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An educational agricultural system for Greece

Constantine P. Ladas

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Constantine P. Ladas

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AN EDUCATIONAL AGRICULTURAL
SYSTEM FOR GREECE.

CONSTANTINE P. LADAS

THESIS

SUBMITTED FOR THE DEGREE OF MASTER OF SCIENCE.

MASSACHUSETTS AGRICULTURAL COLLEGE

AMHERST,

May 1, 1930.

Plato's Republic - Jowett's translation:

"... our aim in founding the State was not the disproportionate happiness of any one class, but the greatest happiness of the whole."

pp. 133-134.

Committee on Curriculum Reconstruction for the
Rural Schools of Colorado.

"The chief aim of education is to teach pupils to do better the desirable things that they will do anyhow. This is interpreted to mean both those desirable present activities and assured future needs." -

Agriculture is a more natural art than politics because it cooperates with nature.

Plato.

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INTRODUCTION

Education occupies one of the most important places in the psychology of the individual Greek. When the writer of the present treatise attempted to narrow down his subject into one phase of Hellenic education - namely, Agricultural Education - he was compelled to recognize the limitations under which he was laboring.

Agricultural Education was never given a place proportionate to its importance in the school system of Greece. Even today, agricultural education as a system, is confined to only five or six agricultural schools in Greece. Consequently, literature or agricultural books on the school system of the country are not to be found anywhere in Greece. The present study, in its endeavor to build up a new agricultural educational system for Greece, has met with many difficult situations, and has often been compelled to show a revolting spirit against traditional pedagogical schemes in the school system of the country. All this, however, does not relieve the treatise from its many limitations, in spite of great amount of research work which has been done to make it a workable scheme for the educational needs of the country. Yet, the writer is satisfied that he made the first attempt.

Greece is an agricultural country, in spite of the industrial activity of its principal cities. But, unfortunately, agricultural conditions in Greece at present are primitive and

in some respects worse than that of the ancient period. Tradition still holds its sway in Greece and primitive agricultural technique is handed down from generation to generation. Agricultural machinery and other mechanical inventions which have revolutionized agriculture in other countries, have not as yet penetrated the Greek soil. Greece for the last twenty five years has been in a state of transition between war and peace. Consequently, the policies of the successive Governments have entirely neglected agriculture and its related industries. For many years the Greek peasant labored under a heavy taxation system, poor communication, exploitation by the middle class, poverty and, above all, under a heavy burden of ignorance. The young peasants inherited the limited knowledge of their parents and nothing more. Even the school could not be of any help to them and bring the necessary change which would mean growth and development for the young generation. One of the chief reasons for the existing backward agricultural situation is the deficient and imperfect elementary education in the rural section of Greece. Elementary education in Greece, as we shall explain fully in the following chapters of this treatise, is common throughout the entire provinces of Greece with no discrimination for the rural sections of the country. The curriculum of the city or town school, does not differ at all from that of the country school. Books and other elementary school literature are the same for boys of the urban centers as well as for country boys. Teachers change their positions from country to urban

schools and vice versa. Teachers in country schools are not required to have an agricultural training neither do they teach agricultural subjects, as they are not provided for in the curriculum of the school.

The educational system of Greece up to the present time, does not provide for a separate agricultural educational system which could be applied to the rural sections of the country. This reason accounts for the ignorance of the peasant class and consequently, for the existing backward agricultural condition in Greece.

The writer, will attempt in this treatise to analyse the existing educational system in Greece as it affects the rural sections of the country; he will show the defects of the present system, its limitations and its inadequacies to reach the door of the farmhouse; and finally, he will endeavor to furnish Greece with an agricultural educational system which will provide a new curriculum for the country school, and a method of supervising agricultural education in the country and a plan for adult education in the country districts.

The proposed educational system will follow as close as it can the American standards of organization of rural schools. Particular attention will be given, also, to other agricultural educational agencies working outside the rural school.

CHAPTER I.

A GENERAL SURVEY OF MODERN GREECE.

1. New Greece and its Population.

Greece gained its independence from Turkey by force of arms in 1821-29 and by the protocol of London of 1830, was declared a kingdom, under the guarantee of the great powers, England, France and Russia.

In the beginning Greece consisted of a small area in the Southern Balkan peninsula and did not include the majority of lands, where the Greek population predominated and where the Greek mode of life was best adapted to the natural conditions.

But soon the Hellenic State under-went a progressive process of territorial expansion. During the Balkan wars of 1912-13 Greek territory expanded to include part of Macedonia and Thrace and from that period until 1923 new changes were made in the frontier, when, by the treaty of Lausanne another expansion took place at the expense of Turkey. The acquisition of the new areas brought about many economic advantages, the most important being the annexation of plains capable of large scale grain production. Greece has an area of 49,000 sq. miles with a population of 167 per sq. mile. Between 1922-24 Greece had to find homes for about 1,500,000 Greek refugees ex-patriated

from Asia Minor. At the census of 1928, Greece had a population of 6,500,000. The various racial migrations which took place on account of the wars from 1912 up to the present time have had the effect of introducing homogeneity in the regions effected, where great diversity previously existed.

2. Physical Features of the Country.

Greece occupies the extreme Southeastern part of Europe and is scantily populated on account of its mountainous and barren nature. It extends south of lat. 35° and in Thrace approaches lat. 42° . The islands constitute about one fourth of the Greek territory. The sea is easily accessible from most places in Greece. The mountains are not very high but traverse the land covering most of it and isolating many parts from one another. The rivers are not navigable but at severe winters they overflow producing many damages to the crops. The physical environment varies with the areas of Greece and it has exerted a distinct influence on the character and the history of the people. (1) The climate of Greece as a whole is unstable and is liable to great extremes of heat and cold and sudden changes during night. The mean temperature is 79 Fah. for the summer; that of winter about 52. Winters are not very severe but they vary in temperature. Snow is rare and transitory, except in the mountains.

(1) E. Robinson "Commercial Geography" N.Y.

The climate in the islands is highly favorable to the sailor, at least during the summer period. Fog is rare and the alternation of land and sea breezes takes place with great regularity.

Attica, where Athens is located, is a very dry region and claims about 300 sunny days in the year, while its air is perfectly clear and the sky most of the time azure blue. Water supply is not adequate in quantity in many a town and at the present time in various parts of the country, water is conveyed from great distances.

3. The Government and Religion of Greece.

Greece became independent in 1830, after a successful insurrection against the Turkish government, to which the country had been subjected since the 15th century. Until 1924 the Government of Greece has been a constitutional monarchy with a hereditary King at its head. After a succession of rulers of the Glucksburg dynasty, Greece was declared a Republic by the constituent assembly of March 25, 1924.

The legislature consists of a Senate of 120 members and of a chamber of deputies elected for three years. They elect the President of the Republic for a term of five years. The Premier, according to the new constitution, cannot hold his office for more than one year. The members of his cabinet are, usually, selected from his own party. There are eleven Ministers for: the Army, Navy, Foreign Affairs, Interior, National Economy, Agriculture, Social insurance, Justice, Finance, Education and Communication.

Greece is divided into 9 general administrations, 33 prefectures - smaller administrative units, 89 provinces each with a population ranging from 10,000 to 150,000, 40 municipalities and 4,749 communities each with a population ranging from 50 to 10,000.⁽¹⁾

To Hellenic citizen no title of nobility is either given or recognized. The freedom of person and press are inviolable. Elementary education is compulsory and free to all. By the terms of the constitution, the Greek orthodox church was declared the religion of the State, but complete toleration and liberty of worship was guaranteed to all other sects. The great majority of the inhabitants of the Republic are adherents of the Greek Orthodox Church. The Government of the orthodox church is at present vested in a permanent council, called the Holy Synod, consisting of the Metropolitan of Athens as President, and 6 bishops residing at Athens during their term of office. The orthodox church has 35 archbishops in the old territory, 38 archbishops and 7 bishops in the new territories.

Military service in Greece is compulsory. It commences in the 20th year, and lasts up to the 51st. The normal term of service in the active army is 18 months for all arms. The normal annual contingent of recruits is about 35,000. The Greek army is organized in 4 army corps, each of three divisions.

(1) Census of Population 1920 - Ministry of Interior.

The navy is not a force of any considerable importance. Both the land and sea forces were recognized during the war of 1914-1918 and about 150,000 of both units fought with the Allied Armies.

4. Ethnology and Language.

The Modern Greeks consider themselves to be predominantly of one race and to descend directly from the ancient Greeks. They are an exceptionally homogeneous people. Even most of the Albanians and Vlachs inhabiting Greece, are Greek at heart and most patriotic. The much debated question whether modern Greeks are the direct descendants of the ancients need not take much of our time. The following statement⁶⁷ Professor V. Baker throw sufficient light upon the question under consideration.

---"the Greeks of antiquity, great and small alike, find their spiritual descendants, and in a large part also their physical and mental descendants in the people of modern Greece..... The people, too, of present day Greece both by their traits of character and their manners and customs, illustrate the nature of their predecessors.

...The Greeks have mixed with foreign elements like all nations who have a history, but they possessed and possess much such wonderful elasticity that in spite of the most contrary fate they have been able to absorb foreign culture and foreign races without their national peculiarity being extinguished."

"...Agricultural processes are largely unchanged. The plow and other implements are identical with those used millenia ago ... The shepherds are still piping on the hills at noontime ... the poulterer knows how to inflate his birds to most impossible size; all as in ancient Athens."

Greek people continue their hereditary aversion to manual labor. They love news and political discussions. Perhaps no people in Europe is given so much to politics. Intellectually they are alert and bright. The largest percentage of the Greek students studying at the universities seem to have preference and qualifications for law and medicine. Greece, at present time, has a disadvantageously large number of the professions named above. Rhetorical and literary accomplishments possess a greater attraction for the majority of the educated class than the field of modern science.

The Greeks do not have the same mental traits nor the same character; they vary according to the locality and environment in which they live. They are very individualistic and apt to antagonize often each other with no ability to cooperate in their business and political activities.

Sir Edwin Peary, in his last lines about modern
(1)
Greeks says:

... "What they (Greeks) want, both in religion and in politics is a few men with clear plain intelligence, who can see questions concerning their race in their correct proportion and will speak and act in accordance with their insight".

(1) Edwin Peary - "Turkey and its people".

The language used at present in Greece is modern Greek. Leaving aside many differences in dialect, there are two main types of language used in modern Greece, namely, the "pure" or καθαριούσα and the "popular" or δημοτική.-

The former, a return to ancient Greek, is taught in the schools and universities, it is the official language of the government and the press. The "popular" is the language of the people, that of the Greek songs and ballads, it is a living language and it is generally employed by modern writers of poetry and fiction. In fact, all poetry and fiction are written in the popular language.

Again the language of the modern Greek is a very valuable testimony to his ancestry: modern Greek is certainly not ancient Greek but it is in spite of many differences a legitimate child, a natural development of ancient Greek.

CHAPTER II.

A GENERAL SURVEY OF MODERN GREECE
ECONOMY & FINANCE.1. Finance.

The economic situation of Greece during the early years of the present century, up to the outbreak of the Balkan war in 1912 was marked by a moderate though steady progress. Industrial enterprises for local purposes were established in considerable number. Communications by road and railway were extended, and large additions were made to the mercantile marine. The state of public finance also showed signs of improvement. A series of deficits from 1907 to 1909 had to be faced by a portion of the proceeds of a new foreign loan raised for other purposes in 1910. ⁽¹⁾ The administration of the public finance is under the control of the International Financial Commission established in 1898. This institution though regarded as an encroachment upon the sovereign rights of the country, has been found useful on repeated occasions as a means of providing security for new loans.

The Balkan wars of 1912 and 1913 overburdened the resources and finances of Greece. This situation was relieved

(1) Facts gathered from A. Andreades: "Les Progrès Economiques de la Grèce", Paris 1919.

in some measure by the assistance rendered by the Greeks abroad. However, the economic strength of Greece was greatly enhanced by the acquisition of territories of both actual and potential value, including the important port of Salonica, the rich tobacco-growing districts of Drama and Kavalla and extensive fertile areas in Macedonia.

In the first part of the World-War, during the period of neutrality of Greece, which lasted from 1914 until 1917, there was a marked accumulation of private capital arising out of shipping and other profits in goods. ⁽¹⁾ When Greece entered the war in 1917, she demanded a large increase in military and naval expenditure. A new system of taxation was introduced, which included a tax on war profits and an issue of National Defence bills. But the bulk of the funds required at that period for military purposes was advanced in kind from the Allied Powers. The Greek Government treated these credits as cover for the note issue.

During the Greco-Turkish war, the Government required additional funds for its military operations in Asia Minor. New issues of National Defence bills were necessitated by the government, which finally terminated to inflationary issues of paper money. The disaster in Asia Minor in 1922 reduced the finances and credit of the country to the lowest ebb, and "by the end of the year its securities were quoted on the international markets at prices yielding 20% to the investor, while the drachma had lost 94% of its gold value".

(1) Bulletin of Athens's Chamber of Commerce, June 30, 1929.

The settlement of refugees who came in vast numbers to Greece from Asia Minor and Thrace at the close of the war, threw a fresh burden on the resources of the country. Fortunately the League of Nations assisted the Greek Government in 1923 by a refugee loan issued in 1924.

The financial reconstruction of Greece began with the new coalition Government which came into power in 1926. By way of reduction in expenditures, fresh taxation and other important measures, the budget estimates were balanced. During the year 1927 the debts to Great Britain and United States were funded on terms satisfactory to the country. The approval of the League of Nations was obtained for the flotation abroad of a loan to balance the budget, stabilize drachma exchange, and carry on the refugee work. This series of developments marked the formulation of a definite financial programme and had a stimulating effect on business in general. The League of Nations decided to grant a loan which did not exceed £ 9,000,000 net, including the United States's share. Under the terms of this loan, a number of reforms in the administration of public finances in Greece were instituted. These included the creation of a new Bank of Issue independent of the National Bank, the establishment of a mortgage Bank and in general the relieving of the National Bank of certain functions which now hinder its ordinary commercial work. Under the proposed plan the Greek Government undertook to keep the budget within a limit of about 9,000,000,000 drachmas until the end of the financial year 1929-30 and to maintain a

balanced budget after that time.

On December 3, 1928, the U. S. Commerce Reports stated that the public debt of Greece was shown for the first time in terms of paper drachma. The debt had been computed on the basis of 575 paper drachmas to the pound sterling (or 77 to the dollar), at which rate the drachma was stabilized. According to this statement, the public debt as of June 30, 1928, totalled 36,386,238,419 drachmas (about \$479,000,000).⁽¹⁾

The following table I shows the estimates of revenue and expenditure for 6 years.

Table III gives particulars of the budget for 1925-26.

In table II are shown the estimates of revenue and expenditure for 6 years.

TABLE I.

Estimates of revenue and expenditure from 1921-22 to 1926-27.⁽²⁾

Year	Revenue Drachmai (3)	Expenditure Drachmai	Year	Revenue Drachmai	Expenditure Drachmai.
1921-22	24,537,543	48,495,987	1924-25	23,247,593	27,690,373
1922-23	25,847,155	29,233,057	1925-26	7,020,400,863	7,020,400,863
1923-24	13,097,150	21,912,807	1926-27	8,821,619,843	8,821,619,843

TABLE II.

Estimates of revenue and expenditure from 1921-27

Year	Revenue Drachmai	Expenditure Drachmai	Year	Revenue Drachmai	Expenditure Drachmai
1921-22	24,537,543	48,495,987	1924-25	23,247,593	27,690,373
1922-23	25,847,155	29,233,057	1925-26	7,020,400,863	7,020,400,863
1923-24	13,097,150	21,912,807	1926-27	8,821,619,843	8,821,619,843

(1) Bulletin of the Athens's Chamber of Commerce, June 30, 1929.

(2) The Statesman's Yearbook pp. 977.

(3) At par 77 drachmai = \$1. U.S. Before the World War 5 drachmas = \$1. U.S.

TABLE III.

(1)

Particulars of the Budget for 1925-26.

Revenue		Drachmai	Expenditure		Drachmai
Ordinary:			Ordinary:		
Direct tax	1,090,958,000		Public debt interest	1,130,087,474	
Indirect tax	3,068,604,000		Pensions and other obligations	419,628,239	
Monopoly	312,050,000		Public security	301,547,172	
Tax from Stamps	401,277,000		Public Works	149,838,480	
Telegraph, post and telephone	184,050,000		Education	375,047,000	
Other administrations for State	15,707,500		Monopoly	93,378,304	
Income from State property	123,361,050		Telegraph, post and telephone	194,966,000	
Remaining incomes	366,715,768		Army and Navy	1,250,341,600	
New tax for the payment of public debt interest	900,000,000		Expenses of other administrations	940,822,674	
Total	6,462,723,318		Total	4,861,656,943	
Extraordinary:			Extraordinary:		
Income from war reimbursements	12,000,000		Public security	3,415,000	
Other incomes	441,160,750		Telegraph, post and telephone	14,515,001	
Sale of property	13,716,800		Public works	68,495,715	
Loans	40,800,000		Other expenditure	2,072,318,209	
Tax on property	50,000,000				
Total extraor- dinary	557,677,550		Total extraor- dinary	2,153,743,925	
Grand total	7,020,400,868		Grand total	7,020,400,868	

(1) The Statesman's Yearbook 1927, pp. 973.

2. Production, Industry and Commerce.

Greece is mainly an agricultural country and its economic life is directly dependent on the products of the soil. About three quarters of its population is occupied in agricultural enterprises. Because of the mountainous conformation of the country, only 22 per cent of the area is cultivated, while 52 per cent is covered by meadows and pasturage and 13 per cent by woods and forests. ⁽¹⁾ The greater part of the cultivated lands is devoted to cereals, the production of which is far from sufficient for the consumption of the country. A great part of the area is taken by olive trees and vines. The most important of the fruit trees are the olive, the vine, orange, lemon, fig, almond, citron, pomegranate, and currant vine. Certain districts, however, are devoted to two valuable products, tobacco and currants forming the main items in the exporting list of products for which Greece is very well known. Cotton and rice are cultivated in small areas, especially in Macedonia near Salonica. Olives are abundant, about 865,000 acres are under cultivation; olive oil production in 1925, 44,854 metric tons. In 1922 the number of oranges grown was 152,000,000, of mandarines 63,000,000, and of lemons 49,000,000.

There were in Greece (1925) 200,000 horses, 125,000 mules, 250,000 asses, 550,000 cattle, 6,000,000 sheep, 3,500,000 goats and 400,000 pigs.

(1) Statesman's Yearbook 1927, p. 966.

Tobacco, the most important export item, was estimated in 1927 at 120,358,300 pounds as compared with 120,172,000 in 1926. The estimated crop of currants in 1927 was 283,000,000 as compared with 515,000,000 pounds in the previous year.

Table IV shows the acreage and production of the chief crops for two years. (1)

TABLE .IV.

	Area in acres		Production in metric tons	
	1922	1923	1922	1923
Wheat	1,026,495	959,546	229,403	210,177
Barley	325,424	336,250	112,971	105,395
Maize	369,801	307,946	124,583	126,722
Oats	172,300	174,502	67,650	50,067
Tobacco	66,863	158,766	19,802	37,839
Cotton	16,112	26,149	5,929	8,009
New wine	306,026	300,922	179,400	153,897
Currants	154,849	98,310	182,836	98,932

The country has a large variety of mineral deposits but they are not very well worked. According to the Statesman's Yearbook, there are now in force about 35 mining concessions embracing total area of nearly 20,000 acres. The principal

(1) The Statesman's Yearbook 1927.

minerals are lignite, iron, iron pyrites, magnesite, chromite, lead and naxos emery. Marine salt is produced in large quantities for home production.

The principal mineral output of all Greece for two years is given in Table V as follows: ⁽¹⁾ (metric tons)

TABLE V.

	1924	1925		1924	1925
Chromite	14,820	14,980	Lead	53,600	76,716
Emery	22,528	22,700	Magnesite	58,215	90,828
Iron	96,000	100,000	Zinc	4,861	4,607
Iron pyrites	76,051	65,000	Salt	75,000	77,714

Industry is making a great progress for the past few years. The development of industry on a large scale has not made much progress because of lack of capital and native coal supply. The leading industrial products are olive oil, wine, textiles, leather and soap. The industrial census of 1917 showed that the country had 2,215 factories employing 36,124 hands. The principal articles of export are tobacco, currants, olive oil and wine. Cereals take the first place among the imports, followed by textiles, coal, sugar, and many other commodities. The imports exceed the exports to a large extent.

(1) The Statesman's Yearbook 1927.

Exports during 1927 exceeded those of 1926 by 23.8 per cent in drachma value and 29.7 per cent in dollar value. Greek imports from the United States rose from \$20,427,300 in 1926 to \$26,432,300 in 1927. ⁽¹⁾ Exports from Greece to United States totalled \$17,319,000 in 1927. Principal exports to the United States include tobacco, currants, figs, chrome ore, emery, olives and olive oil.

Following is the table VI which gives the value of the commerce of Greece ("the rate of exchange to the £ 1 being for 1920, 54.23 drachmai; for 1921, 70.05 drachmai; for 1922, 166.34 drachmai; for 1923, 300.92 drachmai; for 1924, 247.39 drachmai" ⁽²⁾).

TABLE VI.

Year	Imports	Exports
	£	£
1920	63,558,961	20,032,426
1921	25,188,706	13,479,081
1922	19,055,921	14,964,045
1923	20,056,513	8,457,764
1924	32,555,007	13,246,176
1925	31,566,082	13,834,778

(1) International Yearbook 1926, p. 311

(2) Statesman's Yearbook 1927, p. 967.

3. Occupations.

Sixty five per cent of the total population of Greece is employed in agricultural occupations. This means that the largest part of the population earns its living from agricultural employment. The prevalent system of cultivation for the last years has been the extensive culture, but since the influx of about 1,500,000 refugees and the allotment of small areas for cultivation, the tendency has now started towards intensive cultivation. The exodus of farm boys towards the urban centers has increased alarmingly for the past few years. The number of [^] Agricultural laborers in Greece is insignificant. The Greek peasant likes to own his farm and works on it with the aid of all other members of the family. The Greek peasant woman is an invaluable aid to her husband. Manual labor is hard among the peasants, while it is unpopular in the urban centers. Greece has a greater proportion of university bred men than she needs at present. "Classical instruction prevails in the schools with the consequence of an overproduction of a poorly educated proletariat and office-seekers, who either agitate for political positions or remain idle more or less" (1).

The Greeks are well known as mariners and merchants.

In the course of a generation the Greek mercantile marine increased more than four times, while its profits have been very satisfactory during the European war.

The growth of industries reflected in the activity of the manufacturing centers, has given employment to many

(1) Savvidis, Education in Greece, 1917.

people especially refugees who flooded the country without jobs and professions. The textile industry ranks second in importance among the other industries in Greece and the rug industry which has just come into existence employs more than 10,000 people in its factories. (1)

There are few labor unions in Greece consisting mostly of the maritime workers, tobacco laborers, and cigarette-makers and other minor unions which form the General Confederation of Labor.

But as we have already stated, the largest percentage of occupations are connected with agricultural industries from which the population mostly earns its livelihood.

4. The Settlement of Refugees.

Greece had just recovered from the turmoil of the World War when she found herself involved in another war with Turkey. The Greek army landed in Asia Minor and after an unsuccessful attempt to subdue the Turkish hordes, retreated from Turkish territory in 1922. Hundreds of thousands of the Greek inhabitants sought refuge in Greece, some reaching there by their own efforts and others being concentrated and transported by the commission of the League for refugees. They had been driven from their homes in Asia Minor by the advance of the Turkish army. The Treaty of Lausanne required members of the Greek Orthodox Church established in Turkey to emigrate to Greece. Ultimately a million and a half persons took refuge there.

(1) Mears, "Greece today", Chap. IV.

These people were without homes, work or money. To feed, clothe, house and find employment for these refugees became imperative. The problem involved in caring for them became very serious for the country because they represented one fifth of its population. They were without funds but Greece itself was undergoing an economic and political crisis due to 12 years of intermittent war.

The Greek Refugee Settlement Scheme was worked out accordingly, after various technical agencies of the League had studied the problem. By a protocol of September 1924 an international loan of \$50,000,000 was authorized and floated. The expenditure of this sum was put into the hands of the Refugees Settlement Commission, which still functions and reports to the Council of the League twice a year. More than three quarters of a million refugees had been settled in productive work by the end of 1926. ⁽¹⁾ In 1927 the above sum being exhausted, Greece needed additional \$45,000,000. Through a refunding arrangement with the United States Treasury, \$12,000,000 was made available to Greece. The Refugee Settlement Commission by 1928 had spent nearly \$40,000,000 on agricultural settlement and more than \$5,000,000 on settlement of refugees in the cities. These sums took care of 143,000 families placed on farms and 28,000 in cities. More than 1,976,000 acres of land had been apportioned, 76,000 houses were built and 7,000 were under construction. Since 1923 the area under cultivation has almost doubled.

