to note that in 1910, the last year in which shipping was normal, Beirut was entered by 1,143 steamships, Jaffa by 707 steamships, Tripoli by 620, Haifa by 555, Alexandretta by 472, Latakia by 137 and Sidon by 109. Of these steamships 22.3 per cent were English, 20 per cent were Russian, 12.4 per cent were Austrian, 10.5 per cent were Turkish, 10.2 per cent were French, etc. The number of sailboats touching at the seven large harbors in 1910 was 8,545.

B. Railways.

The Hejaz Railway.—The passenger traffic is far greater in proportion than the freight traffic. In 1912-1913 there were 130,563 travelers from Damascus to Medina. The Damascus-Dera'a-Haifa line has greater traffic, but no figures are available. In 1913 the Hejaz Railway owned 96 locomotives, 103 passenger cars, 30 baggage cars, 1,028 freight cars, and 7 special cars. The passenger trains from Haifa to Damascus run daily (12 hours' trip), those from Dera'a to Medina 3 times a week.

The Jaffa-Jerusalem Railway.—The number of passengers (pilgrims and tourists) is greatest in March and April. The freight traffic is considerable from Jaffa to Jerusalem, but slight in the opposite direction. In 1913 182,700 passengers (I and II class) travelled on the line, and 47,500 tons of freight were transported.

C. Animal Transportation.

Camels are used in preference to other animals. Donkeys and mules are used for short distances, wagons only for military purposes, in the Lebanon and in the Jewish, German and Circassian colonies of Palestine. The rest of the population does not possess any wagons because of the miserable condition of the roads that prevailed up to recent years. In the cities there are carriages and omnibuses. Palestine has several "Diligences" (stages) running between Jaffa and Ramleh, Jerusalem and Bethlehem, etc. Among

the Arabs the bedouin and effendis use horses, the fellaheen donkeys. It is estimated that a donkey can carry 110-220 lbs.; a mule, 220-330 pounds, and a camel 440-660 pounds. Donkeys and camels cover 19-25 miles in an 8-10 hour day, mules 25-37 miles. It is estimated that no less than 180,000 loaded camels come into Alexandretta in the course of the year.

D. *Total Freight Receipts.*

At an approximate estimate the total freight receipts of Syria accruing from the transportation of goods, etc. (to which must be added the receipts from sea-born traffic and transfer), amount to 45,000,000 francs.

E. *Expressage and Warehouses.*

There are no large express companies in Syria. Expressage is in the hands of business men in the ports, who neither undertake to transport goods direct to far distant points nor offer sufficient safety. The dispatch business consists mainly in transporting people and freight from the steamships to the shore and vice versa, by means of small rowboats. Storage warehouses are quite undeveloped. It is only in Beirut and Haifa that there are steam cranes. Beirut possesses the only modern storage warehouse. The other cities have nothing but primitive sheds, and in the large wheat centers of Hauran the grain lies outdoors absolutely unprotected.

V. *Tourists.*

The tourists who visit Syria may be classed as follows:

- (a) Business men and officials on government business.
- (b) Egyptians who spend their summers in the Lebanon.
- (c) Jewish tourists who visit Palestine.
- (d) European and American tourists who visit Syria and especially Palestine, in the course of a trip to the Orient.
- (e) Christian pilgrims who visit Palestine.
- (f) Mohammedan pilgrims who travel to Medina via Haifa or Damascus.

The first three classes include from several hundred to a thousand people each, the fourth class from 6,000 to 7,000 people. The Christian pilgrims, estimated according to the number of passengers on the Jaffa-Jerusalem line, number about 20,000 annually, the Mohammedan pilgrims travelling on the Hejaz Railway number

about 15-25,000 annually. The total receipts accruing to Syria from tourists may be roughly estimated as follows:

Classes (a), (b) and (c)...	1,000,000	francs
Class (d)	3,000,000	“
Class (e)	2,000,000	“
Class (f)	4,000,000	“
	<hr/>	
Total.....	10,000,000	“

