GREEK AGRICULTURE



DATA AND FACTS 1982 MINISTRY OF AGRICULTURE

CONTENTS

FOREWORD		P.	. 3
1 LAND USE		>>	5
2 ACTIVE AGRICULTURAL			
POPULATION		>>	6
3 FARM HOLDINGS		>>>	7
4 AGRICULTURAL INCOME		»	8
5 PRICES			» 9
6 EXTERNAL TRADE		>>	10
7 MECHANIZATION			
OF AGRICULTURE))	11
8 SEEDS-			
PROPAGATION MATERIAL		»	12
9 FERTILIZERS		>>	13
10 PLANT PROTECTION		>>	14
11 LANDRECLAMATION			
WORKS		>>	15
12 LAND CONSOLIDATION		»	16
13 AGRICULTURAL INDUSTRIES		»	17
14 ELECTRIFICATION IN			
AGRICULTURE))	18
15. AGRICULTURAL COOPERATIVES		>>	19
16. AGRICULTURAL FINANCING	>>	20	-21
17. AGRICULTURAL PRODUCTION	>>	22	-27
18. AGRICULTURAL			
RESEARCH		>>	28
19. AGRICULTURAL			
EXTENSIONS AND			
TRAINING		>>	29
20. PROTECTION OF LIVESTOCK			
AND PUBLIC HEALTH	>>		-31
21. FORESTS	>>		-35
22. FISHERIES	>>	36	-37

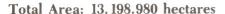
FOREWORD

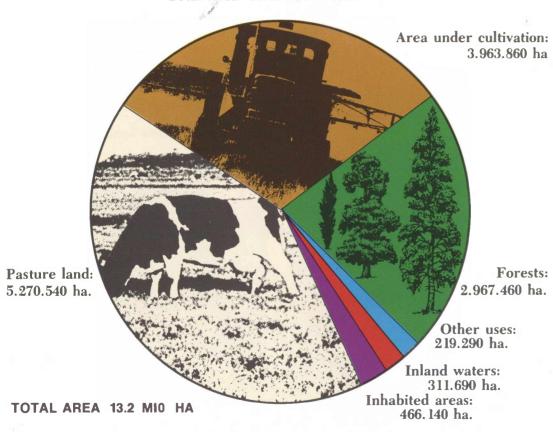
This publication aims at presenting, in brief, the evolution of Greek Agriculture during the years 1958 - 1982; addressed to all those wanting to obtain a concise, comparative and comprehensive picture of the subject.

The numbers, the diagrams, and the other comparative data included in the following pages, illustrate not only the positive and negative changes that occured in the Greek Agriculture from the viewpoint of macroeconomic theory, but in its structures as well.

1 LAND USE

Land under cultivation occupies only the 30% of the country's total area; since Greece is a mountainous country. Nevertheless, this area, together with a part of pasture land, is sufficient to cover the country's needs in primary products, with the exception of red meat.

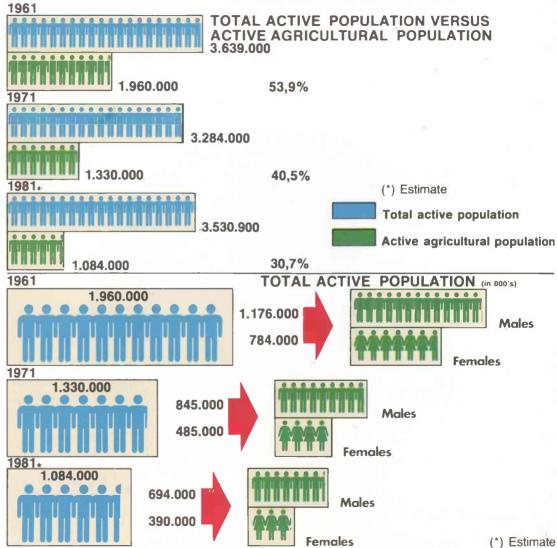




938.000	ha	of the area under cultivation are irrigated (1982):
i.e. 720.700	ha	arable - vegetable gardens - greenhouses
196. 100	ha	trees
22.000	ha	vineyards.

2 ACTIVE AGRICULTURAL POPULATION





The economically active agricultural population showed a considerable decrease in numbers during 1961 - 1971, as a result of the intensive emigration, both internal and external.

The rate of decrease is higher in young people between 15-19 years of age, bringing thus a change in the age pyramid.

3 FARM HOLDINGS

Farm sizes and the distribution of farm holdings are the outcome of significant changes that occured during the years 1961- 1977.

The total number of farm holdings decreased by 17%. More particularly, the decrease concerns holdings of less than 5 ha, while holdings larger than 10 ha showed an increase.

The total area of farm holdings decreased by about 220.000 ha of abandoned marginal farm land.

The above - mentioned changes contributed favourably to the structure of holdings, since

- while holdings of up to 29 ha represented the 61% of the total number of holdings and the 25% of the total area during 1961, the respective number amounted to 59% and 21% during 1977.

- at the same time the percentage of holdings of 10-10.9 ha increased from 3.4% (1961) to 5% (1977).