(1) Bulletin of the Ministry of Social Insurance, 1928, p. 11.

CHAPTER III.

AGRICULTURE IN GREECE.

1. General Remarks.

No attempt will be made in this chapter to make an exhaustive study of agricultural conditions in Greece. But it will be our concern here, to discuss the various agricultural problems which the Government faces at the present stage of agricultural development.

In order to realize the economic and social importance of the agricultural question in Greece, it will be necessary for us to outline below a few reasons which will indicate the place of agriculture in the national economy of the country. Greece is an agricultural country:

First, by the proportion of her rural population. The exact number of the population in 1920 was 5,021,790, as shown by the census books of the Ministry of Interior. ⁽¹⁾ From various classifications of the population we find that the rural population of Greece is the population found in communities or localities having not more than 5,000 inhabitants. ⁽²⁾ According to this classification the rural population of Greece in 1920 was 3,697,548, while the urban population (in towns or

(1) Census of 1920 - Population - Ministry of Interior, New York Public Library.

(2) Greece differs from other nations which limit their rural population to 2,000.

cities having above 5,000 inhabitants) was 1,324,242 out of a total population of 5,021,790. In other words, the rural population comprises 74 per cent, while the urban 26 per cent of the total population of Greece.

Second, by the value of her agricultural production compared to that of industry, commerce and mining. By the end of 1921, for which there are available official figures, the production of Greece was as follows: ⁽¹⁾

Agricultural production per year....	3,750,000,000	drachmas	(2)
Industrial " " "	1,650,000,000	"	"
Commerce-importation in 1921	1,725,000,000	"	"
Commerce-exportation in 1921	947,000,000	"	"

Third, the importance of agriculture again may be shown by the exporting trade of the country in 1921, as follows:

Agricultural products exported in 1921 ...	795,000,000	drachmas
Total exportation in 1921 ...	947,000,000	"

A study of the statistical returns of the import and export trade of Greece in Agricultural products shows that the exports represent 70 per cent of the whole export trade, while the imports take only 30 per cent of the whole in raw agricultural products and 40 per cent in manufactured ones. This proves the statement set forth at the beginning of this chapter that Greece is mainly an agricultural country, and agriculture its most source.

(1) Simonides - *Reveu d'economie Politique*, 1923, p. 770.

(2) 75 drachmas equal to \$1.00 in 1923.

The above figures do not take in consideration the development of the country's agricultural resources since the coming of the refugees, for the last seven years. The following table shows the occupation of the population according to the census of 1920:

General categories of occupations.	total	Males	Females	Total %
Agriculture, Animal husbandry, Hunting & fishing	926,314	817,539	108,775	58.09
Industry	330,391	319,460	60,931	23.86
Commerce	150,884	146,830	4,054	9.46
Public & private administration, Liberal occupation & arts	137,003	90,362	46,641	8.59
Total	1,594,592	1,574,191	220,401	100.00

With the influx of one million and a half refugees and their establishment in the country districts and farming sections hitherto unutilized, the agricultural enterprises have more than increased because, the refugees are utilizing the land which up to the present time has been neglected and have introduced a new spirit and a new impetus in the agricultural industries of the country.

2. The Agricultural Reform.

The most acute agrarian question in Greece has been the breaking up of the large estates into small holdings. As far back as 1860, when Greece was almost one third of its present size, small farm holdings were the rule of Old Greece and the Islands; with the gradual annexation to the country of new territories as Thessaly (1881) and Macedonia and Epirus (1913) (1), large holdings (tsiflikia), formerly owned by Turkish landed gentry, appeared in the new kingdom and according to that system "peasants were working the land on shares submitted to the tolls taken by the owner and tax collector, which frequently left them no reward at all". (2) The main issue was, the breaking up of large estates through the offering of fair prices from farmers to the large landowners and the resulting purchase of small farm lots by peasants assisted financially by the Government. In 1911, after many legislative decrees have failed to remedy the situation, the Government decided to purchase not less than two-thirds of each large estate, paying for the land by bonds bearing six per cent interest, with the agreement that the purchased land would be allotted to associations of farmers under favorable terms. But this law was put into operation only when the Government found the country flooded with one million and a half landless, poverty stricken and homeless refugees in 1922-1923. The splitting of the large estates into small holdings became then a

(1) See map of Greece and her territorial expansion, Appendix 4.

(2) Mears, "Greece today", p. 55.

reality and the property which was available at that time for division in small farm lots was increased by small farms abandoned by exchanged Turks and Bulgarians. Each refugee family was given a small farm plot of about ten to fifteen acres, two animals, modern farm machinery and seed with which to start the enterprise. The work of placing more than one million of people in the farming sections of the country was tremendous, but it has been administered remarkably well by the Settlement Commission organized there by the League of Nations.

With the land question solved at present to a satisfactory arrangement between refugees and native farmers, the agrarian reform remedies only one part of the agricultural problem. Other questions which are equally important and which constitute the most vital part of Greek agriculture are the types of crops to be used for better production; better breeds of animals and new methods of cultivating, harvesting and marketing of products. The attention of the Greek Government has been turned at the present time to a thorough reorganization of the agricultural technique now in use by the peasants throughout the country. Agricultural machinery has been imported and cooperative societies have been organized for the joint purchase of machinery fitted to their agricultural needs. It is a difficult task to induce the peasant to change his traditional technique which is simple and full of poetry to him, and adopt a new technique which requires more intelligent manipulation and much more expenditure. The scheme of a few producers' cooperatives

in Greece, which have brought such labor saving machinery and have used it in common, has not been very successful because of the difficulty of transportation of machinery from one small field to another. An added difficulty is the type of Greek farming.

With the small farms existing under the present system in Greece, intensive farming is far more profitable than extensive farming. Wheat growing is better adapted to extensive farming because it becomes easier by the use of modern machinery such as tractor plows, machine reapers, threshers, binders and such enterprise becomes remunerative only when conducted on a large scale. In small farms the peasant women still reap their grain with hand sickles. The problem which confronts at the present moment the Greek Ministry of Agriculture is the introduction in Greece of a type of machinery fitted to greek soil and to its type of farming.

3. Agricultural Production.

The agricultural production in Greece may be conveniently classified in four general categories: cereals, animal husbandry, fruit production, and industrial and aromatic products. While cereals are well distributed, from the point of view of production, in all parts of the country, other products as currants, tobacco, olives, etc. are grown only in certain parts of the country as we shall explain below.

According to the figures of the census of 1920, only one fifth of the territory of Greece was brought under cultivation;

but these figures took no consideration of the expansion of Greece during the later years. Professor Hears claims that in 1927 about 36 1/2 million stremmas ⁽¹⁾ out of the entire 120 million stremmas of the superficial area of Greece were under cultivation. The best fertile valleys of Greece are Thessaly in old Greece, and the newly acquired valleys in Macedonia and Western Thrace. These valleys properly exploited can become the granaries of the country.

Greece at the present time is not a self-supporting country, but she can become such. Bread forms the basis of the diet of the Greek people. The average consumption of wheat bread in Greece is 0.85 of a pound daily. ⁽²⁾ Taking in consideration this figure and considering the population of Greece in 1920 as 5,000,000, we find that Greece needs 700,000 tons of wheat yearly. The country produces on the average 400,000 tons yearly, so that 300,000 tons must be imported.

Many agricultural experts believe that Greece can support herself. The Government has already started a tremendous agricultural work of draining and reclaiming of swamps which will result in the release of thousands of acres of land ready for cultivation. The Greek peasant needs to be taught new methods and new ways of performing the various tasks in the farm to produce larger and better products. For many years the Greek peasant labored under the ancient method of leaving the land lie

(1) One stremma is equivalent to about a quarter of an acre.

(2) Bulletin of Athens's Chamber of Commerce, December 1921, p. 848.

fallow. With the coming of the refugees the system of fallow land has been abandoned and in its place came the system of the rotation of crops. ⁽¹⁾ The use of fertilizers and their contribution to agricultural production has been justly realized during the recent years. While in 1911 the consumption of fertilizers amounted to only 200 tons, and in 1916 to 6,600 tons, the use of fertilizers for the past two or three years has reached the surprising figure of 60,000 tons yearly. Below we shall give a brief discussion of the most important Greek products under their general classification.

Cereals.

The most important cereals of Greece are, wheat, corn, barley, oats and rye stated according to their importance. Wheat or wheat and barley bread are the most important cereal foods of the Greek diet. According to the census of 1920 ⁽¹⁾ the cereals of Greece covered 9,135,963 stremmas or 70.62 per cent of the cultivable land.

Wheat stands above all cereals both in regard to acreage and value. It is grown in almost all parts of the country and especially so in the plains of Thessaly and Macedonia which are regarded the granaries of the country. The wheat generally grown in Greece is of the hard type and can stand a great deal of drought. The quality of the seed has been much improved by using Egyptian seed which, by research, has been

(1) Bulletin of Ministry of Agriculture, 1922, pp. 7-9.

found to yield twice as much as the native seed.

Corn takes the second place among the cereals of Greece. Maize grows best in a light sandy soil, particularly the alluvial soil which is found in Macedonia, Western Thrace and Thessaly, near Larisa. It grows also in the western parts of Greece such as Akarnania, Arta and Achaia.

Barley comes third in importance of production. Because of its hard seed, it can stand much drought and can be grown in poor soils. It matures earlier than wheat, oats and rye are grown also in poor soils.

Live Stock.

Greece, like many mountainous countries with dry summers, raises large numbers of sheep and goats, but on account of the climate and lack of pastures and lowlands, is unable to support sufficient cattle for its growing needs. According to official statistics animals and animal products held second place in the country's list of exports during the years 1919-1921, ⁽¹⁾ and they held the fifth place in the country's list of imports for the same period.

There were 5,811,418 sheep in Greece in 1923 as it is shown from the bulletin of the Ministry of Agriculture. The sheep is the most important animal for a country like Greece with poor, dry pastures. From ancient times the people had to depend on sheep for their food, because of the uncertainty of rain to support the cereal food. Sheep can eat at places where

(1) Monthly bulletin of the foreign commerce of Greece, 1920.
p. 40.

cattle can find little. The large number of goats raised in Greece, indicates the poor soil of the country. Almost every peasant family in Greece possesses a number of goats. They can live and feed at places where sheep cannot; they climb on mountains and can destroy young shoots of trees making thus much injury to the forests. In 1922, there were above 3,418,000 goats in Greece.⁽¹⁾ Sheep and goats are very valuable to farm households for their milk from which is made cheese, an important ^{article} of food for the Greek family.

Because of the dry summers and consequently poor pastures found throughout the country, it has been difficult to develop large cattle industry. The supply of milk comes mostly from goats which take the place of cows in Greece. Most of the cows found in Greece are of inferior quality and of the 571,329 cattle found in the country, a larger number is used for ploughing. There is also a great number of oxen.

General Fruit Production.

Under this category we classify those products which are produced on a large scale and which occupy an important place in the exporting trade of Greece.

Fruit industry is still undeveloped in many parts of Greece, especially so in Macedonia and Thrace territories possessing many possibilities for that type of agricultural production. Macedonia is an excellent place for the production of apples, pears and small fruits. The products which are enumerated below are grown mostly in old Greece and the islands.

(1) Ministry of Agriculture - Bulletin, p. 12.

Currants until recently occupied the first place in the exporting trade of Greece. They are small seedless grapes, grown on a strip of land 250 miles long and from 1 to 5 miles wide. (1) The gulf of Corinth and Northwestern Peloponnesus are the best regions for the production of currants. Greece until recent years held a monopoly in their production, but at present Australia and California are becoming important producers of similar seedless raisins. The largest demand for Greek currants comes from Great Britain where they are used extensively in cakes, puddings and other sweets. Unfortunately for the past few years the supply of this crop has overflowed the markets with the consequent abrupt fall in prices. In times of overproduction the crisis threatened to ruin the whole industry. To remedy the situation the government has introduced various measures. At present, the Central Currant administers the production and marketing of the currant industry. Greece produces about 120,000 tons a year, a supply which more than meets the demand of the world.

The soil and climate of Greece are particularly adapted to the culture of grapes. Raisins and wine form one fourth of the agricultural production in Greece, while wine and spirits made from grapes took fourth place in the country's exports. The largest of Greece's wine is exported to France where it is used for mixing with other wines, because of its high alcoholic content. There are many kinds of wine made in Greece, the dry table wines and the sweet dessert wines. The government is encouraging this industry by plantation of new vineyards in

(1) Foreign Trade of Greece, Dorigas, p. 40.

Macedonia, especially in the refugee settlements. "In 1928, over 7,000,000 new grafted cuttings were distributed to the settlers".⁽¹⁾

Greece produces large quantities of olives and olive oil to feed her own population and to give her the third place in the world's production of these crops. Olives and olive oil occupy an important place in the Greek diet, taking the place of butter. Olive trees are found in places where the Mediterranean climate prevails and grow in abundance in coastal plains. They live long and can stand much drought. The methods of handling, picking and packing are still primitive and much can be done for the introduction of new labor-saving methods. In 1920, there were in Greece about 20,000,000 olive trees, which produced 71,088,300 kilograms of olive oil valued at 154,429,929 drachmas.⁽²⁾

There are many kinds of citrus fruit (oranges, lemons, tangerines) thriving in the Greek soil. The Greek Government is at present conducting an aggressive campaign for the development of fruit industry by installing nurseries in many parts of the country and teaching the farmers how to fight the pests. Figs are an important agricultural item in the country's exporting trade. Fig trees thrive near the coast where the climate is mild. In 1920, the production of figs (dried) amounted to 19,765,400 kilograms at a value of 14,758,226 drachmas.⁽³⁾

(1) Mears, "Greece today", p. 72.

(2) Dorizas "Foreign trade of Greece", p. 43.

(3) Bulletin of the Ministry of Agriculture, 1920, p. 53.

Industrial and Aromatic Products.

Under this category the Ministry of Agriculture classifies such products as tobacco, cotton, haschich, flax, silk, etc., the production of which has been greatly encouraged by the refugees. They have increased the cultivation of hemp, roses, red pepper, autumnal crocus and of licorice, all of which have proved very profitable.

But by far the most important agricultural product, at present, is tobacco. This industry in the last few years has grown by leaps and bounds. From 42,000 stremmas in 1875 and 390,382 stremmas in 1920, the tobacco area has risen to 650,000 stremmas in 1926, with a production of 56,600 tons valued at \$40,000,000⁽¹⁾ for the same year. The best grades of tobacco are found in Western Thrace, Eastern Macedonia and Thessaly. Greek tobacco, because of its small nicotine content has a mild effect, which makes it excellent material for cigarettes. In the exporting trade of the country it has taken the place formerly held by the currants, but like the currants the tobacco is going through a crisis of overproduction and of low prices. The Government after having interfered long with this industry, has organized in 1929 the Greek Tobacco Institute for the promotion of the quality of the crop and the development of markets in the foreign countries.

Cotton is another important fibrous product in Greece. This product was grown principally in Peloponnesus and the

(1) Mears, Greece today, p. 75.

district of Attica, but it is now successfully planted in Macedonia by the refugees. The Government encourages the cultivation of cotton first, because it is suited to the climatic conditions of the country and second, because the oil cake which remains after the cotton seed oil is removed, makes a very good fodder for a country like Greece, poor in pastures and forage crops.

The production of silk is growing fast and with good returns for the producer. In 1928 the Government distributed over a million mulberry trees to be planted in Macedonia and has established a nursery for such trees in Old Greece. One tenth of this product is used as a raw material for the mills of Greece, while nine tenths of the product is exported to foreign countries.

Summarizing the agricultural situation in Greece we find that the country is going through a process of reorganization and experimentation. Waste lands are brought under cultivation and new crops are tried out. The production of cereals falls back as compared with the production of other crops, exported to foreign countries. Antiquated methods of farming are still in use and the Government is conducting an aggressive educational campaign, teaching the peasants how to produce larger and better crops. The refugees have given a new impetus to the agricultural industries of the country in which they have participated as tillers of the soil, and have introduced their experience and technique in many agricultural enterprises making them simpler and more remunerative.

CHAPTER IV.

ESSENTIAL BACKGROUND IN THE HISTORY OF GREEK EDUCATION.

In order to understand the existing educational system of Greece and formulate a better system for agricultural instruction we need cast a glance at the near past.

We may divide Greek education, for our convenience, in four periods. The first period extends from the sixth century, B.C. to the third century of the Christian era, when Constantinople became the center of the Roman World. It is sufficient to say here that during this period the ancient Greek spirit glorified in the liberal arts and formulated the beginning of our educational theory. Athens, was the proud center of culture and education where the first schools have originated.

The second period is that of the Byzantine supremacy and ends with the fall of Constantinople in 1453.⁽¹⁾ This period is characterized by a fusion of ancient Hellenic philosophy with Christian doctrine and although during this time the ancient schools of Athens and of other Greek cities declined or were suppressed by imperial decree, the Greek language and traditions survived and were flourishing in the brilliant capital of the Byzantine empire. It is true that Latin was the official language

(1) G. Karapanagiotou "Early Greek Education", Athens, 1908.

of the court and of other Byzantine institutions, but the language of the people - the living language - was Greek, and the culture which drew scholars from the Western Universities to Constantinople had its roots deeply imbedded in the Christian-Hellenic culture.

The third period is that of Turkish domination from 1455 to the war of independence (1821). The Turks, during this period, looked upon Byzantine education and culture with indifference and contempt, and in many cases they were openly hostile to it. The Christians during this period were not free men. There were no careers open to Greek scholars under any circumstances and many of them abandoned the brilliant city of Constantinople and fled to Western schools and universities to which they imparted their knowledge and wisdom. Conditions were miserable and people who had a little fortune hesitated to educate their children for fear of increasing their attractiveness.

Every four years a certain number of Christian boys were taken away from their parents to be trained as "janitcharies" - body guard of the Sultan. Girls were kept in the homes and deprived of education because of the danger of being taken in some harem.

Although this was the darkest period of Turkish slavery, education among the suppressed Greeks was not entirely extinct. The Greek Church became the bond of Union between all the Greeks in the Turkish empire and the symbol of their lost national life. ⁽¹⁾ The leaders and clergymen of this period

(1) Skleros, Social problems of Greece, p. 56.

realized that the only way by which they could preserve national life, language and religion was through their churches and schools. Their schools were under the supervision and direct control of the clergy. In these schools, the pupils were taught to read the church service and the elements of arithmetic and writing. The narthex of a church or the shop of a handicraftsman were the places where the pupils assembled for their school exercises. There were no special school buildings. They had no chairs but sat on mats laid on the floor; their books were in manuscript, since the art of printing was not invented yet. Schools were held generally daytime, but night schools were held in many places where the Turks were opposed to any kind of instruction or social gathering. Each pupil had one book at a time and his promotion to another book was greatly rejoiced by his family.

The last period of the Greek education is that which begins with the war of independence in 1821 up to the present time.

After the independence war (1821-1829) was over, plans for an organized system of education were discussed. As soon as a provisional Government was established under Kapodistrias, the movement for a national system of education became general and in 1828 twenty two primary schools were opened in towns in the Aegean islands. In 1829 Kapodistrias appointed a committee on elementary education entrusted with the duty of organizing and establishing a system of elementary schools. This committee gave the elementary (demotic) schools the character which they still retain.

Two classes of schools, the elementary or demotic and the Hellenic, formed the basis of the national system established after the war of independence. Both schools originated while Greece was under the Turkish slavery. The Hellenic schools were established by the ecclesiastical authorities, their main purpose being to preserve the knowledge of the rhetoric and the ancient language. Thus the foundation of the present system was laid before 1830 in which year the kingdom was organized under the protection of the three Powers, Great Britain, France and Russia. From time to time laws have been passed which taken together provide in detail for a system of public education.

The following is a historical summary of education
(1)
in free Greece from 1829-1900.

Elementary Education.

The majority of the elementary schools were maintained by the communes. In these schools the Lancasterian method of mutual instruction was used. The subjects of instruction were: the elements of the language, catechism, reading, writing, arithmetic, geography, drawing and elements in the physical sciences.

The subjects of instruction were modified from time to time but little, while the purpose to serve the people was not realized from the very beginning. The regular elementary schools were made up of four classes and there were one, two,

(1) (Ministry of Education) - Official Bulletin, 1915.

three or four roomsschools according to the number of pupils and teachers. The teachers of the elementary schools were of three grades, depending upon their experience and preparation. The grade of the teacher determined not only the type of school in which he might teach, but also the salary he was entitled to receive.

Middle Education.

The schools for Middle Education were the Hellenic schools - corresponding to the Latin Schools - and the Gymnasia. The former consisted of three classes and were more numerous; the latter consisted of four classes and were founded in the capitals of provinces and other large towns.

The function of the Hellenic Schools was to prepare students for the Gymnasia and to give them also a practical training. The subjects of instruction were: Religion, ancient Greek and Latin, Mathematics and Physics, French, History, Geography, drawing, Penmanship and gymnastics. This curriculum produced a great number of academically-trained men with little or no practical training for life.

The Gymnasium was a higher school with a combination of similar curriculum, as in the Hellenic schools. The Gymnasia were generally supported by the State and they were managed by their own faculty. They were classical schools but the physical sciences were included in their course of study. They lacked apparatus. In 1856 Priest's schools were established in Tripolis and Chalkis (Euboea).

There were a few technical schools as the Polytechnic, the Agricultural school, the Military and Naval schools, the last

two under the supervision of the Ministers of Army and Navy.

Higher Education - the University.

The University in the beginning consisted of four schools, for law, medicine, philosophy and theology. Later a school of Pharmacy was added in the University. The required number of years of study was three up to 1842 and since then four. The graduating students were given a written and oral examination at the end of the fourth year but they had no examination during the year. Attendance was not compulsory. The students paid a certain fee upon registration. Each school had and has a dean elected for one year by its professors, while the head of the University is called the Rector and was elected by all the regular professors. The academic year nominally began in the beginning of September and ended on the 15th of June. The professors taught from 3-7 hours a week. In 1895 there were 57 professors.

(1) This is the original text of the document, as it appears in the original source. It is a transcription of the original text, and is not a translation. The original text is in Russian, and is a historical document. The text is a transcription of the original text, and is not a translation. The original text is in Russian, and is a historical document.

CHAPTER V.

(1)
PRESENT EDUCATIONAL STATUS IN GREECE.1. Administration.

The head of the public educational system in Greece is the Minister of Education (and of Ecclesiastical Affairs) who is one of the nine members of the cabinet. His appointment is largely a matter of politics and his tenure of office is brief. The inspection and management of the elementary and secondary education is in the hands of the Minister of Public Instruction; he has authority to determine what subjects are to be taught in all the schools both public and private, and he fixes the time that must be devoted to each of these subjects in the course of study. He conducts all these affairs through the Education Board, the superintending Councils, the Superintendents, the Supervisors and the Principals of the schools.

The Minister appoints all teachers and has authority to appoint or discharge teachers in the Hellenic Schools and in the Gymnasia. He also appoints one chief inspector of elementary schools, four inspectors of intermediate schools and one inspector of elementary schools for each of the 38 prefectures.

(1) Facts and information regarding the present school system of Greece have been drawn almost entirely from the official bulletin of the Ministry of Education found in the Harvard Law Library and from Mr. Savvides "Modern Education in Greece".

Under the Minister comes the General Council of Public Instruction. It is composed of twelve Councillors and has its seat in the Ministry of Education. Some of its important duties are: (1) to express its opinion about any educational question at the request of the Minister; (2) to prepare bills, decrees, circulars and instructions. To sketch the curriculum and the programs as well as the material for the text-books; (3) to superintend duly the Normal Schools, the Superintendents and Supervisors of elementary and secondary education in general, etc.

At the head of each prefecture is a Nomarch who is appointed by the government. As one of his duties consists in supervising the funds of the "demoi" comprised in his prefecture, he is indirectly required to look after matters of education. In practice, the Nomarchs and the Demarchs confine their attention to the financial affairs of the schools and leave the supervision of the schools to a supervisory council. The various demoi are required to establish elementary (demotic) schools, but a provision in the constitution makes it possible for the government to contribute to elementary education in proportion to the necessities of the demoi. It happens, therefore, that some of the schools in the poorer demoi are entirely supported by the government, while other demoi support their own schools.

Note: "Prefecture" is a large administrative district headed by a Nomarch. Greece with the islands is divided into 33 prefectures. "Demoi" are local districts, a number of which make a prefecture. They are directed by a Demarch.

2. Supervision.

The General Council of Public Instruction is the highest supervisory unit of the school system in Greece. Every three years, the Board elects its President and Vice-President who are again eligible at the end of their term. The Council in its supervisory function divides itself into two halves, the one being the elementary school section and the other the secondary school section.