If travelling and hotel conditions in Palestine were better a far greater number of tourists would undoubtedly visit the holy places. Good roads for automobiles, European hotels and an advertising campaign in Europe and America would bear immediate fruit. The same may be said of the Lebanon, which is an ideal summer resort. There are already several agencies in Syria (Hamburg-American Line, Thos. Cook and Son, Clark) which arrange tours in Palestine and the rest of Syria. When Syria becomes easy of access and offers the same modern comforts to tourists as Egypt it will be possible to utilize its watering places. The hot sulphur springs of Tiberias, famous since antiquity, and widely used by natives, resemble the hot springs in Aix-la-Chapelle. The water, which has a temperature of 143.6 degrees F., is rich in sulphur and magnesia chloride and has radio-active properties. The hot springs of Hamman-ez-Zerka (the Callirrhoe of the Romans) were used by Herod. There are also hot sulphur springs in the Yarmuk Valley. It seems, too, that the enormous basin of the Dead Sea may also be used for medicinal purposes. The lower Jordan Valley would prove an ideal winter resort for consumptives and convalescents in general.

PART EIGHT.

URBAN AND RURAL LIFE.

1. *The Life of the Fellaheen and Bedouin.*

For food the fellah depends for the most part upon the products of his farm. His main food is bread, made of wheat (or of durrha or barley by the poorer classes) baked in thin cakes. Wheat is also consumed in the form of *burghul* (wheat grits). The well-to-do always serve mutton and rice on festive occasions. The commoner vegetables are tomatoes, egg plant, lentils, peas, beans, etc. Olive oil serves as a fat in the preparation of foods. Coffee and tobacco are used extensively. Entertaining guests is an important feature of village life, as well as celebrations, such as weddings, circumcisions, etc. Despite the fact that polygamy is allowed, the fellah rarely has more than one wife, whom he purchases from her father at a price ranging from 200-1,000 francs. In other respects, too, the fellah is quite primitive in his customs. The village children grow up without instruction of any kind and a large number of them are either disfigured or crippled by avoidable diseases, such as small-pox, trachoma, etc. The fellah rarely has recourse to physicians or pharmacists. It is interesting to note, however, that better health conditions exist in the Arab villages near the Jewish colonies, where a physician and a drug store are maintained by the community.

The fellaheen generally live in houses consisting of one room without flooring or chimney. The Bedouin, on the other hand, live in tents and roam the land at will. When they come into the civilized part of Syria they break up into groups of 10 to 50 families. Their favorite haunts are Transjordan, the Jordan Valley, the environs of Beersheba and the eastern parts of the Litani and Orontes Valleys. The life of the Bedouin is still more primitive than that of the fellaheen.

II. *Life in the Cities.*

A. *Architecture.*—The streets of the Syrian cities are narrow and crooked, although there are modern quarters with wide streets in such towns as Beirut, Damascus, Jerusalem, Jaffa, etc. In the European sections the streets possess narrow sidewalks. In

Batrum, in the Lebanon, the streets are paved with small, round stones, in Tyre with small cobble-stones, etc. In the last few years the government has forced each municipal administration to occupy itself with the laying out of new streets and the widening of existing streets. In those cases where houses were torn down the proprietors were indemnified.

The houses built by natives have a large drawing room in the center with numbers of doors leading into smaller rooms. (In Damascus there are beautiful courts with fountains and trees.) The rooms are furnished with rugs, mats, divans, and cushions; there are no tables, chairs or closets. Bathrooms are practically unknown. The first bathrooms and water closets were introduced by the Jews of Tel-Aviv.

B. *The Price of Land and Rents.*—The price of city lots is highest in Beirut. Then come Aleppo, Damascus, Jerusalem, Jaffa and Haifa. Before the war lots were sold at the following cost per pic (1 pic equals 0.5625 sq. meters) :

	Best Location in Center of Traffic	Near the Edge of the City
Beirut	200	10
Aleppo	50	5
Damascus	50	5
Jerusalem	30	2
Jaffa	30	2
Haifa	30	2
Tripoli	20	2
Homs	15	2
Hama	10	2
Gaza	5	1

The cost of building a one-story house containing four large and three small rooms, with a foundation of 62 square miles, is approximately as follows:

	Building Material	Francs
Damascus	framework filled in with sun-dried brick	8,000
Jerusalem	natural stone (hard)	20,000
Jaffa	“ “ (soft)	14,000
Haifa	“ “ (hard)	18,000

Houses bring 3 to 4 per cent in Homs, Nablus, Gaza, etc., 8 to 10 per cent in the ports, and as much as 10 to 12 per cent in those ports with the greatest immigration.