1961		1971		1977		
Farm size in ha	No of holdings (1)	Area (2)	No of holdings (1)	Area (2)	No of holdings (1)	Area (2)
No land	16.8	_	10.7		4.3	
0.1-0.9	261.8	132.0	225.8	113.5	219.2	107.3
1.0-2.9	426.0	778.3	384.3	702.6	338.2	606.9
3.0-4.9	232.4	880.0	209.6	792.5	181.4	678.6
5.0-9.9	172.7	498.1	164.3	1092.6	150.6	993.6
10.0-19.9	38.9	185.3	42.8	552.3	48.0	617.0
20.0-49.9	6.9	56.3	8.8	243.3	12.6	338.0
50.0 +	0.7	1143.2	1.0	88.9	1.5	108.9
TOTAL	1.156,2	3.673,2	1.047,3	3.585,7	955.8	3.450,3





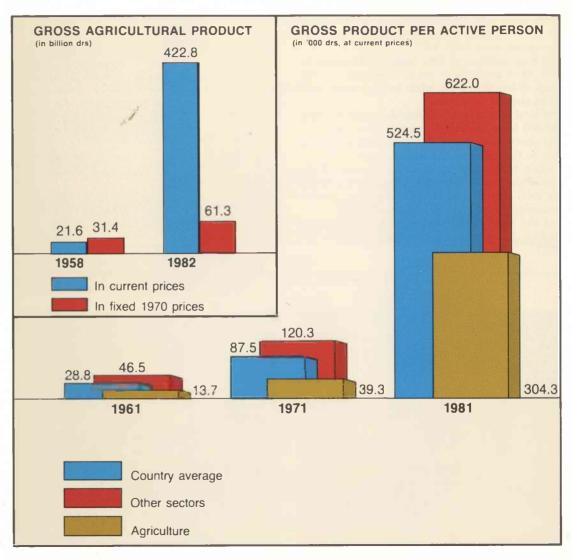


4 AGRICULTURAL INCOME

The per capita income of those engaged in agriculture as a percentage of the correspoding income per person employed in the Greak economy as a whole, grew from 47% (1961) to 58% (1981). However, the farmers' income is somewhat higher, due to

- the lower cost of living in the country.
- the higher purchasing power because of self consumption.
- the agricultural income is supplemented with income from tourism, home handicrafts and remittances.



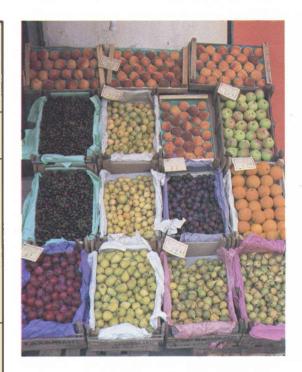


5 PRICES

PRICE INDICES

Prices obtained by the producers (1976=100)(*)

	1967	1970	1975	1980	1981
Cereals and rice	47.1	48.1	89.3	182.2	221.6
Edible dry legumes	31.7	36.8	81.9	176.9	219.0
Industrial crops	37.7	38.6	87.9	257.9	210.9
Bulbs and rhizomes	30.3	27.0	75.2	164.1	208.6
Vegetables	35.4	36.4	75.1	199.0	253.7
Wine	38.2	33.4	81.8	192.9	220.0
Citrus fruit	36.8	37.6	74.8	279.1	293.7
Fresh fruit	38.0	35.2	67.4	210.2	205.8
Olive oil and table olives	39.5	50.4	96.9	178.3	207.0
Milk	51.5	51.8	85.4	176.1	235.6
Meat	38.3	44.9	83.0	190.4	262.9
(*) not including incom	ne aid				



6 EXTERNAL TRADE

Remarks:

a. The share of agricultural products in the total trade balance of Greece has been positive until 1980, with a few exceptions of minor importance (e.g. in 1973 and 1979). As regards the trade balance with EEC-9, the share of agricultural products has always been positive, exhibiting even an increasing rate (a surplus agricultural balance).

Provided that one-third of the total Greek exports is still covered by agricultural products, the above mentioned «positive» of the Greek agricultural trade balance, contributed to the decrease of the deficit of total Greek trade balance by the corresponding figures.

b. The accession of Greece to the EEC was accompanied by a tremendous increase of Greek imports from EEC-9, amounting to 139% in 1981 (vs 1980).

On the other hand, Greek exports to the EEC-9 increased by only 25,7% in 1981 (vs 1980).

The result of these changes was that in 1981 the Greek agricultural trade balance changed into negative both with the EEC-9 and the rest of the world. Provisional data for 1982 show that this negative trade balance has been doubled.

c. The fact that, in the case of Greece, the Commounity preference has worked in favour of the products of the North, is proved by the evolution of the imports of meat and dairy products from the Community: in 1981, meat imports from EEC-9 increased by 264,6%, while the imports of dairy products from EEC-9 increased by 107,7%.

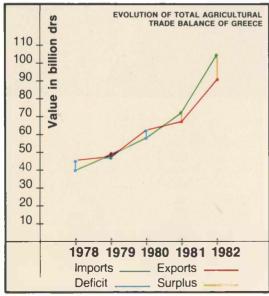
On the other hand, the increases in exports remained at «normal» levels.

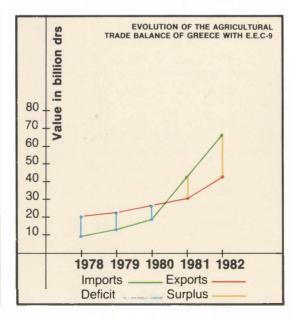
Since the accession, Greek agricultural exports as a

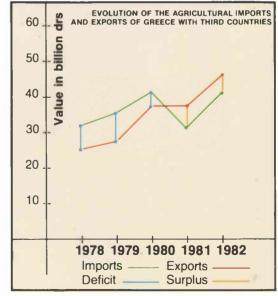
percentage of total exports, exhibit a decreasing rate (10% versus 25,5% before the accession).

Exports to the EEC-9 attained a considerable increase, but this is not regarded as satisfactory so as to balance the increased imports.

For instance, exports of fruit and vegetables, constituting the basic Greek export in oriental products, increased only by 26,8% in 1981, that of tobacco by 6,7%, while the exports of beverages decreased by 12,8%. The Community preference did not operate satisfactorily in favour of the Greek products, like tobacco, cereals, foodstuffs, hides, oil and fats. This is proved by the fact that even after the accession, the greater part of these products continues to be exported to third countries.