I. SUPERINTENDING COUNCILS AND SUPERVISORS OF ELEMENTARY SCHOOLS.

The public elementary schools, including the infant schools, are divided into 85 districts. Their respective centers, extent and assignment are regulated by a Ministerial decree at the recommendation of the Education Council. Each district has a superintending council composed of the director of the Gymnasium as chairman, the oldest judge in service, the supervisor of the elementary schools and two other members, one of whom must be a professional man, and the other a business man.

The Superintending Council expresses its opinion about founding, consolidating, dividing and abolishing Elementary Schools and Infant Schools; about the time of beginning and ending school-sessions in parts of the district where it is not advisable to apply the general regulations.

The direct supervision of the elementary schools is in charge of the District Supervisor. He visits at least twice a year, all the elementary and infant schools, public and private, of his district. He tours his district 120-160 days a year,

examines the condition of the school buildings and materials and sees that the educational regulations of the country are observed. He exercises on the elementary school teachers a disciplinary authority and submits at the end of each tour to the superintending Council a report about the condition of the schools and teachers.

II. GENERAL SUPERINTENDENTS.

These secondary schools are divided into 20 educational departments. For each department is appointed (a general superintendent of schools). Some of the duties of the General Superintendent are: (a) to have the general supervision of the education of the Department and the direct control of the Elementary School supervisors by inspecting their offices at least twice a year; (b) to have the direct supervision of the public and private secondary schools as well as the Normal Schools of the Department. They are expected to make inspection tours of their department 120-160 days and to visit each secondary institution at least twice a year and examine the condition of the school buildings and materials. They also submit reports to the Minister after each tour or in case of need directly after the inspection; (c) the General Superintendents call a meeting once a year for the Elementary School Supervisors of their department, the directors of the city, schools and the gymnasia of their department, in order to deliberate about improvements. The absence of a general superintendent is supplied by a Councillor appointed by a Minister at the suggestion of the Education Council.

III. GENERAL SUPERVISORS OF SPECIAL SUBJECTS.

There are also five general supervisors for special subjects: two for Mathematics, two for Physics and one for Gymnastics. They supervise the secondary school instruction of their specialty all over Greece and keep a detailed record of the efficiency of the teachers under them. They submit reports to the Ministry, the Education Board and extracts to the General Superintendents. The Supervisors of Elementary Schools and to the General Supervisors of special subjects may be allowed a half year's leave of absence for appropriate study, with full pay.

IV. SCHOOL PHYSICIANS.

Every education department has also a school physician. He gives his instructions to the supervisors and superintendents and cooperates with them to improve the health of the students. He submits regular reports, through the general superintendents, to the Ministry and Education Board. He has assistants, at least one for every educational district who also teach Hygiene in the Gymnasia.

3. Elementary Education.

The elementary schools have either four or six-year courses. If the school provides a four-year course it is called a common elementary school. If, on the other hand, it provides a six-year course it is a complete elementary school. Theoretically, coeducation of the sexes does not exist in Greece, but in the smaller towns and in the rural sections, where the school attendance is not over seventy-five, both sexes attend

the same school and are taught by one teacher. This arrangement is not permitted after the children are ten years of age.

Greek elementary education is compulsory and gratuitous. The teachers of the elementary schools are of three grades, depending upon their experience and preparation, as we have stated in the previous chapter. The grade of the teacher determines the type of the school in which he teaches, and the salary which he is entitled to receive. Teachers of the third or lowest grade are usually found in schools where the enrollment is from fifteen to forty. If the enrollment is more than fifty-five a first grade teacher is required. The minimum qualification for elementary teachers is a license from one of the teacher's training schools. The daily program of studies for the year's work is prepared in the beginning of each year by the teaching staff of each school and submitted to the approval of the supervisor. Wednesday and Saturday afternoons are usually left free, one of which is used for a walk or excursion, under the guidance of the teachers.

Each teacher, teaches as a rule from 28-31 hours a week, while the principal from 26-29.

The regular elementary school which has six grades meets at separate rooms under different teachers. The hours of instruction vary from 22-23 according to the grade; the subjects are: Religion, Greek, History, Geography, Natural History, Drawing, Penmanship, Handwork, Singing, and Gymnastics.

A graduate of a full elementary school of six grades enters the third Hellenic school without an examination.

The regular course of the six-grade elementary school is typical of all other kinds of elementary schools.

The program of studies of a six-class elementary school is given in the following table:

Subject	Number of Weeks					
	1st	2nd	3rd	4th	5th	6th
Reading	36	36	36	36	36	36
Writing	36	36	36	36	36	36
Arithmetic	36	36	36	36	36	36
History	36	36	36	36	36	36
Geography	36	36	36	36	36	36
Science	36	36	36	36	36	36
Physical Education	36	36	36	36	36	36
Music	36	36	36	36	36	36
Art	36	36	36	36	36	36
Foreign Languages	36	36	36	36	36	36
Health	36	36	36	36	36	36
Character Education	36	36	36	36	36	36
Other	36	36	36	36	36	36

This table is intended to show the general distribution of studies in a six-grade elementary school. The actual number of weeks for each subject may vary according to the local conditions and the needs of the school.

Table VII

Subjects taught in each grade of the elementary school and the hours per week devoted to instruction in each subject.

No.	Subject	Hours of Instruction per week					
		1st yr.	2d.yr.	3d.yr.	4thyr.	5th yr.	6th yr.
1	Religion	$\frac{2}{2}$	$\frac{2}{2}$	2	2	3	3
2.	Greek	8	9	9	9	9	9
3.	History			1	2	2	2
4.	Geography	3	3	2	2	2	2
	National History			3	3	2	2
5.	Physics & Chemistry					2	2
	Arithmetic						
6.	Geometry	3	3	3	3	3	3
						1	1
7.	Drawing	$\frac{3}{2}$	$\frac{3}{2}$	2	2		
8.	Penmanship		2	2	2		
9.	Handwork	$\frac{3}{2}$	$\frac{3}{2}$	2	2	2	2
10.	Singing	$\frac{4}{2}$	$\frac{4}{2}$	$\frac{4}{2}$	$\frac{4}{2}$	$\frac{4}{2}$	$\frac{4}{2}$
11.	Gymnastics	$\frac{4}{2}$	$\frac{4}{2}$	$\frac{4}{2}$	$\frac{4}{2}$	$\frac{4}{2}$	$\frac{4}{2}$
	games (in the excursion).						
	Total	22	25	30	31	32	33

Note: The number of hours has been copied from the original and verified. The sums, however, do not come out right. There is either an error in the printed matter, or explanations are missing.

4. Intermediate Education.

From the elementary schools the boys may pass to the Hellenic Schools. Those who come from the common schools enter the first year of the three year course; but those who have taken the six-year course from the complete elementary school enter either the second or third year of the Hellenic School. It was recently advocated by the Education Council that the last year of the course in these schools should be added to the course of the Gymnasia. This would abolish the Hellenic Schools, as the first two years of their course is now given in the complete elementary schools. There usually are at least as many teachers as there are classes in the Hellenic School. Teachers in the Hellenic Schools must have a diploma. The director of a Hellenic School is called a Scholarch. These teachers are appointed by the Minister of Education and they have no fixed tenure.

The program of studies of the Hellenic School is given in Table VIII.

Table VIII.

Subjects taught in each class of the Hellenic School, and the hours per week devoted for instruction in each subject.

No.	Subject	Hours of instruction per week.		
		1st class	2nd class	3rd class.
1.	Religion	2	2	2
2.	Greek	12	11	11
3.	Mathematics	3	3	4
4.	Physics & Hygiene	2	2	3
5.	History	3	3	3
6.	Geography	3	2	2
7.	French		3	3
8.	Drawing	2	2	2
9.	Penmanship	1	1	1
10.	Gymnastics	3	3	3
11.	Singing	2	2	1
	Total	33	34	35

5. Secondary Education.

The Gymnasium is the representative type of secondary education in Greece. The first Gymnasium was founded in Aegina, after the war of independence in 1829. The German models showed their influence plainly in the secondary education of the new kingdom. Since that time the number gradually increased, and at present there is a gymnasium in every town of sufficient size to justify the expense. In the larger cities, Athens, Salonica, Patras, etc. there are more than one, according to the population. Each gymnasium is managed by its own faculty. At the head of the faculty is the Gymnasiarch, who is both a teacher and a general director. We have mentioned already that he serves as one of the members of the Supervising Council for the province. The program of studies is regulated by an official plan which is modified to suit the individual schools. In the gymnasium the hours of instruction are 35 to all grades and the subjects are: Religion, Greek, Mathematics and Cosmography, Physics and Hygiene, Philosophy, History, Latin, French, Gymnastics and singing. Of the 140 weekly hours of instruction to all the grades, 73 are devoted to the classic languages and French (the latter having only twelve). To enter the gymnasium the students must pass a special examination.

The gymnasia are generally supported by the State; but in places where the population is not large enough to justify the expenditure by the Government, the people of the community sometimes support one for themselves, paying the expenses from the income of a special municipal tax. Pupils are required to

pay small entrance and certificate fees. The gymnasia are classical schools, but the physical sciences are included in the curriculum of the school. The physical sciences, however, have been slightly regarded until recently, since the great importance of classic education in Greece overshadows the special need which the physical sciences have for modern education.

At the graduation exercises the Gymnasiarch reads a report of the year's work and the condition of the school, so that the public may be informed. In the relative value of subjects, Greek, Latin, Mathematics and gymnastics count the most. No boy can get a gymnasium leaving-certificate without at least having studied in a State gymnasium. A repeater is expelled, in case he fails at the end of the second year.

Table IX gives the program of studies of the Gymnasium.

Table IX.

Subjects taught in each class of the Gymnasium, and the hours per week devoted to instruction in each subject.

No.	Subject	Hours of instruction per week.			
		1st class.	2nd class.	3rd class.	4th class
1.	Religion	2	2	2	1
2.	Mathematics & Cosmography	4	4	4	5
3.	Greek,	12	12	10	10
4.	Physics & Hygiene	3	3	4	4
5.	Philosophy			2	2
6.	History	3	3	3	3
7.	Latin	4	4	3	3
8.	French	3	3	3	3
9.	Gymnastics	3	3	3	3
10.	Singing	1	1	1	1
Total		35	35	35	35

5a. Secondary Education - Commercial Schools.

The first two State Commercial Schools were founded in 1903 in Athens and Patras. The full course lasts four years and is prescribed for all uniformly, with the exception of Italian and Shorthad, as optionals. The hours of recitation vary from 34-41 and the subjects of instruction are: religion, Greek, mathematics, physical sciences, commercial articles, French, English, German, general history, history of commerce, geography, theory of commerce, accounting, correspondence, political economy, commercial law, penmanship, gyanastics.

The entrance requirements are a graduating (?) certificate of a Hellenic School or its equivalent and a special examination. The regular professors have the rank and salaries of their gymnasium colleagues and the usual requirements are a university diploma in addition to technical studies gained from education abroad for many of the subjects.

Commercial schools belong to the grade of secondary schools and prepare for the commercial career, with an appropriate theoretical and practical course of four years. Each commercial school is provided with a Library, a physical and chemical laboratory and a commercial museum.

Table X gives the program of studies of the commercial schools.

Table X

Subjects taught in each class of the commercial schools and the hours per week devoted to instruction in each subject.

No.	Subjects	Hours of instruction per week				Total
		A Gr.	B Gr.	C Gr.	D Grade	
1.	Religion	1	1			2
2.	Greek	4	4	3		11
3.	Mathematics	5	5	4	4	18
4.	Physical sciences	2	2	2		6
5.	Commercial articles			2	2	4
6.	French	5	5	4	4	18
7.	English	4	4	5	5	18
8.	German	4	4	5	5	18
9.	General History	2	2	2		6
10.	History of Commerce				2	2
11.	Geography	2	2	2	1	7
12.	Theory of Commerce & Bookkeeping	2	2	2	3	9
13.	Correspondence & exercises		2	2	5	9
14.	Political economy				2	2
15.	Commercial Law				3	3
16.	Penmanship	2	2			4
17.	Shorthand			2	1	3
18.	Gymnastics	3	3	3	3	12
	Total	36	38	38	40	

5b. Secondary Education - Agricultural Schools.

The interest in agricultural education has been developed for the last two or three years by leaders in the field of various agricultural industries.

There is at present a secondary school of agriculture at Larissa which has an enrollment of about 120 students; a smaller agricultural school is found in Salonica, called the American Farm School founded in 1904, which gives boys practical agricultural training at its model farm of about one hundred and fifty acres. In 1928 there were about eighty five boys of high school age attending the full course of the school which lasts five years. Four other agricultural schools founded in Patras, Crete, Janina and Corinth respectively, endeavor to give to the students a practical farming occupation. (1)

In 1922 it was organized in Athens the first agricultural college, mostly for students desiring to continue higher studies in the various agricultural fields. The college offers theoretical and practical training in many agricultural branches. There are also two forestry schools in which students are trained for three years in the various fields of forest industry. The above enumerated schools are the only institutions in the country affording agricultural education.

(1) Tsanderos "Le revelement economique de la Grèce", pp. 151

6. Higher Education.

I. THE UNIVERSITY.

The Greek educational system culminates in the National University at Athens. In 1837, Otto, the first king of Greece, issued a decree for the establishment of a university. According to the custom of the Germans, he named the university after himself, but in 1862 the name changed to National University. According to the decree of 1837 there were to be four faculties: theology, law, medicine and philosophy. The university, since 1911, to meet the requirements of a legacy, has been divided into two: the National University, with two schools for medicine and for Physico-Mathematics; and the Capodistrian University with three schools for theology, law and philosophy.

The rector is the executive head of the university and its representative at all functions. Each faculty chooses one of its members who is made dean of that faculty for the following year by the Minister of Education. The financial administration of the University rests with the University Senate, a body composed of the rector of the university, the dean, and one other representative from each of the faculties, except the faculties of philosophy and physical and mathematical sciences.

University education in Greece has been open to women for more than thirty five years. Women attend especially the school of philosophy.

The students are obliged to attend their lectures and at the end of each academic year they get certificates of attendance in order to take their examinations. Every student

is required to attend the regular seminars of his department. The purpose of the seminars is to facilitate and prepare the students, under the supervision of the professor, in independent scientific thinking. The professor, at the end of the course, makes to the Dean and the Rector a detailed report of the work done and submits it along with the names of the students that distinguished themselves.

All the schools give compulsory yearly examinations and finals for the doctorates. They are oral examinations unless a school decides to give also written or laboratory tests.

If a student fails in a condition, he is obliged to repeat all the courses of the year.

It is clear that the professors of theology, law, and philosophy depend almost exclusively, on the lecture method and the students in their turn, depend for their degrees, with the exception of doctorate thesis, on the oral, the yearly and final examinations.

II. HIGHER TECHNICAL SCHOOLS.

Higher technical education in Greece is given by the "Polytechnic" founded in 1863. It is made up of two schools, the school of Industrial Arts and that of Fine Arts. The former is under the Ministry of Interior and the latter under the Ministry of Public Instruction; they were separated in 1910.

The school of Fine Arts gives theoretical and practical training to artists and is subdivided into the school of Graphic Arts and into that of Plastic Arts.

The school of Industrial Arts has at present, only the school of Mechanical and Civil Engineers. The course lasts four years. It provides also a school for surveyors, foremen and practical mechanics, a course which lasts two years and a half. The school of Industrial Arts gives technical education for public service and the industrial activities. The teaching staff consists of professors and assistants who are supplemented in many technical courses by specialists who have obtained their diplomas in Paris or Germany.

The courses given are: higher and lower mathematics, experimental physics and chemistry, descriptive geometry, harbor and hydraulic works, engineering, mechanics, machine construction, bridge, road and railway construction, topography, architecture, electricity, ship-building, chemistry applied to arts, mineralogy, geology, forestry, administrative law, political economy, accounting and metallurgy.

The schools of engineers, architects and mechanics admit graduates of gymnasia.

In addition to the above Public Technological Institute there are in Athens and Piræus the following private institutions:

The Athens Industrial and Commercial Academy, giving a full higher technical education. This institution gives diplomas after two years' training. There are also two Evening Schools of Mechanical Engineers. The technical instruction lasts four years and the requirements are: ability to read, write and use practical arithmetic. There is a special school to teach these elementary subjects. The State exercises no control over these schools.

CHAPTER VI.

A CRITIQUE OF STATE ELEMENTARY AND SECONDARY
EDUCATION.

(1)

1. Statistics of Public Instruction.

The statistics on public education which are given in this chapter are for the school year 1928-1929 and have been taken from the annual report of the director of the Bureau of Statistics on Education to the Minister of Education and Religion.

According to these statistics, there were 323 kindergarten elementary schools in the country with 375 teachers and 12,513 pupils. There were 7619 primary schools, including both the four-grade and six-grade schools, with 13,747 teachers and a school population of 632,933 pupils. The report does not discuss the condition of the school building for the year 1928; older statistics of the Ministry of Education show that in 1914 there were only 3,879 primary schools, of which 404 were buildings of the new type and 939 were not, but paid no rent; 2,178 were rented private houses.

The Hellenic schools throughout the country had a student population of 58,000 of which 45,027 were males and 12,073 females. There were about 310 Hellenic schools, with 50 per cent of the school buildings belonging to the state, towns or communes and the remaining 50 per cent to churches and private individuals.

(1) Bulletin of the Greek Ministry of Education, 1929.

TABLE XI

School population and the number of Teachers in the Public Schools of Greece for the year 1928-1929. (1)

Types of Schools	Number of Schools	Number of Pupils	Number of Teachers
Kindergarten	323	12,513	375
Primary Schools	7,619	632,933	13,747
Hellenic Schools (2)	310	58,000	-
Gymnasia	287	28,215	2,733 (3)
Commercial Schools (4)	28	3,013	269
Universities	2	9,864	75

- (1) This table does not include private schools. There are not also complete statistics on girl's schools.
- (2) Hellenic Schools are intermediate schools; see discussion on pages 38 and 48.
- (3) This figure includes also the number of teachers in the Hellenic schools.
- (4) There is one university in Athens divided in the National and Capodistrian Schools, and the other University has just been established in Salonica.

In 1928, there were 287 high schools with an enrollment of 23,215 pupils, of which 22,538 males and 5,677 females.

There were 28 commercial schools with 269 teachers and 3,013 students of which 2,384 boys and 679 girls. The Commercial College at Athens numbers at present 20 teachers and 388 pupils.

As we have explained in the previous chapter on the school system of Greece, as schools of the secondary education in the country are classified the high schools (gymnasia), Hellenic schools and the commercial schools. During the school year of 1928-1929 there were enrolled in the schools of the secondary education 90,179 students.

The number of teachers in the primary and secondary schools for the year 1928, was as follows: For the infant⁽¹⁾ schools 575 teachers; primary schools 13,747 teachers of all grades; and for all schools of secondary education 2,733 teachers, out of which 1,217 were teaching philosophy, 299 were teaching mathematics, 315 physics, 350 theology, 155 French, 233 were teaching theoretical courses, 49 music and 115 teaching penmanship and handwork.

At the end of the same school year, the National and Capodistrian Universities numbered 61 professors and 9,799 students, while the newly established University at Salonica had 14 professors and an enrollment of 65 students. The Polytechnic had 22 professors and 170 students.

The tabulated results of the school year of 1927-1928 show many interesting data worth of our consideration,

(1) kindergarten schools

TABLE XII

Enrollment and Promotion of Pupils in the Elementary Schools of Greece for the years 1927-1928 and 1928-1929.

In 1927-28 there were promoted from the fifth grade of the primary schools 41,462 pupils. From these pupils:

In 1928-29 were enrolled in the sixth grade	.....	31,708	or	76%
" " " " " in the 2nd class Hellenic Schl.		2,334	or	5%
" " " " Mortality of pupils		7,420	or	19%
		Total		41,462 - 100%

In 1927-28 promoted to sixth grade 43,554 pupils. From these:

In 1928-29 were enrolled in Hellenic Schools	.....	1,439	or	6%
Pupils who discontinued their studies	.....	42,115	or	94%
		Total		43,554 - 100%

TABLE XIII

Enrollment and Promotion of Pupils in the Secondary Schools of Greece during the school year 1927-1928

Year	Sex	Enrolled	Promoted	percent of promoted
1927-1928	Males	75,529	41,057	54%
"	Females	21,487	12,962	60%
"	Total	97,016	54,019	55%

dealing with the enrollment and promotion of the pupils in the grades as well as in the institutions of secondary education. A study of the figures on secondary education reveals that of 75,529 enrolled males were promoted 41,057, that is, only 54 per cent of all pupils. Of the 21,487 enrolled 12,962 girls were promoted, or 60 per cent of them. Of the total school population of 97,016 enrolled in secondary schools, only 54,019 were promoted. In other words, 55 per cent of the pupils were promoted while 45 per cent were failed. If we subtract from this figure the 10 per cent of the pupils who were withdrawn or were subject to reexamination in the following year, we have 35 per cent of the school population failed. It should be noted also that many of the pupils who were promoted were poorly trained as ~~it~~ was later made known from the protest of the Universities of Athens and the Polytechnic Schools.

The following statistics on the enrollment and withdrawal of pupils from the elementary schools of the country, during the year 1927-1928 show many interesting facts with regard to school curriculum and the existing illiteracy in Greece. In 1927-1928 there were promoted from the fifth grade of the elementary schools 41,462 pupils. Out of this number, there were enrolled at the following school year 1928-1929 in the sixth grade of the elementary school (last grade of the school) 31,708 pupils or 76 per cent, and in second class of the Hellenic school 2,334 pupils or 5 per cent of them. Consequently, there were 7420 pupils or 19% who dropped out of school. In 1927-1928 there were promoted or graduated from the sixth grade of the elementary schools 43,554 pupils. Of these, only 1,439

pupils of 6 per cent were enrolled in the second or third class of the Hellenic Schools, while the rest, 22,115 pupils, in other words, the 94 per cent of the graduating classes of the elementary schools have not continued their studies. Of the 76,289 pupils promoted in 1927-28 from the fourth grade of the elementary schools, there were 17,113 pupils or 22% per cent who enrolled the following year in the first class of the Hellenic Schools, and 54,145 pupils or 70 per cent who enrolled in the fifth grade of the elementary schools; consequently, 5,031 pupils or 8 per cent of the class ^{of the} fourth grade dropped out of school.

From the above statistics we may conclude that a large percentage of the pupils of the elementary schools drop out each year. This fact becomes more evident when we take in consideration that in the first year of the elementary schools there are enrolled about 193,833 pupils. Of these, only 31,700 reach the sixth grade or the first class of the Hellenic Schools. In the meantime, the rest interrupt or discontinue their studies.

An interesting study of the population above ten years of age according to profession and age was made by the Bureau of Statistics in the census of population of Greece in 1920. ⁽¹⁾ According to this study, out of 285,333 which was the total population of Greece between the ages 10-19 termed as potential school population, 129,433 boys were working in agricultural enterprises, 47,921 were working in live stock business, ⁽²⁾ 15,319 were working in mines and other mining industries, 37,008 were working in industries of products of agriculture, 19,000 in

(1) See table in Appendix 4.

(2) live stock classified as separate agricultural industry.

commerce and 36,213 boys were associated with liberal professions. It is interesting to note here the large number of boys between 10-19 years of age who were working on farms as contrasted with other industries.

The census of the population of 1920 has made an extensive inquiry in order to determine the state of illiteracy existing in Greece. The educational status of the population of Greece above 6 years of age was as follows: of the total population of 4,237,747, there were 2,004,565 literate (who knew how to write and read) and 2,233,182 illiterate, or to put it in percentages, 47.30 per cent literate and 52.70 per cent illiterate. ⁽²⁾

Of the total 2,105,275 males, 1,348,302 were literate and 756,973 illiterate, or 64.04 per cent literate and 35.96 per cent illiterate. Of the total 2,132,472 females, 656,263 or 30.77 per cent were literate, while 1,476,209 females or 69.23 per cent were illiterate.

The classification of the population according to groups of ages and marital condition as to their educational status is given in a separate table which may be found in Appendix 4. In the same Appendix will be found a cartogram which shows the population of the literate on 100 inhabitants above 6 years of age. It is interesting to notice that illiteracy varies from territory to territory and that the same variation may be found between urban centers and country districts as well as between trading regions and isolated rural districts.

Central Greece and Evvoia lead Greece by numbering 55-65 literate on 100 inhabitants above six years of age.

Second comes Peloponnesus with 50-55, next Thessaly and Arta with 45-50, then Macedonia and Epirus with 35-45 and last Western Thrace with 25-36 literate in 100 inhabitants above 6 years of age. The variation in the proportion of literate among the different territories of Greece is explained by the fact that most of them were for many years under Turkish subjection and with their gradual liberation and annexation to Greece, the state of illiteracy has been correspondingly decreasing.