C. *Water-Works and Canalization.*—Beirut and Damascus are well supplied with drinking water by means of aqueducts. There are a few small aqueducts elsewhere, for instance in Acre and in the Jewish suburb of Tel-Aviv, near Jaffa. There is no doubt that in the near future good drinking water will be brought to the other large cities by means of modern aqueducts. So far they use river water. In Jerusalem rain water is stored in cisterns. A small aqueduct from the old Pools of Siloam supplies the neighborhood of the Temple. For decades there has been a plan afoot to bring water to Jerusalem from the wells of Ain-Farah or Ain-Arub but it has not yet been carried into effect, despite the fact that in summer water brought from a distance is sold for as much as 10 to 15 centimes for a can of 5 gallons. It would be expedient to instal sewerage at the same time as waterworks.

D. *Tramways.*—There are electric tramways in Damascus and Beirut, and horse-cars in Tripoli. Both electric tramway lines belong to French companies. There is a project of introducing electric tramways in Aleppo, Jerusalem and Jaffa. A Constantinople firm attempted to obtain a concession for an electric plant (lighting and tramways) in Jerusalem after the beginning of the war, but no definite arrangement was made. In Jerusalem the motive force will have to be supplied by means of coal or petroleum. The water power of the Aujeh can be utilized for Jaffa, from where the tramway service should be extended to Ramleh, Lydda, and the neighboring colonies.

E. *Intellectual and Social Life.*—Intellectually the cities are undeveloped. The most important institutions of learning are: the Mohammedan theological faculty in Damascus, the medical faculty (formerly in Damascus, now in Beirut), the American Syrian Protestant College and the French University of St. Joseph in Beirut. In Jerusalem there are the German and American archaeological institutes and the Jewish Arts and Crafts School Bezalel, which has had several notable artists among its teachers, for instance, S. Hirschenberg, E. M. Lilien, Richard Goldberg, etc. In Tel-Aviv there is a Jewish music school.

The school system has improved during the last years. Almost every city has a secondary boys' school. In Beirut there is a teachers' seminary. There is little provision made for the education of girls, excepting among the Jews; the secondary schools in Jerusalem and Jaffa are co-educational.

Arabic newspapers are published in Damascus, Beirut, Jeru-

salem and Haifa. Besides there are several Turkish official newspapers, a French paper in Beirut and a Hebrew daily in Jerusalem. Several Hebrew periodicals are published in Jaffa and Jerusalem.

Most of the physicians of Syria are graduates of European universities, although some of them studied in Constantinople or Beirut. The higher officials are graduates of the law faculty of Constantinople.

PART NINE.

THE ECONOMIC FUTURE OF SYRIA.

Syria suffers in comparison with other Mediterranean countries in lacking metals and coal, in possessing a large percentage of mountains and arid land, and in being isolated by high mountains to the north and by steppes and desert to the east and south. However, it also has advantages, the principal ones being:

- (1.) Its long coast line (435 mi.);
- (2.) The intelligence of the urban population, especially in the coastal zone, and the robustness of the rural population;
- (3.) The plentiful water supply in the coastal zone and in the longitudinal valleys;
- (4.) The unusual fertility of certain grain growing districts, especially Hauran;
- (5.) The interest of all humanity in the "holy places" in Palestine. If these advantages are properly utilized the following results may be achieved in the near future:

(1.) The whole coastal zone (and the river valley) may become a garden of tropical fruits and vegetables. All that is necessary is a proper system of irrigation and the establishment of warehouses and transportation facilities. Excellent markets for Syrian oranges, lemons, grapes, figs, pomegranates, apricots, melons, tomatoes, artichokes, etc., could be found in Egypt and all the Mediterranean ports.