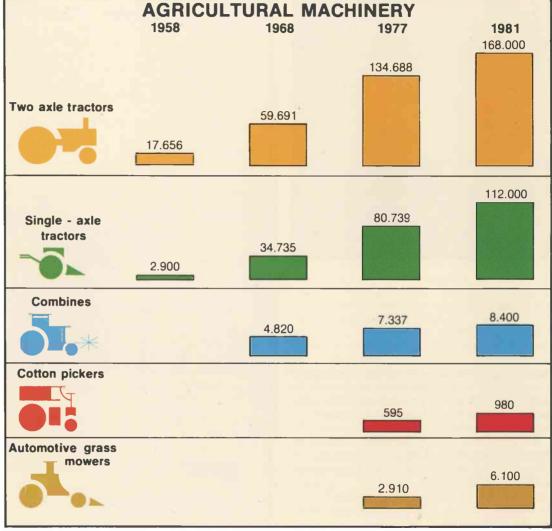






7 MECHANIZATION OF AGRICULTURE





During the years 1958-81 the mechanization of Greek agriculture attained a high rate of development, that was simultaneously anarchic, lacking in coordination and rationalization from the financial point of view.

This resulted, in a great number of cases, into a great total increase of the mechanical equipment, while in other cases, the equipment was not employed to its full capacity.

8 SEEDS – PROPAGATION MATERIAL

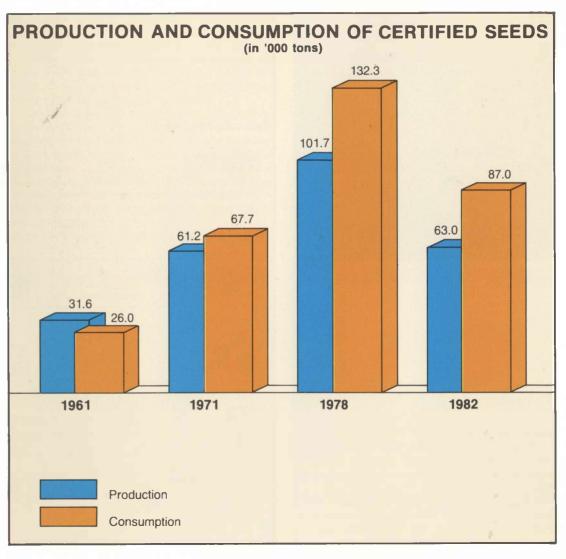


Farmer supply with improved propagating material is carried out by the State seed production, the State farms and private nursery enterprises under the supervision of the Ministry of Agriculture. From the table above we may conclude that: - The production of certified seeds increased by

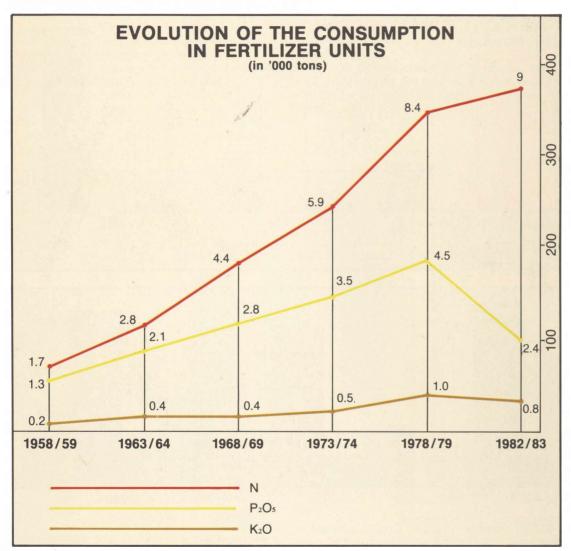
100% between 1961 and 1982.

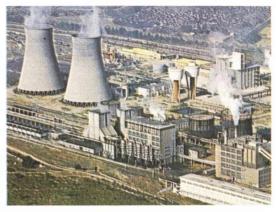
- The supply of farmers with certified seeds increased by 235%, at the same period.

The quantities of certified seeds produced, cover the existing demand, with the exception of vegetable and potato seeds.



9 FERTILIZERS





After the spectacular increase in the consumption of fertilizers during the years 1958-78, their rational use as well as the appearance of new types adapted to the current agricultural needs, limited their increasing rate of consumption during the last years. Thus, for instance, the use of phosphorus (P_2O_5) within 1982 was reduced by 28.000 tons, thus saving about 1.1 billion drs.

Fertilizers constitute one of the most important means of intensification and increase of productivity in agriculture.

The capacity of the domestic industry covers 90% of the country's total needs.

After the establishment of the new unit for the production of anhydrous ammonia, the Phosphate Fertilizers Industry S.A., Greece will be self-sufficient in N-fertilizers.

Production of chemical fertilizers

(in 000 tons)

AEBAL	404
AEHP Fertilizers	435
Phosphate Fertilizers Industry	333
Chemical Industry of Northern Greece	561

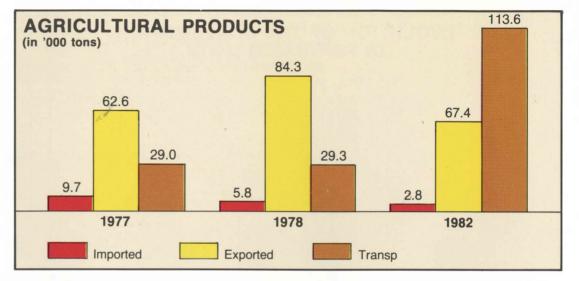
10 PLANT PROTECTION

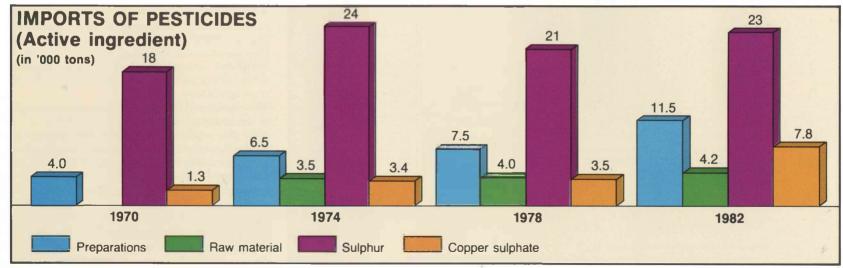
The increase of imports in pesticides is due to:

- The increase of irrigated crops, needing a higher degree of protection.