2. Criticism of the Present Educational System in Greece.

The present system of Greek education with its antiquated provisions is behind the times. At the present stage of our civilization, an educational system in order to be up to date, must prepare for life. The most serious drawback of the schools in Greece at present is a defective curriculum which requires almost all school population of the country to take one prescribed uniform academic course with no electives. In the *gymnasia* more than half the curriculum is given over to linguistic instruction, Greek, Latin and French. Technical education is still in a primitive stage, and such courses are not represented in the curriculum of the elementary and secondary schools of the country. Agricultural education and training are entirely neglected in the schools of Greece. According to official statistics, the yearly average number of students attending the seven agricultural schools of the country is estimated to be 450.

In the meantime, 65 per cent of the population is employed in agricultural occupations with no provision made for suitable instruction in the elementary schools of the country districts. As in all nations, the agricultural population

contributes a very healthy, moral and stable element to the country. There is no reason then why agriculture, one of the great sources of prosperity in a country should be so ~~disadvantageously~~ neglected by the institutions of education in Greece.

The inadequacy of the existing educational system in Greece to meet the higher needs of its population may be shown more clearly by the following professional or occupational stratification of the Greek society and its corresponding institutions of learning. For the general occupations of agriculture with which 60-65 per cent of the population is associated are provided six small agricultural schools and one agricultural college; for the professions of commerce with 9.5 per cent of the population, exist 42 commercial schools; for the industrial and vocational occupations with 22 per cent of the population, there are only two private vocational schools; for the liberal professions and arts and the public administration with 8.5 per cent of the population, all elementary and secondary schools operate as well as the higher schools including the universities.

What are the results of such an educational system? Starting from the elementary schools, we witness first of all the inadequate curriculum with which these schools are provided. The statistics of the Ministry of Education, show that of 193,000 pupils enrolled in the first grade of the elementary school only 31,700 reach the sixth grade. ⁽¹⁾ Many reasons compel the students to drop out of school, especially in the rural districts of the

(1) The report of the Ministry of Education does not make it clear whether these are average figures or figures for the year 1927-1928.

country. First, poor economic conditions coupled with poverty, which occasion a miserable situation. When the boys are hungry, dirty, barefooted, without books and without paper, they have no desire to attend the school, and in this class belong 50 per cent of the pupils. Second, many boys who have not even reached maturity are compelled to work in order to help their parents support the family. Third, and most important, reason is the inadequacy of the school curriculum in the country districts. Why go to school when, it cannot prepare the pupils to meet successfully the needs of their life? What really happens today with boys in the villages is simply a strange and unfortunate thing. The boys follow the occupations of their parents guided by blind and dark tradition, because the school is not in a position to open for them new roads of activity and instruct them new methods and new technique in their work.

The fact that 94 per cent of the graduating classes of the elementary schools discontinue their studies in order to work on the farms or other jobs, shows the importance which should be attached to the elementary schools of the country. The last two grades of the elementary school must be provided with elementary vocational courses which, will help, the pupils improve their work.

When we analyse the school system of the secondary education in Greece we discover the same peculiar situation. Official statistical figures on secondary education show that of the total school population of 97,016 enrolled in 1927-1928 only 54,019 were promoted, and that many of the Promoted Pupils were badly trained. Who is to blame for this situation? A

careful examination of all factors surrounding the instruction in secondary schools, relieves both teachers and pupils of any responsibility of failure in educational attainments. The reasons which explain the inadequate preparation which is given in the secondary schools, are deeper and are due mostly to the lack of a close contact between the administrators of the system of secondary education and the modern tendencies and ideals of our society. Even with an imperfect school functioning or a poor school administration, a failing of almost 50 per cent of pupils would not be explained on superficial grounds. The rejection of such a large number of students from schools throughout the country shows that the pupils are unable to digest the instruction which is given to them by the institutions of secondary education, that the curriculum does not provide courses to meet their future needs and that they are asking for something else which will conform to the state of their psychology and their mentality, as it has been moulded by their living conditions and the present stage of our civilization. In other words, this means a failure for the secondary education, and this failure should be taken under serious consideration in the formation of a new curriculum for these important institutions of the Hellenic School system.

Thousands of graduates from gymnasia, who are unable to attend the Universities are in a miserable situation. Having attained in the gymnasia an over-academic instruction, they are incapable of doing any kind of work, and look for parasitic jobs from which they can earn a living-salary.

Another disadvantage which may be attributed to the existing school system is the fact that the muscular and constructive activities of the pupils have been ignored ^{and} the national

aversion to manual labor has been strengthened and encouraged by the curriculum of the public schools throughout the country.

Illiteracy has been an old enemy of the country for many years. According to the census of 1920 the national illiteracy for that year was 50.83 per cent, among men 34.67 per cent and among women 66.01 per cent. These figures show a great improvement over 1883 when the estimates of illiteracy were for Attica 55.60 and for Peloponnesus 90.45 per cent. The newly acquired territories Macedonia and Thrace have a larger number of illiterates and with the influx of the refugees, many of whom do not know the Greek language, the situation becomes more complicated. The Refugee Settlement Commission has established in Northern Greece over 200 kindergartens designed to teach the Greek language to the refugee children, whose language is not Greek.

In concluding our critical review of the present system of education in Greece, we reiterate our statement that the elementary and secondary schools of the country with their antiquated provisions are behind the times. Greece has suffered and is still suffering from over-classicism. When the educational system of the country does not provide for agricultural, industrial and other vocational training in the present stage of our civilization, such educational endeavor is not ^{only} one-sided but a poor and inefficient.

The statistics show clearly that only 8.5 per cent of the money earning population is engaged in liberal professions

and it stands to reason that a large number of these men and women would be better served by a less classical and more varied and up-to-date curriculum.

4. *Secondary Education's Curriculum and its Scope*

There are many reasons why the curriculum of secondary education should be broadened and diversified. In a country where the population is increasing rapidly, it is essential that the educational system should be able to provide for the needs of all. The curriculum should be such as to give the students a wide range of knowledge and skills, and to prepare them for the various occupations and professions of the future.

The curriculum should also be such as to give the students a good knowledge of their own country and its history, and to instill in them a sense of national pride and loyalty. It should also be such as to give them a good knowledge of the world and its various peoples and nations, and to instill in them a sense of international understanding and goodwill.

It is also essential that the curriculum should be such as to give the students a good knowledge of the principles and practice of democracy, and to instill in them a sense of civic responsibility and participation. It should also be such as to give them a good knowledge of the principles and practice of peace, and to instill in them a sense of international understanding and goodwill. The curriculum should also be such as to give the students a good knowledge of the principles and practice of science, and to instill in them a sense of curiosity and inquiry. It should also be such as to give them a good knowledge of the principles and practice of art, and to instill in them a sense of aesthetic appreciation and creativity.

In conclusion, it is clear that the curriculum of secondary education should be broadened and diversified, and should be such as to give the students a good knowledge of a wide range of subjects and skills, and to instill in them a sense of national pride and loyalty, international understanding and goodwill, civic responsibility and participation, and a sense of curiosity and inquiry. It should also be such as to give them a good knowledge of the principles and practice of peace, and to instill in them a sense of international understanding and goodwill.

P A R T I I

C H A P T E R V I I .

THE NEED OF A NEW RURAL SCHOOL SYSTEM.

1. Inadequate agricultural instruction in the Schools.

Greece will achieve progress in agriculture only when she will turn her attention to a proper education of her peasantry, thus relieving almost half of its population employed in agriculture from a state of ignorance which has been detrimental to their social as well as economic mode of living.

Many causes contributed to the backward state of agriculture in Greece, chief among them are the following:

First, the Greek peasant has been isolated in his village for many years. He was never given the opportunity to keep pace with the development which took place in the urban centers. Away from the city, away from people, he centered his life within a close environment between his farm and his home. His children lived in the same environment, worked with him on the farm, and as it was traditional they inherited from him his limited agricultural knowledge and his old technique in doing the jobs around the farm.

A second cause, is the poor communication which existed in Greece up to the present time and which has been a great factor for the backwardness of the present state of agriculture. Good communication leads the farmer to a new environment, his products are sold at a greater advantage and with a larger profit; the middleman, a constant drain on the farmer's profits, is more or

less eliminated, and the peasant can see new avenues of endeavor and effort to better his economic existence.

The third and most important cause of the present state of ignorance of the Greek peasant is his defective education. The curriculum of the elementary and secondary schools in Greece has been and is up to the present time defective, imperfect and in all respects inadequate for the rural sections of the country. The curriculum of these schools is exactly the same for both the urban and rural sections of the country. For many generations the pupils of the country schools were given a course of study unadjustable to their environment, to their needs, to their future life. Education has been defined as a preparation for life. In the case of the school system of Greece, education has worked different results. It has misdirected the pupil's efforts and it has retarded agricultural progress.

An academic elementary education is of no use to farm boys who live in the villages and work on the farms.

For many years, the farmers have been deprived of any agricultural knowledge leading towards an improvement in their vocation and in the cultivation of their lands. Traditional methods of farming technique were handed down from generation to generation. The schools were unable to help the situation. Not one course in agriculture was provided in the school curriculum. In this way, education was unable to fit the peasant to meet the social and economic demands of the society of which he was a member. The same situation exists even today, in spite of the present stage of progress and enlightenment in which we live.

The books which are used in the elementary schools of the rural parts of Greece are no different from the ones now used in the city schools. Some of these books are entirely unfit for pupils expecting to live on the farms. On the other side, boys have been and are still encouraged to memorize what is in a text-book and to make the contents of the text-book the sole aim of the course, treating all topics with equal importance whether they have any relation to their vocation or not. In a few words, the existing school system in the country is unable to offer to its pupils the needed kind of education. The school instruction does not meet a real vocational need; it is not purposeful; it is not connected with life's activities; and it has no definite objectives.

Greece, again suffers from a dearth of agricultural teachers. The majority of the teachers who are employed in the elementary schools of the country districts of Greece, are devoid of any agricultural training and farming experience. The qualifications for employment in the teaching service are similar for both country and city schools. Often times, a teacher from a city elementary school is transferred to a country school and vice-versa. The curriculum of the Normal Schools, where the teachers are trained, does not include any courses in agriculture, consequently teachers appointed in country schools do not contribute anything to the development of agriculture. Even teachers trained in pure sciences cannot satisfy the demands of modern scientific agricultural education. Usually they lack a proper viewpoint in their work and do not understand the applications of scientific agriculture to farm problems.

On account of the meagre salaries given to teachers of the schools of the country districts, many positions are open during the year and in many cases one instructor is obliged to do the work of two. Teachers of the "lowest grade"⁽¹⁾ are usually appointed to such positions.

The most important factor in education is the teacher. If agricultural instruction is to be effective, if Greece feels the need of a strong and intelligent body of young peasants, she must have efficient agricultural teachers. They can only be competent, when they are prepared for their work. They must be technically trained agriculturists, liberally educated men, practical farmers and professionally trained teachers. Agriculture under the inspiration of a teacher who has imagination and willingness for work, can be made a cultural subject to fit the needs of those students who do not expect to pursue a higher education. Greece needs efficient teachers, who can be leaders in the country and councillors in the various projects undertaken by the community.

2. The Need for Vocational Agricultural Education.

From the foregoing pages of this chapter, we have given the impression that the present status of elementary and secondary education does not meet the needs of the Grecian rural population. We need no further proof to show that something is wrong with the Greek agriculture. When wheat and corn crops do not give any substantial returns to the farmer; when insects destroy the crops

(1) Poorly equipped teachers

to the extent of millions annually; when the live stock production decreases every year; when roads are impassable in prosperous country districts for several months each year; and when a great number of young folks drift to the cities every year - there must be inefficiency somewhere. To my mind, the fault can be attributed upon the failure of the government to realize the important and significant value of vocational agricultural education, when organized in the elementary and secondary schools, of the country districts. The curriculum of the schools, as it exists today, provides only for classical and liberal education. ⁽¹⁾ It fails to give to the students an education which fits them for a vocation so necessary for the farming sections. It will be our purpose and our endeavor from this part in this treatise from now on to formulate a concise and constructive plan for an agricultural educational system in the elementary and secondary rural schools of Greece.

We believe that the young peasant in his village is entitled to receive an education which will enable him to meet the demands of the group in which he lives. This education should be vocational, the purpose of which would be to prepare one to pursue effectively a specific and useful occupation, or to improve the efficiency of his present occupation.

The Greek Government must adopt a system of vocational agricultural education, which will teach the young farmer how to make the soil yield an abundance and at the same time leave

(1) Lekas, Bulletin of the Ministry of Education, Greece, 1928.

it in good condition; an education that will break away from the old methods and traditional practices in farming; an education that will develop the skill of thousands of school children and prepare them to enter the various channels of agricultural industries; finally, an education that will make the farm attractive.

Greece's national prosperity and welfare depends fundamentally on the farmer. Rural life must be made as attractive and pleasant to the village boy as the life of the city. The hope of the rise of a new agriculture is to be found in the village schools of today. These schools should become the new institutions of learning and practical training for the young generation. Existing schools in villages should be recognized to introduce a vocational course of study in agriculture. New types of vocational schools should be established in the various sections of the country. The new tendency in agricultural education proposes to establish the agricultural school at the very threshold of the farm, where it will be available for the country boy.

The instruction in the rural schools must be different from what it has been up to the present time. Here schooling cannot alone make an efficient farmer. The old system of instruction placed too much stress upon recitation of lessons learned from a text-book and the same system is in operation at the present time in the schools of Greece. The new method of teaching agriculture must be different; a recitation from a text-book will not train a farm boy to do intelligently the

many jobs a farmer must perform. Continuous class-room discussion, will not make a student efficient in his vocation. The plan of including practical experience as a part of the school course, should be inaugurated in the rural schools of tomorrow.

According to Dean Alfred Vivian of the Ohio State College of Agriculture:

"The best system of education is one in which knowledge is acquired by doing and not merely by hearing. The pupil learns about things by working with them instead of by reading about them or hearing them described. The best knowledge is that gained first hand by observation.... Recitation destroys any originality, curiosity or spontaneity that the pupil may possess, and the child who is naturally an investigator to begin with becomes in the end a mere passive recipient of prescribed orthodox information".

The vocational instruction in these schools should be based on the farm enterprises of the community. In this way, the lessons will become interesting to the pupils because they will be connected with their life's activities, and they will meet a real vocational need. The instructor must become acquainted with the problems of the community, to be able to cooperate with the students' needs. He must analyze the jobs of an enterprise and make teaching layouts of jobs.

Concluding we may say that the teaching of vocational agriculture in the rural schools of Greece should be directed toward the three following rural problems:

a. An improvement in the farm methods and practices.

How the Greek peasant can improve the soil and get better returns from it. How he can secure better breeds of plants and animals. How he can fight successfully plant and animal diseases and pests. These questions are of paramount importance to the welfare of the people who live in the country.

b. A system of marketing the farm products.

Ways and means of how the peasant can obtain money to carry on his business, improve and develop the enterprises of the farm. How the peasant can sell his products without the need for the middleman. How he can be induced to join cooperative societies for his own advantage. This is a group of economic questions which affects the life of the peasant both at home and in his work and is inseparably connected with the problems cited above.

c. An attractive home and community life.

The improvement of facilities in the home, improvements in the rural schools, a reorganized community center, attainment of adequate social and recreational facilities and similar questions are closely connected with an efficient management of the farm.

The three groups of problems stated above show a close relation to the teaching of vocational agriculture in the rural schools of Greece. The schools adopting the new vocational system will help to solve the problems we have discussed. Agriculture combines industry, business and life, and in this aspect the new

instruction will give the farm boys a course of study which will prepare them to participate intelligently in the practice of their vocation.

The following is a list of the subjects which should be included in the course of study for farm boys. The subjects are arranged in the order in which they should be studied. The subjects are: English, Arithmetic, Algebra, Geometry, History, Geography, Science, and Agriculture. The course of study should be such as to give the farm boy a broad and liberal education, and to prepare him for the practice of his vocation. The subjects should be taught in a practical and interesting manner, and should be such as to give the farm boy a thorough knowledge of the principles of his vocation. The course of study should be such as to give the farm boy a thorough knowledge of the principles of his vocation.

CHAPTER VIII.

CHANGE IN GENERAL CURRICULUM FOR RURAL SCHOOLS.

1. The new Curriculum and its objectives.

The curriculum of the schools of the country districts in Greece needs a thoroughgoing readjustment in order to make it fit into the life of farming people and to qualify it to perform the services for those people that it should perform.

The changes which the present curriculum needs, consist in making the course of study more directly vocational both for boys and girls, introducing high school subjects, filling up the studies and school activities with an appreciation for farm life, and paying more attention to sanitary provisions and practical hygiene. The course of the new curriculum should be closely related to agriculture and the life of agricultural people.

The new curriculum should prepare the pupil to meet with an ever increasing interest the demands of a progressive ~~vocation of~~ farming. It should endeavor to meet the present agricultural needs of the country boys and girls who live on the farms.

The new course of study will follow certain objectives necessary for the efficiency and happiness of the young farmers. Every farm vocation calls for certain skills and habits of mind which should be taken under consideration in the new curriculum. The farm boy who will enter the rural school may be acquainted with some problems in agriculture. He may know some of these well, some partially, but not well enough, and some not at all.

TABLE XIV

A suggested program of studies for the first four grades of the elementary schools of Greece and hours of instruction in each subject.

Number of Subjects	Hours of instruction per week			
	First Grade	Second Grade	Third Grade	Fourth Grade
1. Modern Greek	8	8	8	8
2. Nature Study	2	3	4	6
3. History			1	2
4. Geography		1	2	2
5. Hygiene		1	2	2
6. Natural History			2	2
7. Arithmetic	3	3	3	3
8. Drawing	2	2	2	1
9. Penmanship	2	2	1	1
10. Handwork	2	2	2	1
11. Singing	1	1	1	1
12. Gymnastics	2	2	2	2
Total hours	22	25	30	31

Generally in the new course of study the field of objectives is measured by the difference between what the pupils know before they enter the school and what they ought to know to succeed in the vocation for which they are prepared.

The objectives of the proposed course of study in the rural schools will be determined by (1) the ability of the pupils to follow the requirements of the new curriculum; (2) the size of the village in which the school is located and the age of the pupils, both of which will determine whether pre-vocational or vocational agricultural instruction will be given; (3) the time at the disposal of the teacher and particularly of pupils; (4) the limitations which arise from lack of teaching resources, poor school buildings and needed cooperation from the community; and (5) the finances available for improvement and expansion.

(1) The new rural schools of Greece will teach only such kinds of farming as are accessible to its pupils under the direction mostly of one teacher. The curriculum will make a provision for the teaching of the fundamentals of all farming so that in whatever kind of farming they enter, they may be in some measure prepared. In general, the Greek peasant is engaged in diversified farming and a general agricultural preparation, excepting regional factors, will meet successfully the demands of the country people. In certain parts of Greece where currants and tobacco are grown exclusively, specific preparation for the vocation will be very necessary. In this connection, it is argued that teaching in a specific vocation does all that a more general course can do, but in the case of farming conditions in Greece, the training will be determined to a large extent by the

(1) Bulletin No. 27, Massachusetts Board of Education.

by the different kinds of agricultural industry of the region in which the school is located. Every rural school in Greece is located in a particular village at a particular region. The school in that case will have access to farming resources in particular.

The curriculum should take in consideration the fact that boys who choose farm vocation are far more likely to choose a known and familiar vocation of farming than one remote and unknown to their experience. (1)

From another point of view, whatever is put into the curriculum of the nation's schools, at the end becomes a part of national character and achievement. This is done in ancient Greece, when the old Greek philosophers of Athens by properly training the youth made Greece the center of civilization. Sparta offered to its boys technical training in the arts of war and became the chief military nation of her time. Germany introduces into the curriculum of its schools technological subjects and is regarded today one of the leading manufacturing countries of the world.

Greece is an agricultural country with 65 per cent of its population employed in agricultural occupations, and with adequate agricultural training in her schools she can become one of the important agricultural nations in the world. The new curriculum of the rural schools of Greece, besides the training in the various agricultural industries, must include also subjects that contribute to the cultural development of the boys

(1) Nolan, "The teaching of agriculture".

or girls, who aspire to be progressive citizens in the civilization of this century.

The curriculum of the rural elementary schools of Greece should include among others the following subjects.

Modern Greek language: the farm boy and girl should be taught to read and write their own language correctly and with ease. They should be asked to know only the elements of the structure of the language and simple grammatical forms, because advanced, formal courses in language are complicated and beyond the understanding of the children at the elementary grades. The texts of ancient Greek authors should be translated in the modern tongue of the people and they should be available for reading in the advanced elementary grades. A series of useful readers should cover the entire period of the six elementary grades. Lessons in penmanship, spelling, and punctuation, should make the beginning of the teaching of the mother tongue. (1)

Arithmetic: long standing experience has established arithmetic as an indispensable course in the elementary and secondary school curriculum. Arithmetic serves two ends, it affords mental discipline for the child and empowers him with a tool of practical knowledge. The arithmetic of the rural school should be simplified and be concerned with concrete problems to be met in the home on the farm and in the shop. The writer by experience knows that the teaching of arithmetic at present in the schools of Greece is very defective.

History and civics: These courses are closely interwoven with the curriculum of all schools. Every pupil who goes to the rural

(1) De Vuyst, "L'enseignement agricole".

school should know something about the history and the mode of government of his country. Such a preparation in the school is conducive to an intelligent participation in the affairs of the country.

History, as ^{it} is taught at present in Greece deals mostly with the military and political activities of the nation. The pupils of the grades and even in the secondary rural schools should be taught about social things that pertain to the people of their country, their home life, their schools and industries, their adventures and their achievements.

Geography: The rural school has more advantages in teaching profitably geography to the pupils than the urban school. The pupils are in constant touch with nature and the earth; the rivers, the valleys, the mountains and the experiences of country life are concrete things for the boys and girls in the farm districts. Geography when taught in a social background is more beneficial to the pupils than single memory work of geographic names. (1)

Hygiene and Health, and Physical training: Health is the basis of happiness of the population in general. Poor health means poor business and lack of efficiency. Courses in hygiene and health have never been taught and are not represented in the curriculum of the elementary schools in Greece. The study of physiology in the secondary schools of the country even today has not met its real purpose, for it imparts to the students a

(1) Kern, Outline of course of agriculture - Nature study.

a simple theory of anatomy with no relation to hygiene and health-laws affecting the life of the community. In the new curriculum, the lessons on hygiene and health should take a more concrete attitude. They should deal with sanitary conditions at home and the farm; care of eyes and teeth; ventilation of the sleeping-rooms and precaution from contagious diseases. The teachers should advise the students to divide properly their time between work, recreation and play.

Domestic Science and manual training: Courses in domestic science and in manual training can be well started from the elementary rural school and continue to a greater extent in the rural high schools. The girls should be taught the practical art of sewing, cooking, and serving with possible equipment that may be found in the school or in private homes. The girls will appreciate such lessons because they are adapted to their nature and the duties of the household. ⁽¹⁾ The boys especially in the last grades of the elementary school should be encouraged to take an active interest in the use of tools for making different kinds of work on the farm.

Music and singing: The pupils of the country districts who live for the most part in the villages and are secluded from the centers of culture, should be encouraged to devote a small part of their busy time to the study of the finer aspects of culture. ⁽²⁾

(1) De Vuyst. L'Enseignement Agricole, Paris 1917.

Singing has always been encouraged in the Greek schools and has been an indispensable part of the child's schooling.

Nature study and Agriculture: These subjects which will play the most important rôle in the curricula of the elementary rural schools and the vocational agricultural high schools are discussed in more detail in the following chapters.

2. The new-curriculum affecting village and town schools only.

The present attempt for reorganization of the curricula of the schools of Greece will affect only those institutions which are located in distinct rural districts. At this point it will be wise to mark the distinctive character of urban and rural centers.

One of the distinctions between country and city community is that which has to do with population. It is commonly accepted that an urban community has a much larger population than a rural community. In the United States communities having large populations within small areas are called cities while those having small or scattered populations within given areas are termed rural districts. In Greece, the rural population is not scattered in any given country district. A group life characterizes the Grecian peasantry. For fear of assault, for the purpose of protection and because of poor communication the peasants live in villages. The population of these villages varies from 100 people to about a thousand. The occupations in the villages are distinctly agricultural and it is safe to state that everyone living in a village is more or less engaged in some kind of agricultural

enterprise. To explain this further, a village is a rural community, distinctly agricultural, whose population in very few cases exceeds a thousand peasants.

In each village there is an elementary school maintained by the community. "The school is one story frame building and has two or three windows in each of two sides. The school equipment is a blackboard, often in poor condition, a few school charts and maps and in rare cases a library of 5 to 10 books. In front of the school there is enough ground for exercises and play during the intermissions. The toilet provisions are very poor and unhygienic. The typical school has no provisions for laboratories and other scientific school experiments."