(2.) The mountain district can be devoted to olive and pistachio trees, etc.

(3.) The plateaus may be utilized for grain cultivation.

(4.) Finer grades of tobacco may be grown in Syria.

(5.) Agricultural industries such as the manufacturing of cane and beet sugar and the preserving and desiccating fruits can become an important activity, as well as the production of alcohol from durrha, figs, carobs, etc.

(6.) The chief factor in promoting industry will be a new tariff. Raw products which were exported to other countries and then re-imported in a finished state must be treated in Syria itself.

Spinning and weaving of wool and cotton as well as tanning come under this head.

(7.) The absence of coal makes it imperative to utilize to the utmost the motive force of the rivers. The falls of the Yarmuk and the Jabbok, the rapid flow of the Jordan and the Aujeh, etc., can be used to provide electricity for the working of pumps, railways, etc. It seems that the Hejaz Railway Co. has worked out a scheme for utilizing the falls of the Yarmuk to run the Dera'a-Damascus, the Dera'a-Afuleh-Jerusalem, etc., lines, to provide lighting plants for a number of cities, etc.

(8.) If hotels and railways are improved tourists can be brought into the country in great numbers and become a considerable source of income for Syria and especially for Palestine.

APPENDIX.

PROJECTS FOR THE PROMOTION OF SYRIAN AGRICULTURE.

Up to now the government has erred in not seeking the co-operation of Syrian farmers in its projects, not of the poor fellah, but rather of the rich landed proprietor, and especially of the European colonists in Palestine. We believe that all efforts to promote agriculture should be made by a single agency, similar to the Société Khédiviale d'Agriculture in Cairo. A Syrian agricultural society might engage in the following activities:

(1.) To destroy locusts and insects, and combat diseases injurious to crops;

(2.) To make artificial fertilizers, seeds, etc., accessible to the farmer;

(3.) To maintain model farms;

(4.) To experiment with, and introduce, new forms of agriculture and new agricultural industries. Under this heading the following branches of agriculture and agricultural industry may be mentioned:

(a) Cotton in central and southern Syria (and the production of cottonseed oil);

(b) Sugar beets and sugar cane;

(c) Carob trees (the carob is used in England for the production of alcohol);

(d) Bananas;

(e) Castor oil bushes;

(f) Fruit and vegetable preserving;

(g) Oil production.

A society of this kind should publish a periodical containing instructions and suggestions for the Syrian farmer. So far there is only one agricultural monthly, the Hebrew *Hahaklai* published in Jaffa. Besides, it should hold agricultural expositions from time to time to promote competition.

The promotion of animal husbandry can be brought about by improving the quality of the breeds and by combating the frequent epidemics. In order to prevent the spread and fatal consequences

of animal epidemics proper precautions should be taken to inoculate the animals. This would call for the preparation of sera. An institution for this purpose could easily be founded by Jews in connection with the Pasteur Institute in Jerusalem, and develop into a veterinary college. An increase in cattle raising would be of great benefit to the soil.

There are certain districts in Syria at present partially or wholly unfit for agriculture, which could be rendered cultivable by the following measures :

(a) Drainage ;

- (1.) The swamps and marshy districts along the coast ;
- (2.) The swampy districts near streams and lakes.

(b) Afforestation of the sand dunes between the Egyptian frontier and Cæsarea, the arid district near Beersheba and the mountain slopes ;

(c) Irrigation (of the Jordan Valley between Beisan and the Dead Sea and other districts in the neighborhood of streams).

It is, of course, expedient to begin by undertaking those ameliorations which seem most urgent and promise to be most profitable. The work may be undertaken either by the government or by private societies acting in co-operation with the government. In the latter case the government is not forced to utilize state funds nor does it run any risk in case of failure.

There ought to be up-to-date warehouses throughout Syria, both in the ports and in the centers of production. Not only would the farmer be able to store his grain instead of being forced to sell it immediately, but the fact that grain of a certain quality coming from various quarters is stored together would force the farmer to keep his products up to the standard.