- The consumers' demand for products free of pests and diseases.

Moreover, an integrated control programme against pests and diseases was applied on approx. 90.000.000 olive trees, in all olive-oil producing regions of the country.





11 LAND RECLAMATION WORKS

One of the main objectives of Greek agriculture is to extend irrigation projects through the rational use of the country's water resources, so as to maintain and even increase land productivity.

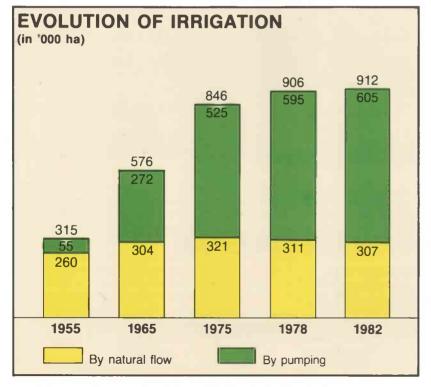
The irrigable areas are estimated at 1.600.000 ha, i.e. about 40% of the cultivated land.

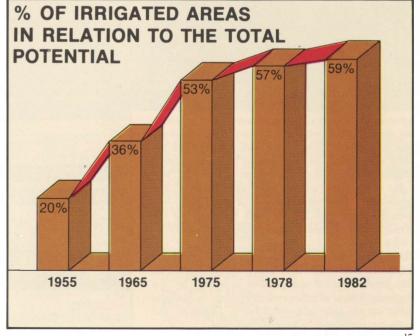
The increase of irrigation is the outcome of a large irrigation project carried out both by the public sector and the private or small collective programmes carried by the private sector under State initiative.

State projects are financed mainly by the Public Investments and to a small extent, by the International Bank (IBRO) and the European Bank of Investments (EBI).

Irrigation projects carried out by private initiative are financed by the producers' savings as well as by loans granted by the Agricultural Bank of Greece.

Major land reclamation projects	ha
Irrigation projects in Arda - Evros.	32.300
Irrigation projects in Xanthi and Komotini.	14.000
Irrigation project in the plain of Serres.	20.500
Irrigation project in the plain	
of Giannitsa.	15.500
Irrigation project in eastern Vermion.	24.000
Ground water development project	
in Thessaly.	40.000
Irrigation project in the plain of Argolis.	20.000
Irrigation project in western Crete.	20.000
Irrigation project in Drama.	11.000





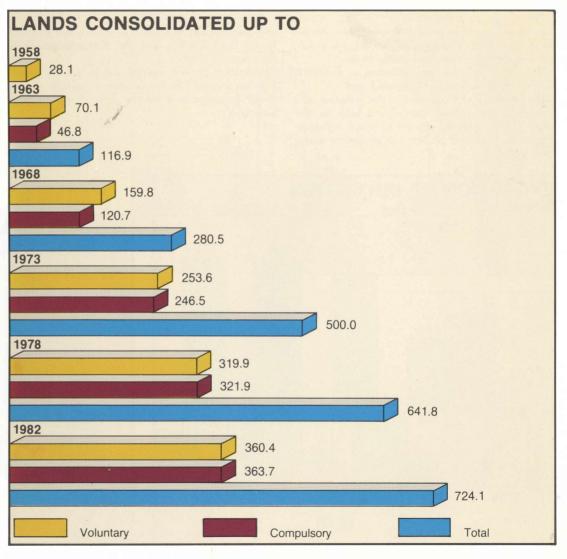
12 LAND CONSOLIDATION



The overfragmentation of rural property constitutes one of the main weakness of Greek agriculture. The problem was faced for the first time during 1953, with a voluntary land consolidation programme. Since 1959 land consolidation became compulsory in areas where large reclamation projects are carried out, by virtue of law 3881/58.

In the areas where land consolidation was applied, the average number of land plots was reduced from 7 to 1.5 per each holding, and the average size of each plot increased from 0.25 to 1.6 ha.

Thus piece per new agricultural holdings were established through land consolidation, favouring the production of competitive products by the implementation of advanced technology, organizing them on an entrepreneurial basis. However, the outcome continues to be unsatisfactory.



13 AGRICULTURAL INDUSTRIES





The large processing plants for agricultural products have been developed during the last 25 years. The following industries were established:

- 2 State factories of chemical fertilizers.
- 5 sugar factories.
- 5 large cooperative wine factories.
- 5 large private wine factories.
- 15 large canning units for fruit and vegetables.
- 11 industries producing tomato paste.
- 8 large cooperative milk processing units.
- 5 large private milk processing units.

A brief account of the existing situation is given below:

- The quantitative development of the agricultural processing was considerable.

- However, as regards the quality and the geographical distribution of the units, the situation is characterized as lacking in coordination and rationalization.

The agricultural industries utilize the primary agricultural production and is a fundamental branch of the agricultural economy.

Their contribution amounts to:

- 4% of the total gross domestic product.
- 19% of the gross product of the processing units.
- 8% of the total working force.
- 18% of the total added value of the processing sector.

Financing (by the Agricultural Bank of Greece) for the extension, development and establishment

of new processing units amounted to 3.994 million drs in 1982; while the funds drawn from the Public Investments Programme, for the same purpose, amounted to 322 million drs.

The cooperative agricultural industries and the units that make up for the one third of the total number of processing units, process and offer access to the market of

- the 30% of canned vegetables.
- the 20% of tomato paste.
- the 32% of olive oil.
- the 50% of wines.
- the 11% of butter.
- the 8% of soft cheese and they also
- pasteurize the 75% of total milk produced.

14 ELECTRIFICATION IN AGRICULTURE



Concerning:

- the conversion of internal combustion enginedriven pumping sets, in use at present, to electricity - driven pumping sets.