The new curriculum then, will be applied to rural elementary schools located in villages and to secondary agricultural schools found in towns and small cities in the neighborhood of country districts. Institutions for secondary education are established in towns and cities where there are enough students to take a higher education. Villages are always associated with elementary schools, because of the small number of pupils attending the school.

Consolidation is impossible at present in Greece. The attempt to combine two or more school districts in one, having a central and modern school plant to which all the children of the larger district may be transported meets with many difficulties. In Greece, the school district is confined only in the village, as there are not any scattered homes in the vicinity of the community.

Villages are not in close proximity with each other and the roads in country districts are unfit for the use of automobiles and quite poor for long distance transportation of pupils. Horses and mules are the prevalent means of transportation in the rural parts of the country. Until a general use of automobiles in Greece, which will provide a better and more convenient system of communication, consolidation in the rural schools cannot be considered at the present economic readjustment of Greece.

5. Regional Factors Influencing School-Curriculum.

The agricultural industries of a rural community may be in their various vocations characteristic of a large or small region.

Greece, because of its geographical position, is divided into six agricultural regions not distinctly different from each other. In any of these regions certain farm vocations are alike in many particulars. A farm study shows enterprises common to all farms such as the farm flock of poultry, the home garden, hogs for a home pork supply, an orchard, hay and so on.

Still certain of these enterprises are dominant in characterizing the types of farming of the particular region and are determined mostly by such factors as climate, topography, soil transportation, labor supply, credit, market or custom.

For example, wheat and apples are the dominant enterprises in Thessaly, not because they are conducted by all farmers, but because by virtue of success with them in the long run these types of farming have prevailed in that particular region.

The School curriculum in such cases will be enriched by agricultural courses corresponding to major enterprises of the region in which the school is located. In Peloponessus the outstanding farming enterprises center around currants, olives, figs and grapes. Many of these farmers keep a flock of poultry and live stock besides their major enterprise. In Macedonia the peasants are more or less engaged in the diversified system of agriculture. Animal husbandry is the major farming enterprise in Iperus and the development of this agricultural industry should be very much encouraged by the course of study prescribed in the curriculum of the schools of that region. Thrace and the Eastern part of Macedonia are the best agricultural regions fitted for the growing of tobacco. These districts provide excellent land for the cultivation of this crop. Wheat also grows abundantly in Eastern Macedonia, as well as corn. The Northern part of Thessaly with the central and Western Macedonia make the best prairies of land where animal industry can flourish. Sterea Hellas does not provide any big agricultural opportunities but this region can encourage horticulture and cotton growing to the best advantage.

The curriculum of the rural elementary and secondary schools should endeavor to foster the development of the above industries by offering to the pupils a related course of instruction.

4. General remarks about School Grades.

We have already explained in chapter V the general administrative system of public education in Greece. It is our purpose here to discuss in brief the school grades in elementary

education as they have been modified recently by a legislative
 (1)
 decree.

The elementary schools in Greece have either four or six year courses. If the school provides a four year course it is called a common elementary school. If it provides a six year course it is a complete elementary school.

From the elementary schools the boys may pass to the Hellenic schools. Those who come from the common schools, - graduates of fourth grade -, enter the first year of the Hellenic school which has a three year course; but those who have taken the six-year course from the complete elementary school, - graduates of the sixth grade, - enter the third year of the Hellenic school. Graduates of the Hellenic school enter the Gymnasium which has four year courses.

The system of school grades, as explained above, brought much confusion and inefficiency in the administration of public education. The Hellenic schools had no real reason for existence as long as the complete elementary schools prepared students for the gymnasia. There was no reason, again, for maintaining two types of elementary schools, one complete the other incomplete.

By a legislative decree passed in June 1929, the
 (2)
 Hellenic schools are abolished; two of the three grades are given to common elementary schools and one added to gymnasium. That is, ^{to} the four-year course elementary school ~~is~~ added two

(1) Journal of the Greek Government, June 1929.

(2) The law has not been put in operation yet for financial reasons. Journal of the Greek Government, June 1929.

grades - formerly belonging to the Hellenic school - and by this arrangement all elementary schools of Greece have a six year course or six grades. The Gynnasium takes the last grade of the Hellenic school, increasing its course of study to 5 years!

By this rearrangement of school grades, the pupil graduating from the sixth grade is ready to enter the Gynnasium. The average student may graduate from the Gynnasium at his seventeenth or eighteenth year. The four year course elementary schools were typical of the ones found in villages and rural districts. The farm boy was required to graduate from the fourth grade before he left school to work on his farm. With the new arrangement he will be compelled to study two years more. In a way, the new legislative decree is of more benefit to villages than to urban centers, as it affords the farm boy an opportunity for higher education in his own environment instead of going to the cities. Only 5% of the farm boys are economically able to attend schools outside their own village; the rest of the farm population, because of insurmountable difficulties, had to be satisfied with a fourth grade primary education. This statement may sound strange in the light of the American system of education, but it is nevertheless true. This single reason^{largely} explains the state of illiteracy which prevails so heavily upon the rural population of Greece.

The new school arrangement opens new opportunities and better advantages for the farmer. His education until the present time has been devoid of any course in nature study or elementary agriculture and the school, as a whole, has not helped him ~~any~~ in his vocation. The new educational measure should

direct its attention to the problem of vocational training in these schools. The new curriculum of the rural elementary schools should give a complete course of study and vocational training, because as the statistics show, the largest numbers of the school population drop out after the sixth grade.

During the first four grades the pupils should be given courses in liberal education and nature-study, the latter being conducive to elementary agriculture.

The fifth and sixth grades should be especially given to vocational elementary agriculture. It should not be the aim in these grades to attempt very technical information, but it should arouse an intelligent interest in the processes of agriculture as it is related to their future vocation.

American educators might argue that it is entirely impossible to teach a pupil of the fifth or sixth grade elements of agriculture and that such provision in the curriculum may be doomed to failure. Still, there is much to say on the other side. Greek pupils are characterized by early precocity. They are quick to grasp and understand the lessons which are given to them. To be sure they are a little superficial in the general process of acquiring and storing knowledge, but on the whole, they are ready by the fifth and sixth grade to understand the general principles of their vocation.

A second reason for putting vocational^l training in the curriculum of the fifth and sixth grades of the elementary rural schools is that there is a need for it. As we have already stated 90-94% of the school population drop out as soon as they have finished the elementary education provided in the school villages.

About five per cent of farm boys attend higher institutions of learning in the cities.

These figures show clearly the need of vocational instruction in the fifth and sixth grades of the rural school. Otherwise, there is no other possible way by which vocational agricultural training would be provided for the school pupils. Extension and club work will be very helpful, but such activities do not take the place of agricultural instruction in the schools. Extension methods may help the farmers after they have started the work on their farms.

The above major reasons compel the writer to believe that during the fifth and sixth grades the pupil has the only opportunity to acquire the first steps in vocational agriculture, which will be of inestimable value to him when he leaves the school to work on his farm.

CHAPTER IX.

THE TEACHING OF NATURE STUDY IN THE RURAL SCHOOLS.

1. General Remarks.

The study of nature under the new curriculum will, for the first time, be introduced in the rural schools of Greece. Nature study is intended for the first four grades of the rural elementary schools, and it is our concern here to discuss briefly its theory and objectives, and its contributions in the school life of the country districts.

Nature study is a clear understanding of the forces of nature. It is a study of natural objects that are familiar to every boy and girl in the school and in the village. The instruction in nature is intended to cultivate in the child a love for the natural and the beautiful. The boy begins to understand more clearly the laws of nature as they are manifested in the free open air and in the changing environment in which he moves. The significant value of a lesson in nature is the fact that the boy or girl in their later life will be always brought face to face with the same natural object which has been a subject of their studies during their early school years. Nature study has the power to instill in a person's daily life a perennial interest.

The general aim of nature study is (1) to train the senses and the observational powers of the pupils so that they may enrich their minds with useful experiences; (2) the second

aim is the acquisition of a store of valuable knowledge and useful information direct from the natural world; and (3) instruction in nature will give to the pupils of the first grades an opportunity to familiarize with the common things of life and take a sympathetic attitude towards natural objects which directly affect the interests of human life.

Keen and direct observation is the keynote of nature study. "Nature study should be here the content and spirit of the work. Nature-study should be pre-vocational to agriculture. It will underlie and prepare for future work in agriculture whether taken up in school or a life vocation".⁽¹⁾

The pupil through nature-study learns how the flowers get their pollen carried by the bee or wind; how the seeds are planted in the garden; how the chicken broods the chicks and he is in a position to learn anything that has something to do with farming. The boys eagerly ask questions about the thousand and one wonderful things in nature and they experience a great joy and pride when they learn interesting stories about birds, insects, animals and plant life that hitherto were unknown to them. As the pupils are promoted to higher grades, they look at the natural objects with a growing interest and with a better appreciation of the causes that have created the present natural order. They realize that agriculture and its various industries are in constant touch with the processes of nature and an intelligent understanding of these natural things is of extreme importance to them or other people who live in the country. It is true

(1) Nolan, The Teaching of Agriculture.

that a close knowledge of the workings of nature will adjust people best to the environment in which they live. Dr. A. B. Comstock, Professor of Nature Study at Cornell University, indicates clearly the value of nature-study as it is connected with agriculture when he says that: "In order to appreciate truly his farm, the farmer must needs begin as a child with nature study; in order to be successful and make the farm pay, he must needs continue in nature study; and to make his declining years happy, content, full of wide sympathies and profitable thought, he must needs conclude with nature-study; for nature study is the alphabet of agriculture and no word in that great vocation may be spelled without it".⁽¹⁾

The instruction in nature should center around the following four general topics:

1. Consideration of human needs and activities; this topic may include such questions as home conditions, food, clothing, hygiene, religious activities, and community life.⁽²⁾
2. Plant life for the entire school year; discussion in a general way of fruits and fruit trees, wild flowers, cultivated flowers, garden plants, various crops, native shrubs, common useful plants cereals, and forestry products.
3. Animal life for the active school year; a general discussion of common domestic animals, animals used for farm work, birds, insects, wild animals, with

(1) A. B. Comstock, Handbook of Nature Study, 1924.

(2) Kern, Outlines of course of Nature Study for California Schools, 1927.

a special attention to cattle, swine, sheep and horses.

4. Observations in the inorganic world and soil studies; a simple discussion of natural phenomena, as, changes in weather, rain, snow, winds, temperature, freezing, appearances of soil during the four seasons of the year and climatic conditions of surrounding places. ⁽¹⁾

2. Nature study for Grades One and Two.

The purpose of the first and second grades is to give to the pupils a "general acquaintance with the common things and processes of nature". The general topics for consideration should be trees, flowers, insects, home, food, and clothing and domesticated animals. The most interesting material from nature should be selected and used in the classroom exercises. Classroom discussions should take a general character instead of detailed one; pupils of the first grades in asking questions are satisfied with a general and simple answer. Repetition of the same material will unavoidably come in the next grades and the pupil being more mature, will be able to follow it by a detailed and careful study.

Another important factor in the teaching of nature is the sequence of seasons. The selection of nature study material should be made according to the sequence of seasons. ⁽²⁾

(1) Nolan, Case method in agriculture.

(2) Heald, f. Course of study in Elementary Agriculture for Wisconsin Rural Schools.

Starting from the beginning of the year, during the autumn months there is a variety of topics to be taken from the natural world. The children may learn to name different fruits and nuts that grow in the district. Let each child bring to school the best peach, apple, orange, grown at home; arouse interest in tree planting and leaf coloring; name some wild flowers grown in the vicinity of the school. (1)

The discussion of common domestic animals is vital and interesting to the children. Have them name the various animals of pasture and barnyard; discuss the wild animals found in the locality; create a desire to learn more about bird life.

Children are always interested in insects as for example bees, butterflies or grasshoppers. Have the pupils know what an insect is and which two or three common insects are injurious to garden, field and orchard.

During the winter months conditions at home may be discussed in the class; labor needed in the construction of a house; heat and water facilities in the house; another important question is that of health and hygiene at the home. Food is another fundamental need. The pupils must know the different kinds of food that are consumed at home. Another need is that of clothing. The use of right kind of clothing for protection from colds. The teacher should give many health talks; discussions about proper air, food and water necessary for a

(1) Miller, Lessons in Elementary Agriculture for Alabama Schools.

(2) Dadisman, Elementary exercised in Agriculture.

vigorous life. During these months some physical nature-study may be given; observe clouds and learn to read the thermometer; teach the care of plants and animals in the winter; observation of the signs of spring. During these months arouse interest in the children for the spring garden work.

For the spring months the teacher should look for
 (1)
 early spring activities in nature. The pupils should note the opening of the flowers and leaf-buds in the trees; learn the names of the flowers and where they grow; what is the principal cereal in the village.

Have the students identify a few of the most important shade trees; choose one tree to find out all the interesting things possible as age, height, shape, manner of growth, direction of branches, color of leaves, limbs and bark on trunk.

From conversations with pupils make a list of different varieties of vegetables growing around the various homes in the district. What insects appear first in the spring; where found and which ones are destructive to fruit orchards; how they are removed.

Make a list of farm animals and their contribution to the farmer. Study in some detail the horse and his contributions to farm work.

Make a study of the various phenomena of the inorganic world; appearance of moon when it is full.

5. Nature Study for Grades Three and Four.

Pupils of these grades should be given a continuation course in nature-study, the work based largely on an observation basis and should deal with the "common things and processes of nature." It must be remembered that children of these grades want to know more details. In previous pages we have referred to the fact that a large number of school population drops out about the fourth grade to work on the home farm. It becomes important then, that the work in nature-study of these grades, should give to the future citizens correct and helpful information along biological and educational lines, enabling them to adjust themselves best to their environments. The study in these grades should center around the larger and more important groups of nature material which touches human interests. ⁽¹⁾

Pupils should prepare their assignments at home, keep good notebooks prepare charts, etc. The curriculum of the school should not provide course in technical science for the intermediate grades, but it should attempt to create an interest in the natural world, so that the farm boy or girl may become an intelligent farmer and make a real contribution in the economic welfare of his community, having a better understanding of the laws of nature.

The work of the third and especially of the fourth grades should be preparatory to the teaching of elementary agriculture in the fifth and sixth grades. The course of study should deal with trees, domestic, and wild animals, soil,

(1) Kern, Outlines of course of Nature Study for California Schools.

insects, garden work, field and orchard observations, human needs and interests and elements of physical nature-study.

The activities of the farm and home during the autumn months will provide good material for the beginning in the nature work in the third and fourth grades. At the opening of the school, discuss the work that is being carried on to harvest the crops of the field, orchard and garden; the part which the children have in the harvesting process; miscellaneous activities as pruning, spraying, care of live stock and poultry. Trees and insects should furnish the larger topics for the autumn work.

Lessons in hygiene should be given much consideration; discuss structure and care of teeth, bones and their relation to muscles.

In discussing human needs, make a list of the principal social, educational and recreational needs of the people of the community. Labor saving tools on the farm. Modern conveniences introduced into the homes of the community.

The pupils of these grades during the winter period may study and observe the materials used in building the houses. Domestic and wild animals, soil and rock studies should furnish the larger topics for the winter work. Study of evergreen trees and their special adaptation to winter conditions. Elementary study of the following industries, fishing, lumbering, mining manufacturing and farming, using the materials of these industries for nature-study work.

(1) Heald & Dille, Agriculture in Ohio Elementary schools.

Make a list of the domestic animals of the community; market value of each kind of farm animal. More detailed observation of soils; growing of plants in pots of rich soil and poor soil; kinds of soil in the community. Methods of heating, lighting and ventilating. Continuation of lessons in hygiene. Elementary study in the physical world with demonstrations in the field of electricity and engineering.

The work for the spring season may deal with garden, birds, flowers, weeds and ⁱⁿ general with field and orchard observations. By this time, pupils begin to take an interest in doing things by themselves. The work of the school should be related to practical interests of the farm, with which the pupils are associated. In the study of cultivated vegetables, the teacher should select one as the tomato for illustration and make a detailed study of it. Flowers should be studied more carefully. The study of insects should include a detailed discussion of moth and butterfly and the devastating grasshopper, life history of mosquito, its breeding places and methods of eradication. Elementary discussion of physical phenomena and the inorganic world.

ring
study.

CHAPTER X

THE TEACHING OF ELEMENTARY AGRICULTURE IN THE RURAL SCHOOLS.

1. General Remarks.

The teaching of elementary agriculture in the rural schools of Greece will begin with the fifth and sixth grades. Such teaching may not meet with ideal conditions regarding the ages of the pupils and the conditions of the one or two-room schools usually found in Greece, but the urgency of the matter will not admit delay. We have already shown that about 94 per cent of the school population drop out as soon as they have finished the elementary education provided in the school villages. If any provision should be made for agricultural instruction in the rural schools, by which a large number of boys and girls could be trained to become better citizens and more intelligent workers, this provision should be made before the pupils leave the elementary school. Environmental and living conditions are such in Greece that an ideal method of approach would be impracticable and with no results. If the Greek Government wishes to develop a strong agricultural population by proper training, it must adapt its plans of organization to the conditions as they are today, when it is impossible to modify the conditions to suit other plans.

The Greek boy or girl is characterized by early precocity and they usually enter the school when they are seven years of age. Many boys in the rural schools attend the schools irregularly, interrupting for one or two years and resuming their studies again. The immaturity of the Greek pupils is not an accurate argument against their state of appreciation and understanding of the elements of agriculture. They live in villages, surrounded by nature which is not difficult of apprehension when the natural environment manifests itself in terms of plants, grasses, flowers, animals and trees. The boys have grown with things that are included in agriculture and have already taken a sympathetic attitude before they enter the school.

With one who is acquainted with living conditions in the European villages the picture of people living under the same roof with animals, may not look strange. The fact that the pupils are immature, is a strong argument favoring the use of the natural environment as an instrument for their practical training.

The subjects of the curriculum of the rural school must be so arranged that the pupil's immaturity will not be forced to work opposite results. If the first four grades of the elementary school are given simple lessons in nature study, the fifth and sixth grades which include more mature pupils, will be necessarily given advanced lessons in nature study. If these advanced lessons are looked upon by the mature pupils from an economic point of view, the lessons recede from the realm of nature study and become simple lessons in elementary agriculture. This argument can be better illustrated by the following example.

TABLE XV

A suggested program of studies for the fifth and sixth grades of the Elementary Schools and hours of instruction in each subject.

Number of Subjects	Hours of instruction per week	
	Fifth Grade	Sixth Grade
1. Greek	8	8
2. Agriculture-Plant Industries	10	
3. Agriculture-Animal Industries		12
4. Arithmetic - Geometry	3	3
5. History	2	2
6. Geography	2	2
7. Natural History-Physics-Chemistry	3	3
8. Hygiene	2	2
9. Electives	2	1
Total	32	33

A lesson on the apple may be given with much advantage to the first-grade and sixth grade pupils, but if the teacher undertakes to give the same lesson on apples to both classes, his attempt will be a failure.

Upon this principle, the writer will endeavor to construct the subjects and lessons on the curriculum for teaching agricultural elementary education to the fifth and sixth grades of the rural schools of Greece.

2. Instruction in Elementary Vocational Agriculture.

Instruction in elementary vocational agriculture for the fifth and sixth grades does not necessarily mean an abrupt change from nature-study into the elements of agriculture. Nature study embraces a large variety of observational experiences for the young pupils of the first four grades and it is very difficult to draw a line separating it from elementary agriculture given to higher grades. The one shades into the other with an indefinite demarkation.

President Andrew Soul, of Georgia State Agricultural College, states: "The teacher is forever stumbling over the words 'elementary agriculture' and wondering what their significance may be. The real need is to teach the child about the life by which he is surrounded, and when this is done, agriculture will be effectively taught no matter by what name is denominated. . . . for, strangely enough, everyone has been trying to convert the simple elementary facts of nature into an obstruse subject, difficult of appreciation and commonly called agriculture (1) for want of a better name".

(1) Proceedings of 13th Annual Conference for Education in the South.

The agricultural work, then, which will be taught for the fifth and sixth grades will be mostly nature-study viewed from an utilitarian attitude on the part of the students. The teaching of agriculture in the higher grades should not be understood to mean only training in farming and its various industries, but it should endeavor to include in its scope a larger participation in the activities of the pupils and in the life of the community. Elementary agriculture in the rural schools should be interpreted to mean a sympathetic appreciation and a careful study of the problems of the community of its agricultural industries, its sanitary problems, its social conditions and its needs. Elementary agriculture if taught in this way, will have a fitting and most beneficial place in the curriculum of the rural school. Many pupils who drop out of school, usually, after the fourth grade, if they be given assurance that for the next two years they will be prepared for the vocation of farming, they will be still willing to keep in touch with the school, even after graduation. In case of students who wish to continue the study of agriculture or study in any other vocation, in higher schools, they will not be handicapped by their agricultural training in attending these schools.

Instruction in elementary vocational agriculture may be offered either by the use of a textbook and agricultural bulletins in class exercises at the school or by the home project method in connection with club work in which case the home-farm and the field take the place of books and school exercises. The tendency at present is to put considerable importance to the home project system which is practicable and within the means of the school boys.

We shall discuss briefly these methods of instruction here, because both of them seem to be applicable in the new curriculum of the rural schools as well as in the social life of the Hellenic communities.

The use of a suitable agricultural textbook in the class room exercises is very essential for the pupils who may turn to it for reference when they are confronted with a certain agricultural problem. ⁽¹⁾ The textbook may be supplemented with various agricultural bulletins containing detailed information of the principles and practices of the major phases of agriculture, such as agronomy, animal husbandry, fruit growing, animal diseases, farm business, etc. The teacher should make regular assignments in the textbook on farm practices, preceding the laboratory exercises, the latter taking at least one third of the class room work. "A very good method and at the same time one wholly practicable, would be to give two or three formal classroom textbook recitations per week and require two or three definitely assigned pieces of home work of an agricultural nature per week". ⁽²⁾ It has been found profitable by experience, to combine the last two grades in the instruction of elementary agriculture. ⁽³⁾ In the case of the rural schools of Greece, the fifth and sixth grades should be combined whenever there is a small number of pupils enrolled in both grades.

(1) De Vuyst, L'enseignement Agricole.

(2) Nolan, The teaching of agriculture, p. 24.

(3) Heald & Dille, Manual for Teachers of Grades seven and eight

The most important part of this system of agricultural instruction is based upon the seasonal, agricultural and school conditions of the villages in which the schools are located. The agricultural subjects which will be taught in the school during the year should be arranged in such a way as to accomplish two things at the same time; that is, while the principles in these lessons are discussed in the class room exercises, the actual farm operations and practices and the things that the community needs should be taught in seasonable order. Some agricultural topics can be "taken up early enough to prepare the pupil for doing the thing well by the time the material is ready on the farm".⁽¹⁾ The most important topics should be selected for school work and especially those that have local application and can arouse initiative and action on the part of the pupils. Due consideration also should be given agricultural subjects which will be instrumental in the improvement of old methods of farming in the country districts. The selection of topics should be also influenced to a great extent by the home projects of the pupils which may be taken at various seasons.

Agricultural textbooks should be also supplemented with illustrative material such as pictures of different products, graphs, charts and collections in the small laboratory of the school of samples of soil, of plants, seeds, injurious insects, rocks, etc. The best laboratory equipment for the country schools is the field laboratory which is incomparable with the best laboratories within four walls found anywhere in the world.⁽²⁾

(1) F. Heald, Elementary Agriculture for Wisconsin Agricultural Schools.

(2) Miller, Elementary Vocational Education for Maryland Schools.

The teacher of the elementary school need not enter into any scientific experiments, because the practical exercises in farming operations are designed to reveal truth to the pupils and in this way they take the place of the experiments. It should be a well established principle, though, that each agricultural topic discussed in the class room should have a definite time allotted to it for laboratory practice.

We have mentioned above, that the work in elementary agriculture may be given to both grades combined and the work may be divided in two parts offered in alternate years. The first year's work should take up plant life in general and the second year should be devoted to the animal husbandry.

The agricultural teacher following the seasonal arrangement of topics, will not find much difficulty in finding adequate material to illustrate the principles of farming. Following are some general topics in plant life for the first and second year, classified under the season in which they should be taught. The teacher, after consulting his supervisor, may divide the topics of each season according to months in which these should be taught, with due consideration to the climatic conditions of the locality, home projects of the students, local needs of the community and initiative and interest of the pupils.

Topics in Plant-industries for the First year of
(1)
Elementary Agriculture.

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- (1) Heald & Dille, Agriculture in Ohio Elementary Schools; Leake, The Means and Methods of Agricultural Education; and, Nolan, The teaching of Agriculture.

AUTUMN SEASON.