But if the grain grower finds it advantageous to store his wares and sell them when the demand is greatest, the fruit planter is anxious to dispose of his crops as soon as possible. In former years the fruits grown on the coastal plain were shipped either to Egypt or to European ports, but now the Hejaz Railway makes it possible to transport the fruits to Damascus, Homs, Hama, Aleppo, etc. ; in the future, when the Bagdad Railway is completed, they will find an important market in Asia Minor.

Nevertheless, as a large proportion of the fruit crops will be sent to foreign markets, it will be necessary to erect a number of cold-storage warehouses in the ports and to establish steamship

lines connecting the Syrian ports direct with Trieste, Marseilles, Liverpool, London, etc. With proper storage facilities even the most perishable fruits and vegetables, for instance, apricots and grapes, can be transported to Europe without risk. These improvements will, of necessity, be brought about gradually. It might be well for the government to subsidize the steamship lines.

Agrarian Credit.—According to a law of 1916, the Banque Agricole is no longer limited to a maximum of 150 ltq. on mortgage credits, and moreover it is now empowered to grant loans secured either by grain or by the entire property. Thus the bank can really become a central institution for the granting of agrarian credit in every form. The Banque Agricole will fulfill its task only when it wholly and adequately satisfies the demand for loans. It should facilitate the advance on grain by erecting warehouses and issuing warrants in the American manner. It should promote the establishment of all sorts of agrarian associations and educate the farmer as to the value of forming associations.

As long as it is not certain whether or not the Banque Agricole can raise the necessary capital to fulfill the duties imposed upon it by the new law it would not seem advisable that it should have a monopoly on granting agrarian mortgages, thus excluding private concerns from this activity. And yet this is what the provisional law of 1912 has done, for in accordance with it private concerns cannot grant mortgage credit in villages. If this measure was taken in the fear that the competition of the mortgage banks would be prejudicial to the Banque Agricole it was superfluous, for as the latter charges only 6 per cent. interest it is in no danger of meeting serious competition. There is another reason why private mortgage banks should not be excluded from the agrarian credit system, namely, because such banks could co-operate with the Banque Agricole in the important task of dividing the large Syrian estates into small holdings and creating a class of free farmers in the place of the tenants of the present time. This could be done by giving the fellah the opportunity of buying the land which he now labors on as a tenant, by granting him a long-term credit to be repaid year by year for a period of 10-30 years, this credit to be guaranteed by a mortgage on the newly acquired land.

The osher, which amounts to 12.63 per cent, cannot be considered an advisable method of taxation. Moreover it is unjust because it is taken on the gross profits without regard to differences in the cost of production. The osher is an impediment to every improvement in which money must be invested, for the proprietor

knows beforehand that he will not derive the full benefit of the increased interest on his money due to the improvement, but only $\frac{7}{8}$ of the increase.

The manner in which the tax is collected is still more harmful than its form. The osher farmer who rents the osher tax of an entire village from the government at a fixed rental is frequently an unscrupulous person who manages to squeeze more than the legal 12.63 per cent out of the farmer. Several reforms of the osher and wergho have been carried through and others projected. In Egypt the osher has gradually been replaced by a fixed land tax.

It is very important that the new land registry law of 1913 be carried into effect in Syria.

Certain of the rules which prevent the property owner from disposing of his land are no longer practicable:

(a) As the owner cannot bequeathe his land to his heirs he disposes of it in his lifetime either by actual or by simulated sale;

(b) The law stating that land lying uncultivated for a period of three years reverts to the state is too indefinite;

(c) The law restricting the acquisition of land by private companies had two motives, first to prevent foreign companies from owning land, and second, to prevent the absorption of small holdings by large capitalistic enterprises. Neither of these motives is sufficiently important to deprive Turkey of the financial and other advantages which would accrue from the introduction of various enterprises. Besides, the farmer could be protected by a law fixing a minimum of land possession for the individual farmer;

(d) The fact that every real estate transaction must be ratified by the commission charged with the recording of such matters gives the official practically unlimited power, as the law does not state for what reasons permission is to be granted or withheld. This restriction should be completely abolished except in the case of foreign companies.

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