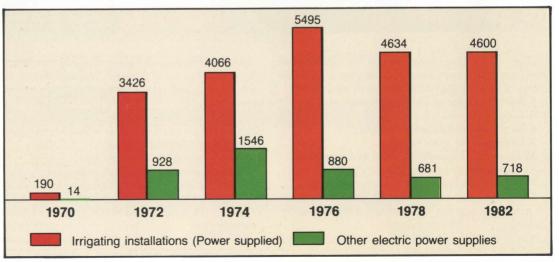
- the installation of electricity - driven pumping stations in areas irrigated for the first time.

- the electrification of other installations and buildings.

Until the end of 1982, electric power was supplied to:

- 52.331 installations irrigating 48,7 million ha

- 9.181 installations for other activities.



15 AGRICULTURAL COOPERATIVES



Although the first forms of economic cooperation appeared in Greece during the 17th century, the cooperative movement became more specific at the beginning of the 19th century, with the cooperatives of Ambelakia, Tsaritsani, etc.

Nowadays, the cooperatives of any type amount to about 7.000, composed of:

- 132 Agricultural Cooperative Unions.
- 11 Central Unions.
- 8 joint ventures.

The most important factories of the Cooperative organisations are:

- 25 Canning industries.
- 21 Cotton gin mills.
- 512 Olive-oil industries.
- 65 Sorting-packing houses for agricultural products.
- 54 Wine factories.
- 52 Cooling plants.
- 15 Cylindrical mills.

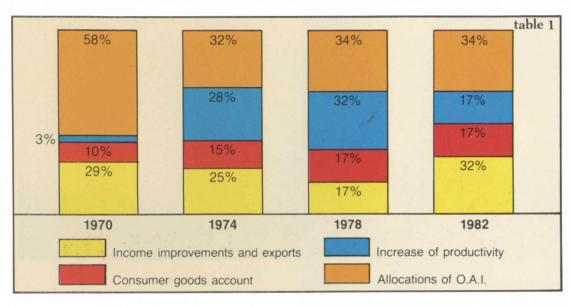


In order to expand their economic activities, the agricultural cooperatives have established joint-stock companies, joint ventures and other forms of companies. These companies amount to 74 today; the Agricultural Bank of Greece has shares in 24 of them. These companies control 74 agricultural industries that standardize and process 450 thousand tons of agricultural products.

Generally speaking, the Cooperative organizations.

- supply agriculture with investment capital (56 billion drs in 1978).
- act as commission brokers (11 billion drs in 1978).
- supply fertilizers, (1667 thousand tons in 1980), insecticides (29 thousand tons in 1980) foodstuffs (1900 thousand tons in 1980) etc.
- and they also contribute to (Government) interventions in order to support prices.

16 AGRICULTURAL FINANCING





Financing of the agricultural sector is realized through three programmes, having as main objective the support for the implementation of the agricultural policy.

These programmes are:

- 1. Programme for financial aid and for the Organization of Agricultural Insurance (OAI). aiming at:
- (a) the development, reorganization and reinforcement of production and the modernization of the agricultural holdings.
- (b) supporting the producer's income.
- (c) the promotion of agricultural exports and
- (d) the expansion of insurance services in the agricultural sector.

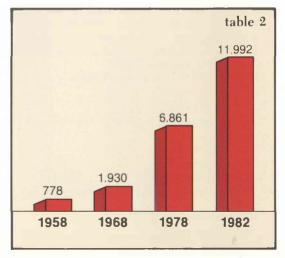
The following amounts were allocated through this programme (in million drs). (s. tbl. 1)

2. Public Investments programme, aiming at increasing the fixed capital in agriculture, through the construction of works for the infastructure.

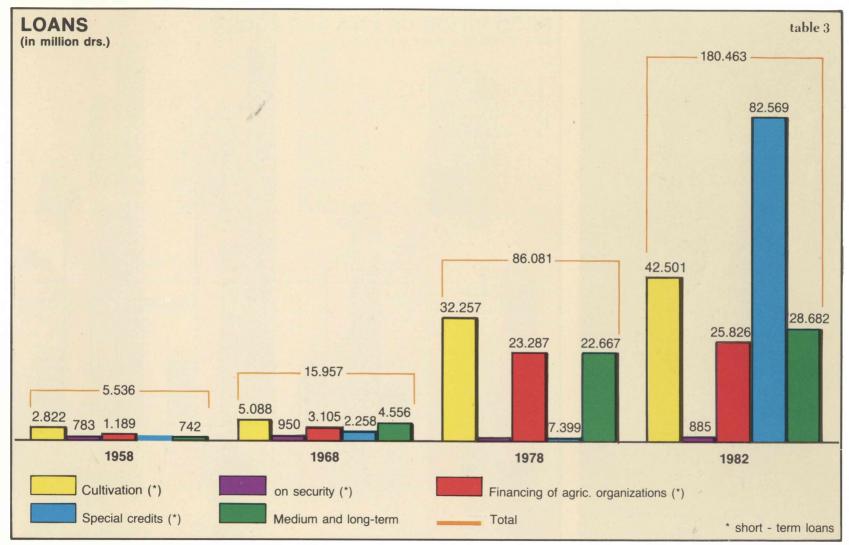
The following amounts were allocated through this programme (in million drs). (s. tbl. 2)

3. Credit policy programmes, aiming to grant low-interest rate- loans through the Agricultural Bank of Greece.

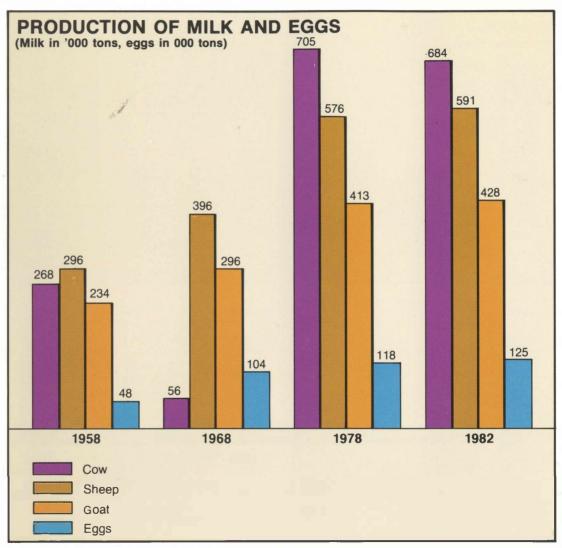
The following loans were granted through this programme: (s. tbl. 3)