1. Crops - Wheat, corn, barley, oats, methods of sowing, cover crops.
2. The Orchard - picking, grading, packing, storing of apples, and other fruits.
3. Vegetable and Fruit gardening - small fruits and storing of vegetables.
4. Flower gardening - home and school, Forests.
5. Fall plowing - new methods, use of machinery.

WINTER SEASON.

1. Soils - methods in improvement, use of manure.
2. Orchards - study of fruit buds, pruning.
3. Crops - testing of seeds, red clover.
4. Farm management - records and simple inventory.
5. Community work - hygiene, exhibitions.

SPRING SEASON.

1. Soils - fertilization, manures, planting, preparing seed beds.
2. Orchard - spraying, cultivating the orchard.
3. Vegetable gardening - cultivating vegetables, small fruits.
4. Plant diseases
5. Flower gardening, grasses, forests.

Topics in Animal Husbandry for the Second year of
(1)
elementary agriculture.

(1) William, Agricultural Schools; also Federal Board of Vocational Education Bulletins 129, 94, 27 35.

AUTUMN SEASON

1. Farm animals - labor animals, types, breeds, improvement.
2. Dairying - care and feed of cows and young calves, beef
3. Poultry - houses, feeding, judging.
4. Swine - feeding, types and breed.
5. Buildings - for farm animals, water supply, ventilation, location of stables.

WINTER SEASON.

1. Farm animals - horses, sheep, cattle, breeds and uses.
2. Poultry - breeds, mating, diseases, selection of eggs for incubators.
3. Insects - control and winter habits.
4. Sheep, goats, hogs - their feeding and management.
5. Dairy - milk as a food, improvement in pastures.

SPRING SEASON.

1. Farm animals - feeding and breeding, management.
2. Insects - growth and injuries to plants, bees, control
3. Farm management - simple accounts.
4. Poultry - incubation of chicks, natural and artificial breeding.
5. Community life - club work.

The number of topics listed above give an idea of the wide range of the work to be covered each year by the pupils although no attempt should be made to teach everything in the school. The subject matter of the first year may be given to both fifth and sixth grades combined; but in case the school attendance is large, the first year should be given only to

fifth grade. The second year is for fifth and sixth grades, but in the case of large schools, the second year in animal husbandry should be given only to the sixth grade.

The program of studies in the rural schools should be covered between the months of September and May, because early in the summer the boys are busy with the work in their home-farms.

2. The Home-Project work in the rural schools.

A new method in teaching vocational agricultural education in the rural schools, is the home-project method which may be introduced to a great advantage in the country schools of Greece. The home-project work is largely associated with secondary education in the United States, especially with high schools of agriculture, high school departments of agriculture and country agricultural schools. ⁽¹⁾ In Greece, the home-project method should be associated with high schools of agriculture as we will mention in the following chapter, but it should be also introduced in the elementary schools in connection with club work conducted with students of the fifth and sixth grades. The home-project work fits particularly well with the social and economic conditions of the country districts of Greece as well as with the educational conditions in the same places. The purely agricultural population of Greece lives in small villages in which is located the elementary rural school of the community. Of the large number of boys who discontinue their studies before

(1) Stimson, Vocational Agricultural Education.

(1)

they reach the sixth grade on account of economic reasons, there will be a considerable number of them who will be willing to join a club and undertake to work on project in his farm under the supervision of the village teacher, in case it is impossible for him to follow the school exercises regularly. With the regular pupils in the elementary school the home-project work in the fifth and sixth grades should prove of great interest and inestimable value to the boys and girls who, will live on the farms. The boys and girls' club work will be organized with pupils of the fifth and sixth grades who will work on various agricultural projects; because of the paramount importance of the clubs in the agricultural development of the community. We shall discuss their organization in more detail in one of the last chapters of this treatise. Here, we will be concerned only with the home-project and its applicability in the rural schools of Greece.

According to R. W. Stimson, State Supervisor of Vocational Agricultural Education in Massachusetts, "a farming project is a thing to be done on a farm, which, preparing to do it and carrying it out to a successful result, involves a thoroughgoing educational process".⁽²⁾ The project to be tried at the home farm by the pupil with the consent of the parents is a large problem for the boy which can be solved only by action on his part. Such problem may take the nature either of

(1) See Chapter VI, Statistics on Public instruction.

(2) R. W. Stimson, Vocational Agricultural Education.

planting a number of trees of untried fruit on a piece of land which might be utilized for other purposes and the whole project to cost an amount of money large enough to shake confidence in the boy in case of complete failure, or the project may take a milder way by which the pupil may take responsibility in a farm enterprise already tried by his father on the home-farm.

The home-project of instruction arouses interest and initiative in the pupil and it helps him in the way of carrying accumulated information into practice. ⁽¹⁾ His responsibility for carrying the project to a success, trains him in the vocation which he selected for the future. The pupils of this age need constant supervision and assistance in order to do the work right from the beginning and the best thing that can be said about the home-project is that this method affords the best help coming directly from the school through the instructor.

According to Mr. C. H. Lane, of the States Relation Service, of the United States Department of Agriculture, the home-project work when adapted as part of instruction in the elementary and secondary schools should include the following requirements: (1) there must be a plan for work at home covering a season of more or less extended period of time; (2) it must be a part of the instruction in agriculture of the school; (3) there must be a problem more or less new to the pupil; (4) the parents and pupil should agree with the teacher upon the plan; (5) some competent person must supervise the home work; (6) detailed records of time, method, cost and income must be honestly kept; and (7)

(1) Williams, Agricultural Schools, 1925.

a written report based on the record must be submitted to the
(1)
teacher.

The home-project method of instruction fits remarkably well with the farm activities of the boys in the villages of Greece. The boy assists in the farm home in various ways and the object of the project will be to train him to do the work with more efficiency and intelligence, introducing in this way a vitalizing spirit in the jobs and enterprises of the farm. He will be asked to keep records where no accounts are kept, he will be asked to introduce economy in knowing how to utilize properly the products and eliminate wastes. The home project work will employ new methods in cultivation and production of crops and new ways in marketing the products, and this is of paramount interest to the farming conditions of Greece where antiquated technique characterizes the Grecian farm education. Greek parents will like the home-project plan because they will be, too, indirectly educated. They will not have to send the boys away from home for agricultural training, if they can help them stay at home and avail themselves of the instruction offered by the school.

(1) From Nolan, The teaching of agriculture.

CHAPTER XI.

AGRICULTURAL INSTRUCTION IN SECONDARY SCHOOLS

1. Preliminary Remarks.

A well organized agricultural educational system in any country can never be conceived as being complete, without an efficient system of secondary education. Agriculture in the primary schools, as described in this treatise, is nature-study coupled with economic utility, designed to prepare the pupils of the last grades to take a sympathetic attitude towards the vocation of farming. The work of the secondary schools is a step above the work which is given in the elementary schools. The agricultural instruction in the high schools should be practical agriculture, training the pupils for the business of farming, and making them intelligent and efficient citizens. At this point, we cannot go much further and ask how much agriculture should be taught in the high schools and how much time be given to it, before we consider the aims and objectives of the existing high schools in Greece. According to official statistics (1) there are at present 7 agricultural schools in Greece, only two of which have courses in secondary agricultural education. (2)

(1) Bulletin of the Greek Ministry of Education, 1928.

(2) Ibid., also Mears Greece today, Chapter XII.

All other institutions of secondary education, even those in purely rural territories, have a uniform liberal curriculum, devoid of any course in agriculture.

This simply means that, the agricultural institutions of secondary education in Greece, are no sufficient in number to impart to the rural population a vocational education; it also means that the other schools of secondary education are crowded with educational ideals that have little in common with farming occupations and with rural or industrial life in general.

The organization of the high schools for the last thirty years up to the present time, has not contributed anything substantial for the promotion of industries in Greece, but it has encouraged boys, by its classical education, to desert the ranks of farm occupations instead of helping them realize their value. Of course, from the foregoing discussions in statistics on public education in Greece, we have seen that the percentage of pupils who attend institutions of secondary education is very small, and one might naturally expect, that the percentage would show a much smaller proportion of rural children who would be in a position to attend high schools, especially when these are located in considerable distance from their own village. Mr. Lefas, chief of the Bureau of Secondary Education, in the Greek Ministry of Education ⁽¹⁾ has stated recently in his report on Greek secondary education, that the present organization of high schools in Greece has failed to realize its educational objectives and

(1) Journal of the Greek Government, July 1929.

has attributed that failure to the present difficult curriculum of the high schools.

It is true that a reorganization of the schools of secondary education, as far as a modified course of study and a readjustment of the schools to the life of the people are concerned, would undoubtedly induce a larger percentage of elementary school pupils to continue higher studies in desirable vocations, than the present system accomplishes with its classical curriculum.

A readjustment of the course of study in the high schools or *gymnasia*, can be accomplished only with a modified organization of these schools. What type of secondary school should be introduced in Greece to meet both the agricultural and liberal demands of the people, is difficult to decide conclusively at present. In Greece, both sides of the question have been discussed at length and exhaustively, without any fruitful and conclusive results. The writer realizing the present limitations under which he is working will not attempt at this time to give a conclusive preference for the course of study to be introduced in the secondary schools of Greece. He will, nevertheless, attempt to suggest the type of school and courses of study in these schools that are closely connected with the life of the rural population of Greece. In other words, the discussion of this chapter will deal with the type of the rural high school that may be adapted to the agricultural conditions in Greece.

The census of population gives us helpful information regarding the population and administrative division of the country. ⁽¹⁾ According to the census, the rural population of

(1) Census of the Greek Population, 1920 - Library of Congress.

Greece is the population found in localities, communities or towns having no more than 5,000 inhabitants. According to the administrative division of Greece, there are 58 Prefectures, 137 provinces and 4,749 communities. The large limit which the census puts on rural population, means that there are many villages and towns with as much population as 5,000 which are predominately rural or are located in rural sections of the country. Gymnasia and other institutions of learning are usually established in the capitals of these provinces.

There are two types of secondary schools that may be introduced with equal benefit to the rural conditions in Greece. First, the vocational agricultural high school: this school should be established in all provinces of Greece and especially so in provinces distinctively agricultural, offering vocational agricultural training to boys who have already decided to enter farming and who could be trained for their professions much better in these schools than in the present classical gymnasia. And, second, the existing gymnasia, with reorganized course of study and correlated vocational instruction, corresponding mostly with the High School Departments of agriculture in this country. ⁽¹⁾ These schools should be established in all parts of the country both urban and rural, offering to the students an all around education and enabling them to pursue higher studies either in the universities or in the College of Agriculture.

(1) The writer has consulted many books on this subject, such as Leaflets 11,44 and Bulletins of the Bureau of Education, Department of Interior U.S., Stimson's Vocational Agricultural Education.

These two types of schools of secondary education should take the place of the classical gymnasia which are now functioning in the urban and rural parts of Greece.

2. The Vocational Agricultural High School.

The vocational agricultural high schools will meet a real need in Greece. To these schools will go students who cannot go beyond the secondary schools, being interested in agriculture, choosing the vocation of farming for a definite life work. The aim of the vocational agricultural high schools when organized in Greece must be a vocational instruction in the agricultural industries and a training which will be most useful to the pupils when they go home or take charge of the home farm.

The view of the Federal Board for Vocational Education was probably expressed by its agent, H. M. Skidmore:

"It is the purpose of courses in vocational agriculture to aid in developing a type of farmer who shall possess managerial ability and business capacity, an aptitude for farming and the necessary technical knowledge and skill to produce and market his products, and also one who is capable of adapting himself to our constantly changing social and economic life."⁽¹⁾

The organization of the vocational schools in Greece distributed mostly in towns of the rural provinces of the country, has many advantages.

(1) Skidmore, H.M. - Annual proceedings N.E.A. 1923, p. 1036.

1. The vocational schools when organized in country districts will compel a larger number of pupils to continue studies in secondary agricultural education than the gymnasia are doing at present with their classical education.
2. The vocational schools can serve the local farm needs of the community more successfully than the gymnasia.
3. The curriculum of the gymnasia is uniform for all schools and all parts of the country, whereas the curriculum of the vocational school may vary or adapt itself to the needs of the community and respond easily to the dominant industry of the locality.
4. Vocational schools can serve a large area and in the case of Greece the largest area that they will serve is the province. The country is at present divided in 137 provinces 60 per cent of which are inhabited by rural population. Agricultural schools should be established first in the purely agricultural provinces which are in immediate need of a practical agricultural school, and later in parts of the country where the rural population shades the urban centers.

These schools should be located in all cases outside the town or the village, usually near a farm where the students can have their practical training. The pupils who come from the village or town in which the school is located may have their projects carried in the home farm, but pupils who come to the school from cities or other towns and are unable to commute every night at home may have their training at the school farm, carrying their projects in the same place. The school should

have at least 100 acres of land in order to carry the experiment work done largely by students as well as the projects undertaken by students who live in other villages or towns. The equipment of the schools should be such, as to be easily imitated by the practical farmers who wish to introduce new methods in their farming enterprises. The farm of the vocational school should be a model farm for the peasants of the surrounding towns. The buildings and the equipment of the school should be at the same time simple and inexpensive and within the reach of the farmers who wish to follow the practice of the school farm. All species and breeds of animals should be kept at the school for demonstrating purposes at modern and inexpensive quarters.

The main object of the vocational school in the country districts is to teach the farm boys and adult farmers indirectly, by setting an example which can be followed to the greatest advantage by them. As the Massachusetts Board of Education puts it: "it should be the aim of the school to establish the highest standards of production; that is, it should undertake to show pupils what farming is at best; because boys whose home farms are producing inferior crops and animals will have standards by which their home production may be gauged⁽¹⁾."

The course of study in the vocational schools should cover a period of four years. The organization of an agricultural course of study in these schools, which for the first time will be established in Greece, should be guided by the following principles:

(1) Bulletin of the Massachusetts Board of Education, 1916, No. 23.

(1) courses of study must be well adapted with the agricultural and economic conditions of Greece and particularly with the needs of the people for whom they are intended; (2) courses of study should be well balanced and flexible enough for expansion and development from year to year; (3) the course of study should not be narrow and specific, but general and inclusive, representing the most important interests and needs of the community in which the school exists.

These principles when stated from the standpoint of the community are interpreted to mean a course of study that will be of greatest use to the pupils, and will represent the most important agricultural interests and needs of the community.

The common age of pupils that will attend the vocational agricultural school is 14 and in many cases 15 or older. The pupils in the beginning of the first year will be required to choose their project which they will carry in the home farm under the supervision of the instructor. The instruction in the schools should be correlated with the project work undertaken by the pupils in each of the four years. All projects should be weighed by the financial risk which they involve when operated in the home or school farm. The pupils during their first year should undertake to work on projects which involve the smallest financial risk and let the projects with the heaviest risk for the fourth year when they are more mature and more trained in the farm work.

The curriculum of the vocational schools should not be constructed in such a way as to give a narrow specialized agricultural education to the pupils because they happen to live in villages and secluded localities that are away from urban centers. While the vocational training of the pupils should be

the aim of the school, the importance of giving to the boys a more varied education should not be underestimated, as this tends to develop the character of the future citizen of the rural communities. In making the course of study in the vocational schools the tendency is to devote 80 per cent of the pupils' time to intensive agricultural training with related study in sciences which are related to agriculture and 20 per cent of the pupils' time to cultural and recreational subjects. (1)

The plan of study which follows below is a proposed curriculum for a four year course in vocational agriculture, suggested by similar curricula of vocational schools in the States of Indiana, Pennsylvania, Illinois, Wisconsin, Iowa, Massachusetts, New York and modified carefully so that it may be adapted successfully to the farming economic and social conditions of Greece. (2)

Following the plan of the Massachusetts school system as it applies to the country agricultural schools, the instruction in the vocational schools of Greece will be divided in three parts: 50 per cent of the pupil's time will be given purely to agricultural training accomplished mostly by project work, 30 per cent of the time will be given to courses in various agricultural sciences as botany, chemistry, entomology, veterinary science, arithmetic, etc. and the rest 20 per cent of the time to cultural and recreational subjects as , history, modern Greek, social sciences and music.

(1) Ibid.

(2) "Curricula for Small High Schools" - Adams, Jesse E., Indiana 1924. "Curriculum Building in the Rural High School" - Ferrin, E.N., School Review, vol. XXXI, 1923.
Getman, A.K. - Vocational Education Magazine, May 1923, p.657.

CURRICULUM FOR A COURSE IN VOCATIONAL AGRICULTURE.

FIRST YEAR.

<u>Agriculture.</u>	<u>Science</u>	<u>Citizenship</u>
Plant production	Arithmetic	Modern Greek
Vegetable gardening	Farm shop work	Elective
Agricultural projects.		

SECOND YEAR

Animal husbandry	Biology	History
Poultry and Dairy	Physiology	Hygiene
Agricultural projects.		

THIRD YEAR

Fruit production	Chemistry	Social sciences
Grapes, olives, figs	Entomology	Citizenship
Horticulture	elective	
Agricultural projects		

FOURTH YEAR

Farm management	Agricultural economics	Government
Farm mechanics	and farm accounts	Hygiene
Special agricultural courses	Physics and drawing	Recreation
Agricultural projects.		

3. The Agricultural Departments in the Gymnasias.

The failure of the intermediate education in Greece to meet the educational and occupational needs of the people, is reflected to a large extent upon the present organization of the course of study in the Gymnasias. A radical change, at present, in the curriculum of these schools, will be impossible and will meet a great deal of opposition on the part of the advocates of the existing classical gymnasias. There is a certain tradition behind these schools that teach classical literature, languages and general liberal education and the attempt to throw away all these experiences, will necessarily be futile and unprofitable. At the same time a way must be devised by which the gymnasias may keep what is best in them and discard such courses that may be profitably replaced by new subjects having a direct bearing on the economic and social living conditions of the people. In other words, the curriculum of the existing gymnasium should be modified by introducing in it vocational instruction and correlating it with the work that it is now offered in all schools of the country.

The proportion of time that should be given to agricultural subjects in the gymnasias, should be determined to a large extent upon the location of the school, the farming and industrial conditions of the surrounding territory, the character of the population (urban, rural, semi-urban) and the interests and needs of the pupils and of the community in which the school is established. The gymnasias at present, are well distributed in all parts of the country and are as a rule organized in the

capitals of provinces, where the population may insure a considerable attendance at the school. Pupils from the villages or country districts who wish to take a high school education attend the nearest gymnasium in the town or city where they are obliged to live for the whole school year. The inclusion of vocational subjects in the curriculum of the gymnasia, will, unmistakably, induce a larger number of boys and girls from villages, to continue their education in a practical field of learning which will prepare them for a definite line of work.

The organization of the Gymnasium Department of Agriculture should be simple and inexpensive as there is no farm required neither mechanical equipment for the practical training. The demonstration of farm methods and the project work of the pupils should be carried on their home farms or in the farms of the neighborhood. (1) The number of instructors that should be appointed in the agricultural department will have to be determined by the number of students attending the school. These instructors should have a general agricultural knowledge, a practical training and be able to inspire sympathy and confidence towards the profession of scientific farming. Primarily, the instructors must be well acquainted with the farming conditions of the territory and the problems of the community in which the school is located. Any gymnasia that have fruit trees and gardens on their premises should place their management under the agricultural department requiring the students of agriculture to devote a part of their time to

(1) Williams - Agricultural Schools, 1925.

such practical culture that may be counted as laboratory work. The pupils after gaining proper training in the school should be allowed to work on neighboring farms and put in practice the new principles that they have learned at the school. Such a work gives to the pupils an added interest and a responsibility in the management of the farm. While pupils show interest and take pride in work done at school they show even greater interest and take greater pride in work they do on the premises of farmers. (1)

The course of study in all agricultural departments of the Gymnasia should cover a period of four years. The agricultural work which is carried throughout each year should be complete by itself. (2) Forty per cent of the pupils' time should be given to intensive agricultural instruction, including the project work both at the department and at the pupil's home. The remaining 60 per cent of the school time should be devoted to liberal education and to the teaching of biological and natural sciences. The proportion of time given to agricultural instruction and project work, may vary from place to place according to the needs of the pupils and the agricultural industries of the community. If the gymnasium is located in a district where the growing of olives and grapes is impracticable the courses in these subjects should be much more limited than if the school is located in a locality good for live stock raising.

(1) Bulletin of the Massachusetts Board of Education, 1916, No. 23.

(2) Ibid.

We will not be concerned here with the course of study of the other departments of the gymnasia which offer liberal education to the pupils, as this would not be within the province of our undertaking, but we will attempt to outline below a model curriculum of studies for the Agricultural Departments which will be established in each of the Gymnasia throughout the country.

There are certain things which ought to be found in a well organized course in agriculture. The use of a textbook in the class room will be very useful to the pupils who will have to refer to it for many agricultural problems time after time. Agricultural bulletins, and other reference materials should be used freely at home and in the school. The department should have two laboratories for practical work required to be done in the department, although the project work will be always conducted at the pupil's home farms. Charts, maps, and pictures and collection of materials for illustrations should be found in every agricultural department of the Gymnasia.

The study of agriculture in the Gymnasia to be useful and practical should include the various forces with which the farmer has to deal. These forces, for our convenience, may be grouped in three large divisions: the biological, physical and economical. (1) The biological group includes everything that pertains to plant and animal life. Botany and physiology are closely related to this division and these sciences should be correlated with the agricultural instruction of the above

(1) Hatch, "The High School Course in Agriculture", Bulletin of the University of Wisconsin, No. 12.

subjects. The physical division includes agricultural technique, mechanical farm operations and soils. Instruction in physics and elementary chemistry should be introduced in the teaching of the items of the second division. The last division is concerned with farm management, marketing of products, bookkeeping, social and economic condition of farmers, community problems and home making, rural economics, rural sociology, courses in home-making and relative subjects should be taught to promote efficiency in the subjects of this division.

Following is an arrangement of work in agriculture and related sciences for the agricultural departments of the
(1)
gymnasias.

Agricultural Instruction

Academic Studies & Sciences

40 per cent of pupil's time

60 per cent of pupil's time.

FIRST YEAR.

Plant production

Botany

Vegetable gardening

Mathematics

Elective

Ancient and modern Greek

Agricultural Projects

Required and elective academic subjects.

(1) Massachusetts Board of Education, Bulletin No. 23; Hummel, materials and methods in High School agriculture; and, Ferris, Curriculum building in Rural High Schools.

SECOND YEAR.

Live stock production	Physiology
Insects	Entomology
Poultry and Dairying	Mathematics - Greek
Agricultural projects	Academic subjects.

THIRD YEAR.

Soils and crop production	Elementary chemistry
Orcharding	Biology
Plant diseases	Hygiene
Agricultural projects	Academic subjects

FOURTH YEAR.

Citrous fruits	Physics
Farm management	General science
Rural economics & rural sociology	Elective
Farm mechanics	Academic subjects
Agricultural projects	Community projects

(1)

The curriculum, flexible as it is, has been constructed to suit especially the needs of the agricultural communities. In certain localities where the provisions of the curriculum are inapplicable on account of climatic or environmental conditions, the course of study may be rearranged with the approval of the supervisor of the school. In case the new legislative decree, providing one more grade to the high schools, is put into operation, the first grade of the gymnasia

(1) "Curricula for Small High Schools" - Adams Jesse E., Indiana, 1924. "Curriculum Building in the Rural High School" - Ferris, E.N., School Review, vol. XXXI, 1923; Getman, A.K. - Vocational Education Magazine, May 1923, p. 657.

should be given a general course in elementary agriculture preparing the pupils to an advanced agricultural instruction in the upper grades of the school.

The project work should be carried throughout the four-year course in agricultural instruction either by individual pupils or by groups at home or at school. Individual projects should be conducted at home while projects which require a number of pupils as in carpentry, cement work, and building should be conducted at the school cooperatively. The project work has not been introduced before in any of the schools of Greece and for this reason special emphasis should be placed upon it. The pupils from the beginning should be encouraged to take a vital interest in projects which will put in practice the theoretical instruction of the school. The teachers should be acquainted with the needs of the pupils before assigning to them projects in the various agricultural industries. The cooperation from the parents and their consent in helping the boy to conduct his project at the home-farm, should be regarded as a vital point in winning their interest in vocational education. Model projects in the various agricultural industries will be found in Appendix II.

CHAPTER XII.

THE TRAINING OF TEACHERS OF VOCATIONAL AGRICULTURE.

1. Necessity for Training Vocational Teachers.

The success of the new educational agricultural system of Greece, will depend almost entirely on the teachers who must have both the proper training and the capacity to direct the work. The new system requires real men and women to vitalize the proposed agricultural movement. The organization, administration and course of study of the rural schools may be based on modern and sound scientific principles, but no other factor will raise the standards of vocational education unless we provide for better agricultural teaching. The new educational leadership demands teachers with broad scientific and academic preparation - men and women who have skill in their profession or in the practice of their vocation and who know the principles of modern science which at present begins to enrich the course of study in the schools.