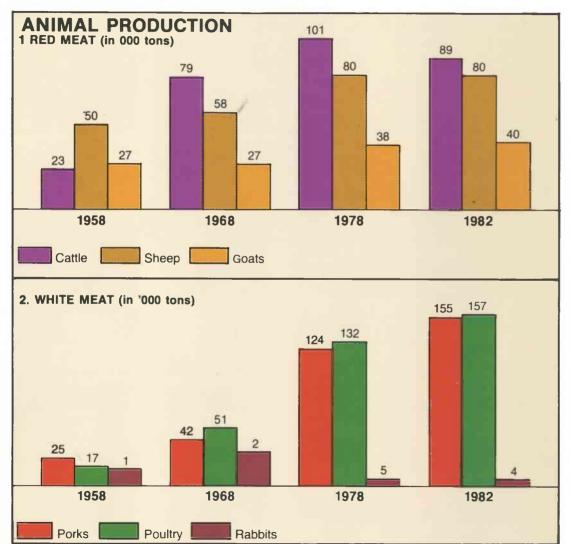


16 AGRICULTURAL FINANCING















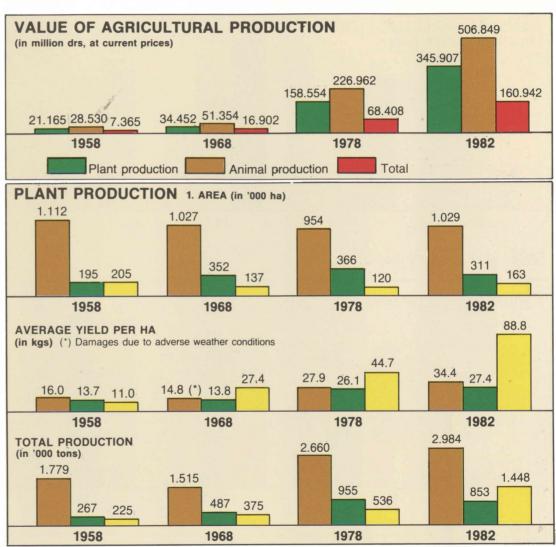
Greek agricultural products vary according to kind and quantity, divided into plant and animal products.

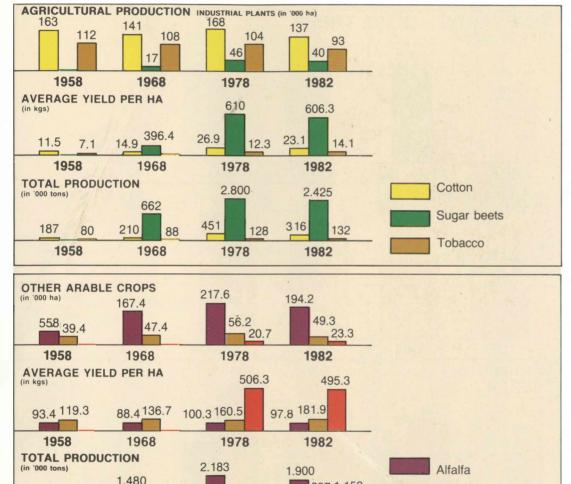
The 71% of the gross total value consists of the following six groups of products (1982):

Grains	15,4%
Industrial crops	9,5
Olives & olive - oil	9,6
Vegetables	9,1
Meat	19,2
Milk	8,7

During the years 1978-82, white meat production increased by 21%, while red meat production decreased by 5%. At the same period, the production of milk and eggs increased respectively by 0,5% and 6%.







962 1.048

1978

648

1968

521 470

1958

897 1.150

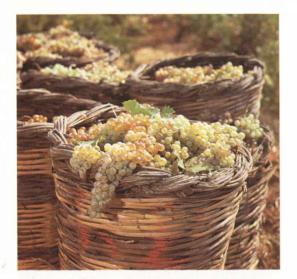
1982

Potatoes

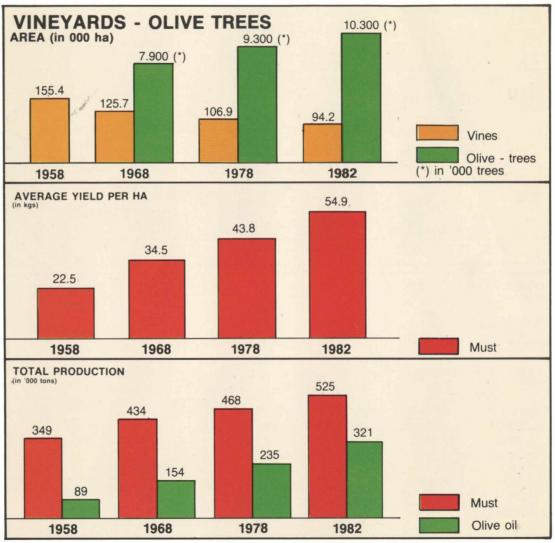
Tomatoes for processing

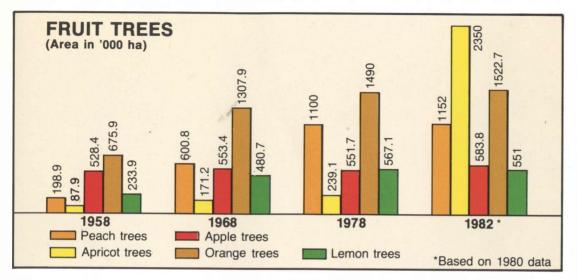




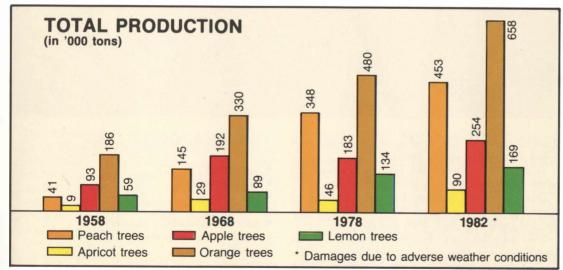














18 AGRICULTURAL RESEARCH





Agricultural research carried out in Greece today is directly connected with the problems that farmers have to face; but nevertheless, it cannot fully meet with the current needs.