The elementary schools of the rural communities of Greece have suffered on account of the handicap of poorly equipped teachers. The majority of them have neither professional nor vocational training. According to state requirements, elementary school teachers in Greece must have a school training "equivalent to two years of high school in this country and three years of normal training in addition." (1) These requirements have been

(1) Meers, "Greece of today" p. 233.

entirely neglected for the past ten years on account of the intermittent wars and consequently, a large number of poorly equipped teachers are to be found among the elementary schools of the country districts; and also in the schools of the cities. Teaching positions in Greece are not of permanent tenure; they are all under the jurisdiction of the Minister of Education. Teachers of elementary or secondary schools may be transferred from cities to country districts with little or no vocational education and in many instances without the slightest comprehension of the needs of country life and the special work to be conducted there; such teachers - and there is a large number of them - keep down the standards of efficiency.

With the new agricultural educational system to be introduced in the rural elementary and secondary schools of Greece, should be demanded a special training and definite qualifications for elementary and secondary teachers of agriculture. The training of both primary and secondary teachers should include:

1. A sound and practical knowledge of "all round" agriculture and a certain skill in its manifold operations.
2. Academic training in the sciences and humanities, for the appreciation of other subjects related to the vocation of the pupils and to society in general.
3. Personal quality that will command for the teacher respect from the population of the community, of which he should be the educational leader.

4. Ability to survey the needs of the community and upon the basis of his findings to establish the program of the school.
5. Ability to hold "a position of civic and social leadership in his community"⁽¹⁾ The teacher of agriculture must possess a spirit of optimism, common sense and enthusiasm for the vocation of farming, he should be an adviser to farmers as well as a teacher, he should recommend changes and improvements in projects undertaken by the community; by helping the farmers in the solution of the problems of the community, he will always have behind him a united public support.⁽²⁾

The agricultural teacher must be prepared to render special service to the community. The club work will be of no value to the pupils without the interest and enthusiasm on the part of the teachers he must also be trained to contribute direct service in the agricultural field; he must give expert advice on various agricultural problems and direct the project work of his pupils. Practical farm experience is necessary for the teacher, because the duties of his profession compel him to come in touch with the farmers in many ways as for example, farm demonstrations, agricultural practices, evening class work, club and project work, exhibition and farm conferences.

(1) Bulletin No. 27, Federal Board of Vocational Education.

(2) Federal Vocational Education, Bulletin No. 129.

The duties and the original training of the teachers of the secondary schools as compared to the teachers of the elementary agricultural schools are outlined in the following section.

2. Original Training of Agricultural Teachers.

The schools of learning which are organized for the purpose of training teachers, are social institutions set up by the society for the promotion of existing educational standards. The purpose of teacher-training institutions, whether these are associated with colleges, Normal schools or High Schools, is one that may be expressed in general terms and which applies to all schools regardless of academic standing; this purpose is clearly set forth by the Federal Board of Vocational Education as being "the turning out of teachers qualified to find in the service of agricultural teaching a true calling, capable of adaptation to changing demands and capable of growth in satisfaction in such adaptiveness"⁽¹⁾. In the United States, teacher-training departments for rural teachers have been established in Agricultural Colleges, Normal Schools and Secondary Schools;⁽²⁾ teacher-training departments for teachers of secondary schools are usually found in Universities or Colleges which have schools or departments of education and in Agricultural Colleges which have or may not have departments of Education.⁽³⁾ In Greece, teachers of gymnasia are always graduates of universities or colleges. The training of agricultural teachers for the rural

(1) Federal Board of Vocational Education, Bulletin No. 90.

(2) Focht, The Rural Teacher and his Work, p. 104.

(3) Federal Board of Vocational Education, Bulletin No. 90.

schools of Greece will follow, as far as possible, the American system of teacher training departments in the colleges and institutions of secondary rank.

A. Training Teachers for Rural Elementary Schools.

The purpose of Normal schools in Greece has been up to the present time, the academic training of teachers for all schools. The course of study of the Normal Schools is not available to the writer, but from unofficial resources it is known that the curriculum of the schools provides little if nothing for the vocational training of the teachers. In order to turn out agricultural teachers capable to direct vocational work in the rural schools, the normal schools must be either reorganized or developed by the addition of an agricultural teacher-training department. In general, the normal schools must adapt themselves to the prevailing condition of the region in which they are located and respond to the needs of the population. In urban centers where there is no immediate need for reorganization of the course of study of the school, special courses for students may be added in the curriculum to meet the demands for vocational instruction. In agricultural sections of the country, the normal schools must make such arrangements in the course of study, as they may seem to be of greatest assistance in the preparation of rural teachers.

The training of rural teachers in the gymnasia should be also encouraged, because the number of normal schools already organized in Greece, is not well distributed in all parts of the country. The practice of training teachers in the high schools has been in force since 1834 and has been adopted by many States in this country. A majority of the high schools in which teacher

training is given as part of the regular course require four years of work for graduation leaving most of the professional work for the last year, when these subjects are taken in lieu of other academic subjects".⁽¹⁾

The course of study in normal and other secondary school departments should emphasize (1) subjects in practical and commercial agriculture (2) special methods and management of rural schools, and (3) problems related to community life. Model rural schools may be established near the teacher-training departments for the student teachers in the training classes.

The curriculum distribution in the course of study of the teacher-training departments should be:⁽²⁾

Agriculture	50 per cent
Science	20 "
Humanistic	10 "
Professional	10 "
Electives	10 "

B. Training Teachers for Rural Secondary Schools.

The preparation of teachers for the gymnasias and other rural secondary schools, should be done in agricultural colleges, and in normal schools offering advanced courses in agriculture and related sciences. The course of study of the teacher-training departments of these schools should include:

(1) Focht, "The Rural Teacher and his Work", p. 109.

(2) Federal Board for Vocational Education, Miscellaneous No. 529.

1. Studies in Agriculture.

- a. Animal production
- b. Plant production.
- c. Farm methods and business
- d. Agricultural engineering
- e. Special farm problems to be met with in certain regions.

2. Studies in Sciences related to Agriculture.

- a. Physical and biological sciences.
- b. Advanced studies in sciences "for students who expect to teach science in the high school as an additional duty".⁽¹⁾

3. Rural Social Studies.

- a. Agricultural Economics
- b. Rural sociology
- c. Problems of rural communities.

4. Studies in the improvement of teaching.

- a. Organization and administration of the Rural School
- b. Professional training of the teacher.
- c. Planning of typical courses in vocational agriculture.

The curriculum distribution in the four year course of study of the teacher training-departments in the agricultural colleges should be:

Agriculture	40 per cent	Science	25 per cent
Humanistic	15	"	Professional 15 per cent
		Electives	5 per cent.

The above distribution of the curriculum has been suggested by the recommendations of the Federal Board of Vocational Education⁽²⁾ and has been constructed purposely

(1) Federal Board of Educational Education, Bulletin No. 90.

(2) Ibid., Bulletin No. 93.

flexible, to meet the farming conditions of the various territories of Greece.

3. Training Teachers of Vocational Agriculture in Service.

There is a general recognition at present of the need for better training of teachers in service before any real improvement can be made in the technique of teaching. Many States in this country have worked out various schemes in training their teachers of vocational agriculture in service. It has been found that many new teachers graduating from courses in agricultural education are not fully prepared to make a success of their teaching profession. ⁽¹⁾ If this is true of the teaching of literature, mathematics and similar subjects it must be more so with courses in vocational agriculture. A great variety of problems arise in rural schools directed by teachers who for the first time come in touch with the problems of teaching. In many such cases, it is important that the teacher be guided in his work and be given an opportunity to improve his professional capacity while in service.

The training in service of the school teachers in Greece consists merely of the visits of the District Supervisor twice a year, who examines the condition of the school buildings and materials and sees that the educational regulations of the country are observed. His visits are not concerned with the professional improvement of the teachers in training in service. This explains why a large number of the teachers in the elementary schools of Greece are poorly equipped and unfit for agri-

(1) Federal Board for Vocational Education, Bulletin No. 135.

cultural vocational work.

A number of methods of training teachers in service have been put in operation in the United States that may be profitably introduced in the school system of Greece. These methods that may be effectively employed by the Greek Ministry of Education are grouped as follows: (1) Meetings and Conferences of teachers, (2) visitation by supervisor or itinerant teacher trainer, (3) training courses, (4) extension or correspondence courses, and (5) professional books, bulletins and other literature.⁽¹⁾

1. Meetings and Conferences of Teachers.

The purpose of holding meetings of teachers of agriculture, is the exchange of ideas on practical educational issues and the development of plans for improved work in the classes and the laboratory. In these meetings, lectures, demonstrations, papers and discussions by vocational teachers should play an important rôle. Such educational meetings may be held in different parts of Greece and may take the form of sectional or general meetings. When sectional, they should be attended by the teachers of one only prefecture and should hold meetings in the various parts of that department. Teachers should be compelled to attend at least one of these meetings each year. The general meetings should be attended by teachers belonging to each of the 20 educational departments to which the whole of the country is divided. The general superintendent of the schools in Greece should be in charge of the teachers' meetings.

(1) Ibid., Bulletin No. 122.

2. Visitation by Supervisor or itinerant Teacher Trainer

The practice of visiting the teacher to be trained is common in all European and American school systems. It is important from the point of view of the smooth organization of the school as well as of the professional improvement of the teacher. In Greece the nature of the supervisor's visits is designated primarily as supervisory with no attempt for a closer participation in the training of teachers. The new vocational agricultural system of Greece will require trained and experienced supervisors to help the teachers in their work. The method of employing an itinerant teacher trainer to visit the teachers who are in need of help and improve their work through advice and demonstrations, will be of inestimable value if adopted by the Greek Ministry of Education. According to this system, the number of itinerant teachers to be appointed should depend upon the population and the number of schools established in each prefecture. The length of visits of the itinerant teacher should vary from one to seven days, and his work should deal with "improvement in teaching technique, planning of course of study, organization and management, projects and study".⁽¹⁾ Visits should also be made by the staff of the Prefecture Board for Vocational Education and by local authorities.

3. Intensive Training Courses.

The best time of the year for offering such courses is the summer. The length of the course may be arranged by the district supervisor, but it usually varies from three to six

(1) S. Dickinson, Training in Service for Teachers of Agriculture, 1923.

weeks. The attendance in the summer school course should be optional; it should be compulsory only for the beginners or for those who are in need of help. The summer course should be held at a teacher-training school where there are many facilities for class work and demonstrations in the field. The purpose of the course should be the improvement in teaching methods, planning of course of study, and general management of the school. Demonstrations, field observations, discussions on selected topics and reports should be the main means of training.

4. Training through Extension or Correspondence Courses.

Such courses when offered should be correlated very closely with the work which a teacher is doing, "so that his correspondence study becomes a part of the preparation he should be making for his daily classes." This system may not be of immediate value to Greece, but it will be of advantage to teachers wishing to make credits for an advanced degree or diploma. (1)

5. Training through Books and Publications.

Publications in mimeographed form with interesting educational articles and a bibliography of new books, is a means of keeping the teachers up to date, of advancing and of advising them how to attack new difficulties. News letters should be sent to the teachers at least every four weeks and personal letters should be employed in giving suggestions when occasion demands. (2)

(1) Federal Board for Vocational Education, Bulletin No. 155, 1929.

(2) Department of Interior, Bureau of Education, Circular No. 18, 1919.

CHAPTER XIII.

SUPERVISION.

1. Supervision of Vocational Agricultural Education.

Adequate supervision is one of the two most important factors in the success of a state program of vocational education; the other factor is proper teacher training. By supervision is meant the improvement of the school program in a broad sense, including the improvement of teaching and the assisting of school boards in their educational work. This is most clearly shown by the two main duties of the supervisor which are: first, the improvement of teachers who are already in service and second, the assisting of communities which are interested in the promotion of vocational education in the schools. According to this definition, the supervisor is an advisor to the community and to the teachers by setting before the former the possibilities of vocational agricultural instruction and by assisting the community boards in organizing satisfactory schools and courses in agriculture. The new agricultural educational system in Greece in order to succeed, it will require an adequate system of agricultural supervision. The second part of the chapter will deal with the organization of supervision in Greece, while it would be profitable here to state the qualifications and responsibilities of the supervisors of the rural schools of the country.

The qualifications of the supervisors of vocational agricultural education, according to Wright and Allen⁽¹⁾ are divided

(1) "Supervision of Vocational Education", - Wright and Allen.

into three groups, the first comprising functioning information to promote the work of supervision, the second group including professional ability, and third providing for personal characteristics necessary for a supervisor.

The duties and responsibilities of the supervisor of vocational agricultural education are many, but they may be summarized for convenience in three large groups.

1. Promotion of Vocational Agricultural Education.

Many communities in Greece are in need of vocational education, but they are unable to suggest for themselves improvements in the course of study in the schools, unless they have the expert opinion and advice of the supervisor. He is in position, through supervisory contacts, to suggest how the community may obtain a vocational school or department, to arrange exhibits and contests and to direct the educational work of his district.

2. Supervision of Vocational Agricultural Instruction of the School Population within the district.

In this phase of work the supervisor should prepare his plan for supervision, visit the schools, assist in the formulation of programs and make suggestions with regard to instructional material and project work of the pupils. "Follow up supervision" of the project work of the pupils in the rural schools is one of the important duties of the supervisor.

3. (a) Itinerant teaching in the most important school centers of the districts; and (b) promotion of a program for the improvement of teachers in service. (1)

(1) National Society for Vocational Education, Bulletin No. 35.

Under the new system of vocational education in Greece, the supervisor will be expected to cooperate with the teachers in the formulation of the program of study including seasonal outlines of lessons, job analyses, suggestions for project work in the various agricultural industries and temporary supervision of club work.

The promotion of the problem for the improvement of teachers in service becomes more effective through a close personal relationship between the supervisor and the teachers of vocational education. In Greece, the defective system of supervision reduces the state of personal relationship in a form of official duties, and the supervising responsibilities of the supervisor call for ordering but not for advising and assisting the teacher in his work. The supervisor of vocational education should go to the school and get acquainted with the teacher, talk over the problems of the school, provide the teachers with suitable forms and guides for the work of the class and become intimately acquainted with the problems which the teacher is facing. This is the surest way of securing a transmission of ideas from the supervisor to the teacher.

The foregoing discussion of the duties and responsibilities of the supervisor of vocational agricultural education, shows the serious problems which are related to the supervisory field.

2. Organization and Distribution of Supervision.

In the fifth chapter we have already spoken about the existing supervisory system in Greece. The General Council of Public Instruction is the highest supervisory unit of the school

system in Greece. Up to the present time, the Council has been concerned with the elementary and secondary schools. With the introduction of vocational agricultural courses in the Public Schools of Greece, the Council in its supervisory function should divide itself into three sections, the elementary, secondary and vocational school section. The present discussion will be concerned only with the section of vocational supervision. Greece, according to the existing public educational system, is divided into 85 supervisory districts. The school population included in these districts varies according to the urban or rural sections of the country. Vocational agricultural supervision should be carried over those districts in which the public elementary schools register a large number of rural children and where courses in agriculture and allied sciences are offered. In urban districts vocational supervision should be carried on in industrial and other vocational schools, as well as in departments of agriculture established in gymnasias. The vocational agricultural secondary schools should be temporarily under the jurisdiction of the supervisory unit of the district. The direct supervision of all schools that offer course in agriculture should be in charge of the District Supervisor of Vocational Agricultural Education.

The Supervisor will deal with many problems in his district; he will have to orient himself with the agricultural conditions of the territory under his jurisdiction, make an educational survey to determine the needs of the population, ask for the cooperation of the district's communities and devote the rest of his time to the teachers and their work. (1) The

(1) Supervision and the Improvement of Teaching, W. Barton, 1922.

agricultural supervisor should arrange his itinerary so that he can visit at least twice a year all elementary agricultural schools, vocational agricultural secondary schools and departments of agriculture in the gymnasia. The district supervisor in his visits should examine the condition of the schools, suggest arrangements for the class-room and laboratory and arrange for the provision of demonstration material which may be purchased or collected in the community.

With regard to the training of teachers in service, the agricultural supervisor aided by an itinerant teacher will make the following arrangements each year. (1)

1. Send a letter to teachers informing them that they will be subject to visitation by a member of the teacher-training staff.
2. Arrange all details for meetings and conferences of agricultural teachers within his district.
3. Make arrangements for summer courses and individual training courses.
4. Cooperate with the Extension service of the prefecture for teacher-training courses through extension or correspondence.
5. Make the necessary provisions so that "news letters" may be sent to the teachers at least once a month.

In each district there is at present a Superintending Council composed of the director of the gymnasium, the oldest judge in service, the supervisor and two other members, one of whom is a professional man and the other a business man. In

(1) Federal Board for Vocational Education, Bulletin No. 122 and 135.

districts with predominating rural population, the membership of the district Council should be increased by the addition of two more members who are either successful farmers or deeply interested in the development of the agricultural resources of the country.

Besides the supervisory division of the country in 85 districts, there should be established also ten General Supervisory Departments, in each of the ten territorial divisions of the country. Each of these divisions has its own special agricultural problems and corresponding agricultural educational needs which could be efficiently solved by the Supervisory Departments, under the jurisdiction of which should come the district units of supervision. A general supervisor of vocational schools should be appointed for each department. He should have:

1. The general supervision of vocational education in his department.
2. Supervision over the work of the district agricultural supervisors and supervisors of other vocational schools in the cities of his department.
3. Supervision of the elementary and secondary vocational agricultural schools.

The general supervisors should be subject to the General Council of Public Instruction, appointed by the Minister of Public Education through its recommendation.

P A R T III.

C H A P T E R XIV.

EXTENSION WORK IN THE RURAL SCHOOLS.

1. Object of Extension School Work.

The main object of agricultural extension work carried outside the school is the vocational education of the boys, girls and in general of farmers who come under its influence. It intends primarily to improve the practices of agriculture and the farm home of the people who are not in touch with the school. The work therefore is vocational and educational. According to the Smith-Lever Extension Act, the object of the cooperative agricultural extension work is "to aid in diffusing among the people of the United States useful and practical information on subjects relating to agriculture and home economics and to encourage the application of the same"⁽¹⁾. The extension work is an agency which cooperates with the school in its endeavor to diffuse practical knowledge and useful information among the people living in the country districts. In this way the extension work supplements the rural school and endeavors to reach people that are not reached and cannot come under the influence of the school.

In Greece, no attempt has been as yet made for co-operative extension work in the villages or the country districts. In Europe, many countries notably among them, Denmark, Scotland, Belgium, Sweden, Germany, England and Wales, Spain, and France

(1) U.S. Department of Agriculture, Circular No. 85.

have introduced various forms of agricultural extension activities, to help their farmers improve the farm methods and the home living conditions. Greece needs this system; it is practical, easily organized and far reaching in its results. The work of the rural schools in the villages in Greece will carry the pupils to the end of the thirteenth or fourteenth year. There are two important questions to be considered at this point. First, the practical work which must be done by the pupils of the last two grades outside the school and the rôle of the teacher in the farm activities of the boys and girls; and, second, the things to be done for practical education of the large number of pupils who graduate from the elementary schools and the pupils who drop out of the school before they reach their thirteenth or fourteenth year.

The United States Department of Agriculture has solved these problems by introducing the extension work as supplementary to rural school instruction in the farming districts of the country. The Greek Government imitating the example of the United States must introduce in the country various forms of agricultural extension work such as boys and girls' clubs, young farmer's clubs and agricultural extension courses.

2. Boys and Girls' Agricultural Clubs.

Club work is a part of the general system of extension work provided for the boys and girls interested in small agricultural enterprises. It was organized for the purpose of teaching young people agriculture and for obtaining their cooperation in farm and home improvement. Every member who belongs to these clubs is required to demonstrate some better farm or home practice

and show a vital interest in the work which he has undertaken. The work of the clubs is both vocational and educational; it promotes agriculture and home economics, and at the same time it develops the character of boys and girls training them to become leaders in their community.

Club work will find a hospitable place in Greece because it fits in with the educational needs of the country districts, by reaching the boys and girls, who for various reasons have dropped out of school, and by giving them vocational instruction and practical training in the branches of agriculture in which they are interested. The organization and financial support of the club work should become a part of the Hellenic system of public education. The work of the club should be so organized as to stimulate the interest of the Greek boys in the education given in the schools and at the same time induce the boys and girls of the rural districts to prolong their attendance at the schools. Club work will be very successful in Greece because all children in the rural communities and in the farm homes are living in the midst of an agricultural environment full of farm practices and operations with which they are more or less familiar. From an early age they have been accustomed to observe the various farm operations, the wheat planted, the olives picked and crushed, the raisins dried and the cows pasturing on the meadows. The club work in this case will not teach them anything new, but it will endeavor, with adequate instruction to "teach both the adults and the children better ways of doing the things they are already doing, and to give them a broader interest and intelligence in dealing with their farm and home problems".

spirit of cooperation. The club more than anything else will afford another opportunity for the development of leadership among farm youth, a quality which is so needed in the ^{rural} districts of Greece.

Club work may be also organized with rural young people above 4th Club age. These farm boys whose ages are usually between 18 and 24, may be old enough for club work but not in position to take actual responsibilities in the farm. The organization of "young farmer's clubs" which has already been started in many States of the Union, will be realized in Greece only after the Extension Service has been established.

3. Training Courses for Club Leadership.

The organization of club work in order to produce practical results must be aided with an efficient training program. Local leaders must be trained to be in a position to promote the work of the agricultural clubs. In Greece, the question of local leadership will meet with many difficulties on account of lack of leaders. The problem of training courses for local leadership must be of paramount importance to Greece, if an adequate system of club organization is attempted for its rural districts. Local volunteer leaders should come year after year from the villages to serve for the development of the clubs, but the State should provide for them an adequate agricultural training. ⁽¹⁾ In Greece, such a training program may come from the following agencies.

1. Agricultural Colleges and Secondary Schools.

In these institutions should be offered courses in rural sociology and rural leadership. In similar social

(1) Foster, R.C., How shall 4th Leadership be trained?

sciences the factor of rural leadership should be strongly emphasized in connection with club movement, the boy and girl scouts, community organizations and general projects of improvement.

2. Local Training Schools.

One day school training is usually suggested for local leaders who can attend training schools in convenient places. In Greece, the leaders of a province may meet in a designated village school where the special training course should be offered by the supervisor's training staff. The content of such courses should be typical of problems in agriculture, community improvements history and development of agricultural education, club organization, ideals and standards of club work and agricultural demonstrations.

3. Personal visits by Supervisor, Teacher and Local Leaders.

The making of visits to club members for the encouragement of their work, is another means by which improvement in the club organization may come about.

4. District Training Courses.

Arrangements may be made so that a number of local leaders and adult club members may attend the training courses offered at the campus of a vocational agricultural school for the development of the club work. Such training courses can be effectively given in Greece only after the club work has been organized over a period of some years.

Any of the methods stated in the foregoing discussion will be instrumental in affording an opportunity for training in

leadership for club work. But such training is necessary for the organization of efficient agricultural clubs throughout Greece.

A. Agricultural Extension in Greece

The first step in the organization of agricultural clubs in Greece is the selection of the area to be covered. This should be done on the basis of the needs of the people and the resources available. The area should be small enough to be managed effectively but large enough to be economically viable.

The second step is the selection of the club members. These should be chosen on the basis of their interest in agriculture and their ability to contribute to the club. The club should be organized on a democratic basis, with all members having an equal say in the club's affairs. The club should have a clear purpose and a plan of action.

The third step is the organization of the club. This should be done on the basis of the needs of the members and the resources available. The club should have a clear structure and a plan of action. The club should be organized on a democratic basis, with all members having an equal say in the club's affairs.

B. Training of Agricultural Club Leaders

1. Selection of leaders
2. Training of leaders
3. Selection of leaders
4. Training of leaders
5. Selection of leaders

CHAPTER XV.

EXTENSION TEACHING AND ADULT EDUCATION.

1. Scope and Character of Extension Teaching.

The main principle of the cooperative ^{Extension} work, is the attempt on the part of the State to reach large numbers of adults farmers and to teach them better farming methods through demonstrations in their own farm-homes.

The character and purpose of extension teaching endeavors to improve the standards of living of the people who live on the farms, by demonstrating how homes may be made attractive and comfortable, and how farm practices may be improved. The whole system of cooperative extension work consists of objective lessons conducted by farmers who follow the instructions of county agents.

A general classification of the activities of the extension work has been formulated by the committee on extension work of the Association of American Agricultural Colleges and Experiment Stations, showing the scope and extent of extension teaching. This classification includes in general the following:

A. Formal Teaching - consisting of:

1. Reading courses
2. Correspondence courses
3. Movable schools
4. Demonstrations on farms
5. Agricultural clubs of all kinds.