Research staff consists of highly qualified personnel, working at 21 Institutes, serviced by 20 Regional Stations.

In order to attain its objectives, agricultural research:

- applies the research findings of other countries by

testing them in the local conditions (improved plant varieties or animal breeds).

- creates new varieties and breeds, producing higher yields and products of a better quality.

- Investigates and finds out the best cultivating techniques for each case and the most effective ways for the control of plant pests and diseases.

-looks into the most effective ways for preserving and processing crop and animal production.

282 reseach programmes are in progress today,

divided into the following branches:

Agronomy	113
Plant protection	65
Soil Science	29
Technology of agric. products	29
Animal husbandry - pastures	27
Land reclamation works - agricultural	
machinery	10
Others	9

19 AGRICULTURAL EXTENSIONS AND TRAINING





The dissemination of information and the training of the rural population both in matters of governmental policy directly related with agriculture, as well as with subjects of modern agricultural technology, is now considered as crucial for their participation in the successful application of the various programmes for agricultural development.

The Department occupied with this project has at its disposal 301 Regional offices for Agricultural

Development, 48 Agricultural Training Centers and 2 Agricultural Schools, employing 1.200 agriculturists and 250 domestic employees, dispersed all over the country.

According to the Second Educational Plan, financed by the International Bank for Reconstruction and Development, 11 new Agricultural Training centers and 3 Agricultural Schools were or are under construction. The educational programme was completed in its entirety in 1982, through

- the dissemination of about 4 million bulletins and other printed matter.
- the circulation of a specialized magazine, in 90.000 copies, and of 5 technical booklets.
- 245 broadcastings addressed to the rural population
- $57~\mathrm{TV}$ programmes addressed to the rural population

20 PROTECTION OF LIVESTOCK AND PUBLIC HEALTH

The Veterinary Service is responsible for:

- the protection of animal health and the improvement of livestock.

- the protection of public health, combined with consumer protection against the supply of adulterated and inferior - quality food of animal origin.



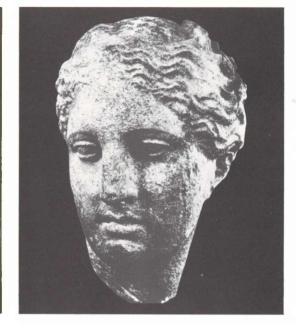
Numbers represent heads)	1971	1978	1982
- Cattle and birds examined.	350.000	1.209.000	1.915.558
- Cattle and birds vaccinated.	20.813.000	25.384.000	32.833.297
- Cattle treated against parasitic diseases.	6.304.000	13.985.000	12.489.000
- Brucellosis and tuberculosis control.		1.100.000	635.214
- Animals vaccinated against melitensis.		3,500.000	967.46
- Control of echinococcosis observed on dogs.	2.600	100.000	262.30



	LIVESTOCK IMPROVEMENT	(Numbers represent heads)	
- Artificial			
insemination in	1971	1978	1982
cattle.	. II.	307.000	294.500
- Artificial			
insemination in			
sheep.		334.000	
- Supply of			
improved bree	eds		
of bulls.			15
- Supply of			
improved bree	eds		
of goats.			30
- Supply of			
improved bree	eds		
of rams.			50

20 PROTECTION OF LIVESTOCK AND PUBLIC HEALTH

	1971	1978	1982
- Meat inspection in ruminants and pigs (heads).	4.268.000	4.042.000	4.084.000
- Seized products of animal origin (tons).	175	379	492
- Inspection of imported products of animal origin (tons).	1.5	1.2	



The programme of slaughter shacks still in operation during 1982, includes:

- 17 big industrial slaughter shacks.
- 47 small municipal slaughter shacks.
- 4 small slaughter sheds.
- 61 Complementary slaughter projects.

 At the same time, various veterinary research

programmes are in operation at 5 veterinary institutes, 2 centers for artificial insemination and 6 veterinary laboratories.

The programmes cover laboratory tests carried out on food, food stuffs, production of vaccines diagnostic products as well as other research work.



21 FORESTS

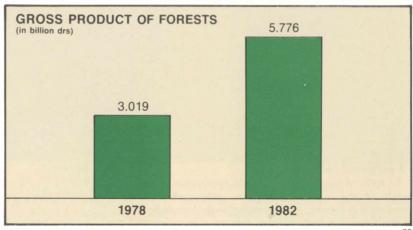
Forests as a sector of National Economy, play an important role under proper management and development - offering through their products (timber, resin, tannin, briar roots etc...) approx 5,4 billion drs of gross value in 1982.

Moreover, forests greatly influence the natural and social equilibrium of our environment, since:

- they influence the climate and act upon soil transformation. They are the most important counter - erosive factor, and especially for grounds with steep slopes.
- they increase the underground water resources.
- they are a basic source for recreation, for the promotion of livestock breeding, and they also enhance the development of game.
- they give employment to 40.000 people in regions that are characterized as «less favourable».