B. Advisory Teaching - consisting of:

1. Farmers' institutes and conferences
2. Itinerant teachers, field agents, etc.
3. Agricultural literature, including leaflets and bulletins.
4. Demonstrations, contents, exhibits and fairs.

C. Cooperative extension work - including:

1. Conferences and meetings on rural progress
2. Cooperation with other organizations, chambers of commerce, etc.

The foregoing discussion gives a brief outline of the cooperative extension work in the United States. It will be our concern here to show what forms of the extension service system may be successfully introduced in Greece. The new organization of the Greek Ministry of Agriculture provides for the establishment of a Department of "Efarmogis"⁽¹⁾ meaning "application", based on the general principles of the extension service work. Until the present time the extension work in Greece, consists mainly of travelling agents from village to village, whose purpose is to help the farmers in their work and make propaganda for modern agricultural practices. The Government has made no provision as yet for club organization of any kind. It will be our purpose here to suggest a few forms of agricultural extension teaching which will be adaptable to the social and economic make up of Greek agriculture.

(1) Bulletin of the Greek Ministry of Agriculture - Legislative laws, August 1929.

2. Organization of the Extension Service in Greece.

The Greek Ministry of Agriculture by establishing the department of "Efarmogis", realizes the great need of re-organizing agricultural instruction in order to help the farmer assume a new attitude toward himself and his business.

The new scheme of agricultural education in Greece will be more successful when at the same time cooperative extension work is organized for the country districts. By accomplishing a general reform of the practical education in Greece, the Government will be in a position to get a new focus on agriculture and its problems.

All extension activities should be placed under the jurisdiction of the Department of "Efarmogis" connected with the Ministry of Agriculture. Greece is divided into 40 agricultural sections, each one presenting uniform agricultural and climatic conditions and common economic interests. In each section is organized an agricultural Council at the head of which is a supervisor who directs the various agricultural projects undertaken by the Council.

The regional administration of the extension work should be placed in the hands of the agricultural council in each section. In each council there should be appointed, by decision of the Ministry of Agriculture, an agriculturist who will direct the various activities of the cooperative extension work. The chief of extension service in each agricultural section of the country, in order to promote the various forms of extension activities should be aided by a group of agricultural extension

agents whose number should be determined by the number of administrative provinces in each section. They must be practically trained agriculturists having graduated from an agricultural school of at least secondary rank. The Ministry of Agriculture, during summers or other periods of the year, should open intensive courses in agriculture in the various agricultural schools, for training agricultural experts who are to be employed as extension agents in the provinces of the country.

In addition to the agents, the Department of "Efarmogis" as the central and coordinating office of the Extension Service in Greece, should employ a number of advisers, general farm advisers, live stock advisers, animal and fish-breeding experts, orchard experts and home advisers, who may be attached to the central department, but whose duty will be to travel in the agricultural sections of the country and assist in the work conducted by the agricultural agents. These experts and advisers should be also instrumental in promoting various agricultural industries and other projects that require experience and more scientific knowledge.

3. Farm Demonstrations and other Extension Activities.

Under this heading we shall discuss the various forms of extension work that may be successfully adapted to the agricultural conditions in Greece.

A. Farm Demonstrations.

The most important and by far the most useful form of extension teaching is the farm demonstration. Demonstrations are objective lessons and when conducted by extension agents they serve to prove the truth of the lesson which they teach.

They deal with problems of the community, of the individual farmer, and of the home maker. ⁽¹⁾ In Greece, the demonstrations, when properly conducted, will contribute considerably in the change of the conservative ideas of the rural people in trying out new things for the improvement of agriculture. Such demonstrations must attract the interest of the people and they must be conducted on problems that are vital to the economic interests of the farmers. The agents before starting demonstrations, must make known and advertise their purpose by meetings, bulletins, newspapers or other means which seem advisable to them. In many cases the demonstrations should be repeated in order to produce effective results. In view of the fact that at these demonstrations the largest percentage of the attending Greek farmers will be either illiterate or with inadequate schooling, the practice demonstrations should be simple and devoid of factors that would make them difficult and incomprehensive to farmers bound by old ideas and customs. When the first results are satisfactory, farm demonstrations will become more popular because the people will have more faith in them. In general, farm demonstrations will be adapted more easily to Greek agriculture when they deal with vital farm problems, when they present a solution which is practical and easy of application.

B. Home Management for rural Women and Girls.

The home of the farmer must be as attractive as the home of the people who live in the cities. Home demonstrations will be as necessary for the rural districts of Greece as farm

(1) Smith, C.B., United States Department of Agriculture, Cooperative Extension Work, 1924, with 10 year review.

demonstrations which are explained in the foregoing discussion. Only a small percentage of the women in the villages are able to read and write; consequently, the extension work in order to be carried over by the home demonstration agents must be practical and must fulfill an immediate need. The women should form groups or clubs for the purpose of studying home-making problems.

Temporary or itinerant courses in home management should be organized for young country girls who have finished the compulsory primary school but are not able to attend regular schools. (1) An average period (of about 15 day courses) should be organized yearly in all provinces of Greece with the cooperation of the agencies of the Extension Service. These courses should be held in the buildings of agricultural schools or conducted according to the itinerant system. The instruction given in these courses should include the care of poultry and hogs, the kitchen garden, child hygiene, health subjects and dress-making and upholstering courses.

The organization of rural women's associations should be encouraged by the Ministry of Agriculture in all parts of Greece. Owing to the fact that a large percentage of women are engaged in rural occupations, the object of the rural women's associations would be to aid the farm women to perform their part in the home and on the farm more intelligently and with greater interest.

C. Young farmers' Clubs.

Young farmers' clubs have been organized under various names in most of the European countries and in the United States. (2)

(1) Extension Service Circulars No. 44, 62, 67.

(2) Ibid., No. 33, 62.

Club work has not as yet been started in Greece and the organization of young farmers' clubs should be encouraged by the Extension Service. The object of the clubs should be the awakening of interest in the business of farming through the organization of competitions in vegetable growing, plowing, milking, home industries and other farm work. In each village there should be organized at least one local group designated by the name of a person or locality for distinction from other clubs. The members of these clubs should elect their officers who will be ^{the} leaders in all projects undertaken by the club. The local central administration of the clubs should be vested in a board of efficient farmers in each village, who, with the cooperation of the extension agent, will have the general supervision of the affairs of the clubs.

D. Other Extension Activities.

Under this heading we may include all other forms of extension work, which may be included in the official program of extension work or sponsored by the initiative of the field extension agents. Under this group may come:

1. Courses in agriculture for young peasants.
2. Correspondence courses in agriculture
3. Exhibitions, contests and fairs.
4. Instruction for farmers through the radio.
5. Development of farm bookkeeping.
6. Conferences and meetings.
7. Evening schools for adult farmers.
8. Boys' and girls' agricultural clubs.

Specifically, the organization of the boys' and girls' clubs will be at first a part of the public educational system of the country, but when the establishment of the Extension Service will be fully developed, the administration of the clubs may be transferred to the Department of "Efarmogis".

4. Extension work in Rural Community Organization.

A careful examination of the social conditions of the average rural community in Greece, will reveal the fact that there has never been given the slightest attention on the part of the State or the community members themselves for any projects in rural community organization. Greece at present, goes through a process of national organization and transformation in her industries and agriculture. Consequently, rural community organization should receive more and more attention on the part of the State and the extension service workers. In fact, the Extension Service in Greece should consider the problem of rural community organization as one of the most important projects in its program of rural extension work. The regional extension offices in the agricultural sections of the country should work out each year a program, by which all members of the community will cooperate in working out together various kinds of community activities. The Central Extension office should employ a specialist whose duty should be to supervise the various community programs suggested by the regional extension offices and aid in putting across all other projects that deal with community improvement.

A typical program of rural community organization should include the following projects:

1. Rural Social Organization.

The first attempt for rural social organization should deal with the material needs of each community. ⁽¹⁾ The best local contracts should be made to ensure successful results. Among the activities should be included the building of a community house, construction of good roads, beautification of the school, the church, the parks and other public places, organizations of clubs and associations, and the securing of fire engines for the village.

2. Community Civics.

Under this heading we may classify other activities that may be undertaken cooperatively by the members or the existing organizations of the community. They include, schemes for the improvement of education, problems in community administration, health subjects, cooperative extension work, training for leadership, religion, holding of conferences and other activities in which the community is interested.

3. Community Recreation.

Rural recreation is often instrumental in breaking down conservative and individualistic attitudes on the part of many farmers. This is true among the Greek peasants. A recreational program should include indoor and outdoor games, contets, fairs, pageants, plays, singing and music, picnics during the summer, and other forms of entertainment.

The above program of community organization may be modified to meet the needs of the community and the efficiency of organization of its members.

(1) Extension Service Circular No. 43.

SUMMARY AND CONCLUSIONS.

The new scheme for the instruction of agricultural education in the public schools of Greece discussed at length in the foregoing chapters of this treatise, is by no means complete and ideal in all its respects. The writer, from the outset has pointed out the difficulties and the limitations under which he was laboring. The new system of agricultural education follows closely but with many modifications the agricultural school system of the United States. It may be that many more modifications will have to be made when the new scheme for agricultural education is put in operation in the public schools of Greece and it is probable that in the years to come better and more comprehensive studies will be made upon the same subject. The present study, without being conclusive, marks only the beginning of the trend of thought in a new field of Hellenic education. The new system of agricultural education, therefore, may have limitations that are unavoidable in any studies made under similar circumstances.

Our critique of the existing public educational system in Greece has showed that the most serious drawback of the schools, is the defective curriculum which requires almost all school population of the country to take one prescribed uniform academic course with no electives. The same academic curriculum is applied to all elementary schools of the country districts, with no provision for agricultural instruction when it is officially

stated that 94 per cent of the graduating classes of these schools discontinue their studies in order to work in the farms or other jobs.

With 65 per cent of the population employed in agricultural occupations and with no provision for agricultural instruction in the schools of the villages, the need of a new rural school system becomes imperative. The rural schools of the country districts should be equipped to teach vocational agricultural education. This movement could be realized by bringing about a change in the general curriculum for the rural schools of the country. The new curriculum, enriched with vocational agricultural subjects and having as an objective the practical training of the pupils for the vocation of farming, would be applicable to all schools, and especially to schools in the villages and rural sections of the country.

The most important provisions made for the new rural school system may be summarized as follows:

1. The first four grades of the elementary schools in the villages and towns should be given courses in nature study as a subject pre-vocational to agriculture.

2. The fifth and sixth grades, corresponding to 7th and 8th grades in the United States, should be given courses in elementary agriculture. The subject matter in these courses should be, in reality, nature study coupled with economic considerations. The home project work may be begun in these grades.

3. Agricultural instruction for the schools of secondary education. A distinction is made here between vocational agricultural high schools which will give to pupils purely vocational education and the gymnasias which will organize

departments of agriculture for students interested in advanced agricultural education. Both types of schools are provided with adequate and up-to-date curriculum of study.

4. Original training and training in service of teachers of vocational agriculture. Provision is made for special training and definite qualifications for elementary and secondary school teachers.

5. A new plan of supervision is suggested to meet the needs of the system of agricultural education, including the improvement of teaching and the assisting of school boards in their educational work.

6. Agricultural educational agencies working outside the school such as boys' and girls' agricultural clubs and various forms of cooperative agricultural extension work intended for adult education.

The study of the new agricultural educational system in Greece, takes a step forward in the agricultural reform of the country and it represents a timely movement. Greece, stands now at the threshold of a new era, full of possibilities for creative work and well provided with examples that can teach the people new duties. The agricultural program sponsored at present by the Greek Government, intends to reorganize the various agricultural industries of the country and introduce new and better practices in agriculture among the farmers, but all these measures of reform will deal with adult farmers, with peasants who have already been accustomed to antiquated agricultural technique, so that it is difficult for them to change. To introduce reforms one must begin especially with children. It is easier to make

changes and direct the thought of the child at an early age than it is at a time when habits have already been established and are difficult to change or to eradicate. The new system of agricultural instruction in the public schools of Greece will endeavor to redirect the pupil's thoughts into a definite line of constructive work, and it will aim at building a strong agricultural population.

The development of agriculture is a national question and the progress that may be realized at a certain time will depend almost entirely upon the efficiency of plans that intend to promote the social and economic conditions of the people who live in the country districts. Agricultural educational schemes that spur the farmers to action, that are inducive to making the vocations of farming profitable and desirable and that endeavor to improve the living conditions of the people, play the most important rôle in the development of a nation's agriculture. The new system of agricultural education aims to accomplish the above ends in Greece. It will take time to improve the country thoroughly; but it is true, on the other hand, that slowly but surely a new rural population will rise that will mark the beginning of a new era leading to a civilization comparable to that of the most developed countries in the world.

APPENDIX I.

I. CURRICULA OF STUDIES IN AGRICULTURAL SCHOOLS

A. Vocational Education at a County Agricultural School. (1)

Intensive training 80 per cent of the pupil's time	Extensive 20% of the pupil's time
<p>(1) 50 per cent in project study and project work, centering on:</p> <p>A. Projects of the pupils.</p> <p>a. At home, as a rule</p> <p>b. At school rarely</p> <p>c. Pupil responsible supervised by instructor.</p> <p>B. Projects of the school</p> <p>a. Illustrative of well-proved methods</p> <p>b. Trial as to adaptability of proposing methods, crops, etc. to local conditions.</p> <p>c. School responsible in group projects.</p> <p>C. Substitutes for projects</p> <p>a. Work on approved farm, with agreed upon educational duties.</p> <p>b. Work on the school farm with duties.</p> <p>c. Employer chiefly responsible, but supervised by the instructor.</p>	<p>(2) 30 per cent related study correlation with project work and study of the following subjects of instruction.</p> <p>Farm arithmetic</p> <p>Farm biology</p> <p>Farm Physics</p> <p>Farm Chemistry</p> <p>Farm Entomology</p> <p>Farm veterinary science</p> <p>Farm drawing</p> <p>Farm shop work</p> <p>Farm typewriting</p> <p>Farm accounts</p> <p>Farm journal reading</p> <p>Agricultural economics.</p> <p>20 per cent cultural and good citizenship, training in such as -</p> <p>English</p> <p>History</p> <p>Citizenship</p> <p>Government</p> <p>Economics</p> <p>Drawing, free-hand and mechanical.</p> <p>Hygiene and physical training.</p> <p>Music</p> <p>Recreation</p>

(1) Massachusetts Board of Education, Bulletin No. 72, 1916.

(1)

B. Vocational Education in a High School Agricultural Department

Intensive training 50 per cent of pupil's time	Extensive 50 per cent of pupil's time
Project study and project work correlating on:	Cultural and good citizenship training, selected from one or more of the regular high school courses, and dealing with such subjects as -
(1) Projects of the pupils	English every year
a. At home as a rule	
b. Near home occasionally	
c. Pupil responsible but supervised by instructor	Social science, including community civics and economics
(2) Projects of the Departments	Natural science, including elementary science, biology, physics and chemistry.
a. At the high school rarely	
b. Neighborhood demonstration	
c. Instructor responsible, but uses projects for group instruction in observation	Drawing freehand and mechanical.
(3) Substitutes for Projects	Shop work
a. Work on approved farms with agreed upon educational duties.	Business, including type-writing, bookkeeping, commercial geography and commercial law.
b. Employer chiefly responsible but supervision by instructor.	Physical training.
(4) Remark.- The agricultural instructor must as a rule assume full responsibility for teaching the "related study" required for the proper understanding and execution of the projects of the pupils.	Music
Correlation of project work and related sciences.	Recreation

APPENDIX II.

SYGGESTED PROJECTS BY TITLES. (1)

A. Short Time Projects.

Agronomy:

- Selection of seed corn
- Germination tests of seeds
- Cleansing and grading seed grain.

Animal Husbandry and Dairying:

- Dehorning calves
- White-washing interior of stalls and other buildings
- Keeping milk record for a week
- Testing milk of all cows for butter fat production.

Weeds:

- Killing thistles and other weeds with brine or oil Treatment.

Gardening:

- Selecting seed potatoes.

Orcharding:

- Grafting - shade tree pruning

Poultry:

- Candling or grading eggs.

Mechanics:

- Measuring and calculating area of fields of the farm.

(1) Hatch, "Suggestions for school and home projects in agriculture". University of Wisconsin, No. 757.

B. Long Time Projects.

Agronomy:

Growing a corn crop

Improving grain by ear-to-row method

Growing a plot of alfalfa.

Animal Husbandry and Dairying:

Feeding balanced rations to farm animals for a given season

Taking general care of a team of work horses for a period.

Keeping feed records and butter fat production for determining net profits.

Soils and Fertilizers:

Improving acid soils by use of lime.

Horticulture and gardening:

Growing vegetables in the garden

Project in potato, cabbage, tomato, onion or cucumber.

Orcharding:

Tilling and cover cropping the orchard

Poultry:

Feeding rations for egg production

Bees:

Care and management of one or more hives or bees.

Economics:






Market study - keeping records of daily or weekly prices of grain and live stock on the local and general markets.

CARTOGRAM I.

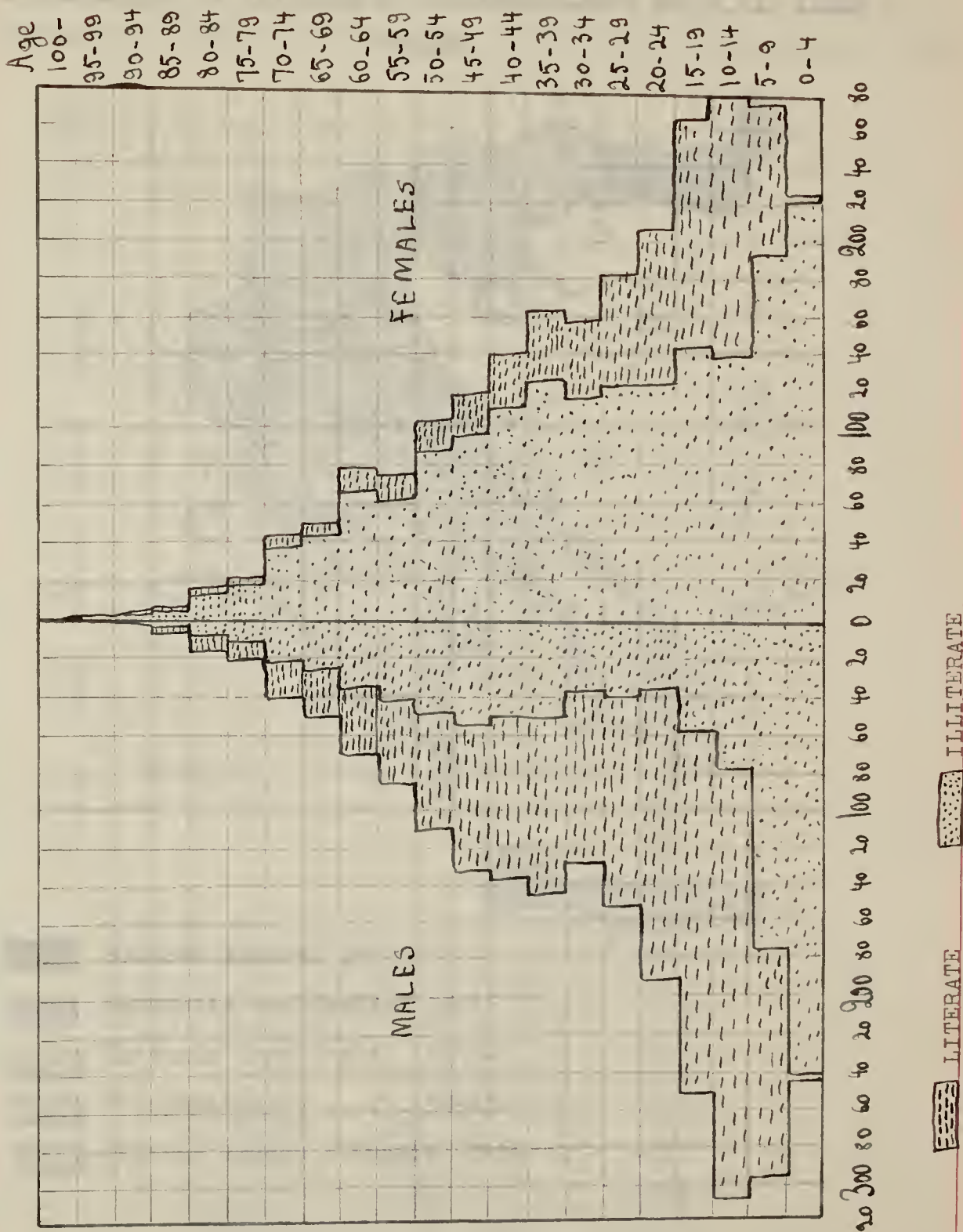
TERRITORIES OF GREECE AFTER ITS LIBERATION 1830-1930

GREECE IN 1930



-  Greece in 1830
-  Territories Annexed in 1864
-  " " " 1881
-  " " " 1913-1914
-  " " " 1919-1920

THE EDUCATIONAL STATUS OF THE POPULATION OF GREECE IN 1920








Reference:

Census of the Population of Greece in 1920

PROPORTION OF LITERATE ON 100 INHABITANTS ABOVE SIX YEARS
OF AGE.



-  Western Thrace 25-35
-  Macedonia and Epeiros 35-45
-  Thessaly and Crete 45-50
-  Peloponnesus 50-55
-  Central Greece & Evvoia 55-65

Reference:
Census of the Population
of Greece in 1920.

TABLE I.

POPULATION ABOVE TEN YEARS OF AGE ACCORDING TO PROFESSION AND AGE

Occupation	Total	10-19 years	20-29 years	30-39 years	40-49 years	50-59 years	60 and more years
Agriculture	794,110	129,438	156,946	140,007	142,739	109,483	115,017
Animal Husbandry	120,594	47,921	18,739	15,080	15,529	11,027	12,327
Mining	78,829	15,219	17,938	14,017	12,940	9,809	7,863
Extractive Industries of Products of Agriculture	142,582	57,008	35,945	25,602	31,697	14,151	10,122
Commerce	150,624	19,439	33,093	32,927	32,374	20,205	12,429
Public and private administration	163,969	56,213	47,197	26,111	22,267	11,885	13,896
Liberal Profession							

Note: The large number of boys between 10-19 years of age working on farms as contrasted with other industries.

Reference:
1920 Census of Population of Greece, pp. 120
Library of Congress.

POPULATION ABOVE TEN YEARS OF AGE ACCORDING TO PROFESSION AND AGE.

TABLE I.

TABLE II

PROPORTION OF THE LITERATE TO ILLITERATE PEOPLE

Territories	Populations which declared their educational status					
	Literate			Illiterate		
	on 100 inhabitants	on 100 males	on 100 females	on 100 inhabitants	on 100 males	on 100 females
Central Greece	57.90	74.02	40.71	43.10	25.98	59.29
Thessaly & Arta	46.53	67.30	25.02	55.47	52.70	74.98
Ionian Islands	47.72	66.49	31.56	52.28	53.51	68.64
Cyclades Islands	53.71	61.03	46.30	46.29	38.92	53.20
Peloponnesus	51.25	71.15	31.21	48.75	26.85	68.79
Macedonia	35.39	46.40	22.19	64.61	51.60	77.81
Ipeiros	42.45	66.10	22.77	57.57	36.90	77.23
Aegean Islands	54.11	67.02	42.63	45.89	32.98	57.32
Creta	46.56	64.72	29.53	52.44	35.33	70.67
Western Thrace	26.09	36.05	15.30	73.91	62.95	84.70
Total Greece	47.30	64.04	30.77	53.70	35.96	69.25

Reference:
Census of the Population of Greece, 1920/

TABLE III.

EDUCATIONAL STATUS OF THE POPULATION ACCORDING TO AGES AND
MARRITAL CONDITION.

Age	<u>M a l e s</u>					
	Total		<u>(1)</u>		Illiterate	
	Bachelors	married	Literate Bachelors	married	Bachelors	married
15-19	246,766	6,027	188,027	3,006	58,739	3,021
20-24	173,732	17,392	141,916	10,930	31,816	6,962
25-29	97,451	55,448	76,623	36,414	20,828	19,034
30 yrs and above	119,309	832,255	85,081	457,024	34,728	375,251
Total	637,538	911,622	491,637	507,574	143,111	404,248
	<u>F e m a l e s</u>					
15-19	252,220	12,350	117,301	2,298	134,479	9,532
20-24	139,795	37,046	61,759	21,352	77,946	45,194
25-29	55,752	126,421	23,743	35,342	132,009	90,579
30 yr & above	45,223	927,055	16,721	151,453	28,502	769,532
Total	492,960	1,153,532	230,024	216,445	272,936	914,887

Reference:

Census of the Population of Greece, 1920.

(1) Knowing to read and write.

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