KIND AND OWNE	RSHIP OF FORE	STS	
Kind of trees.	State-owned	Non-state	Total
Coniferous	591	376	967
Broadleaved Evergeen	750	319	1069
broadleaved	303	174	477
Total	1644	869	2513



21 FORESTS



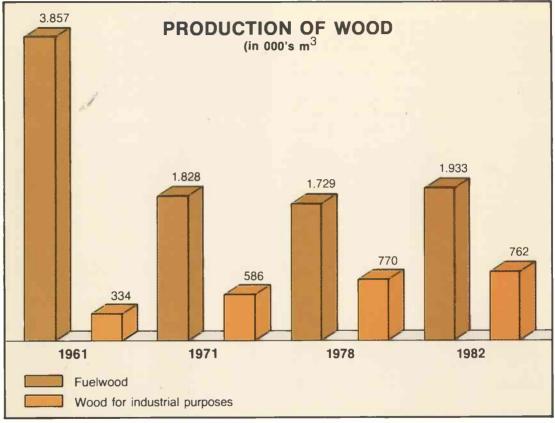
The substantial decrease in firewood production is mainly due to the improved living standards, attained through the use of other forms of energy, and more importantly, to the electrification of the country.

Contrariwise, the industrial wood production was increased, due to the exploitation of new forest areas, the application of new methods in cultivation, and the development of new forest industries.

The following forest industries are already in operation:

- 1308 saw mills.
- 12 fiberboard and particleboard industries.
- 7 plywood industries.
- 1 match factory.
- 1 pulpwood industry.

In spite of the increase in forest production, the needs of our country, mainly in pulpwood and construction timber, are increasing fastly, resulting in the following trade balance deficit:



1. Imports (*) 2. Exports (*) 3. Balance (*)	1961	1971	1978	1982
	1.156	3.177	10.180	7.262
	274	298	1.215	65
	- 882	- 2.879	- 8.965	- 7.197
				4

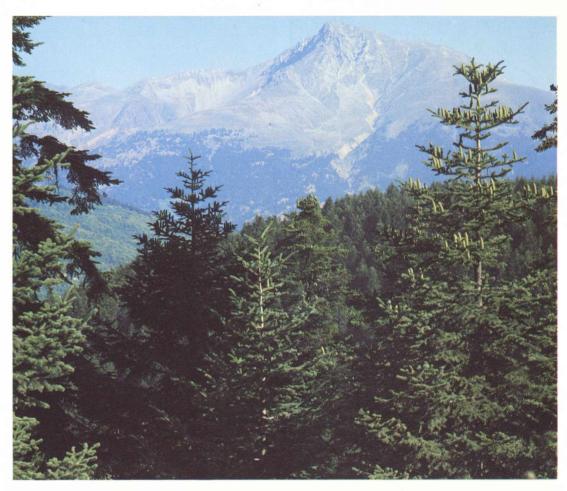
21 FORESTS



The following projects were carried out during the years 1978 - 1982, for the protection and development of forests and forest resources:

- Reafforestation of 37.100 ha and production of 129 million young trees in forest nurseries.

- Forest and horticultural works in about 152 torrents.

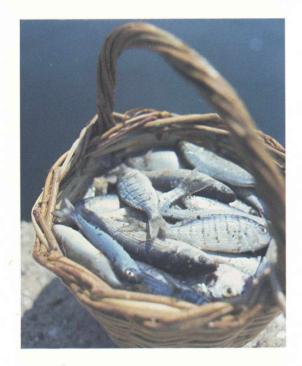


10 National Parks have been already in operation, with a total area of 100.000 ha, as well as 15 aesthetic forests, covering 70.000 ha. 2.500 ha have been reafforested in the Attica region, for the deve-

lopment of a recreational green belt.

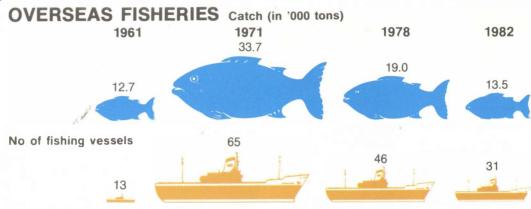
12 areas have been declared as «hunting reserves», 25 as animal breeding stations and 418 refuges for the protection and growth of game.

22 FISHERIES

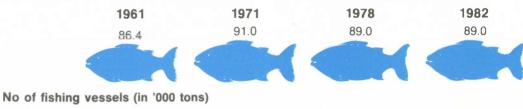


The sector of fishery, despite its small contribution (approx 2%) to the formation of the gross agricultural product, has a substantial role in the nourishment of the Greek population, supplying proteins of high biological value at a relatively low cost.

Although there are great possibilities for the expansion of pisciculture, it has been until now limited to freshwater species, covering a total area of approx. 60 ha, with an annual production of 2.500 tons.



OFFSHORE AND COASTAL FISHERIES Catch (in '000)

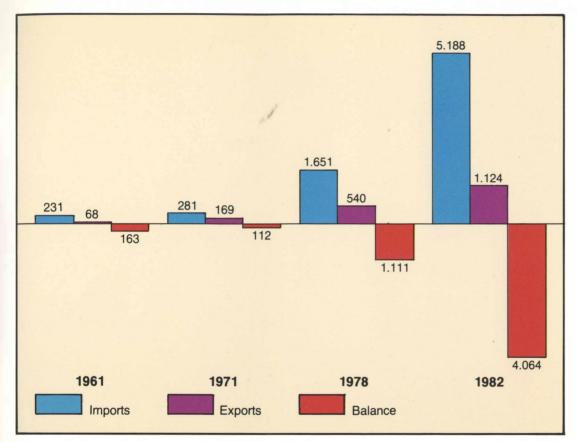




INLAND AND FRESHWATER FISHING Production (in 000 tons)



22 FISHERIES





In order to assist the fish trade, fishing ports are now in operation in Alexandroupolis, Kavala, Thessaloniki, Chalkida, Patra and Chios, through which 30-35% of the fresh fish is distributed.

A programme of increasing the number of fishing ports is well under way.

Greece is faced with shortage in the supply of fish products, and necessarily its needs are covered through imports.

Financial aids are granted in the sector of fisheries. covering the following activities:

- Renewal of fishing vessels and equipment.
- Establishment of pisciculture units.
- Fuel consumption.
- Export of certain kinds of catches.
- Establishment of processing plants.