

AGROplan

**Title: VOCATIONAL TRAINING IN FARM MANAGEMENT AND
ENTREPRENEURSHIP**



**Country Report and Training Needs Assessment
for GREECE**

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PREFACE

This report aims to provide information regarding the farm management and production planning methods used by the agricultural sector in Greece. It also aims to identify farmers' entrepreneurial spirit in Greece as well as the innovative aspects of the sector. These issues comprise major priorities for policies makers for the enhancement of the competitiveness of the rural sector. Another important issue covered is the use of ICT by the farming sector, especially for their farm management and production scheduling activities.

In this context, skill gaps are identified and proposals for training regarding the above mentioned issues are proposed. Furthermore, the report investigates the main training and consulting activities towards these areas and the policies, programmes and initiatives that promote them in the sector as well as the key players in training, consultancy and policy making.

Therefore, part A provides a general description of the sector, part B focuses on specific project issues and methods used, part C refers to the training activities and organisations and part D provides recommendations for the AGROPLAN project.

The materials used are mainly studies and reports available. Results of previous surveys on entrepreneurship have been also used. Some useful statistics for the sector were collected from various sources and are presented in this report.

This report was prepared by Ms. Vana Arkoumani with the support of Mr. Dimitris Petropoulos.

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1. COUNTRY BACKGROUND

Rural sector is very important for Greece, not only in economic terms, due to its high contribution in the National Gross Product and exports trade, but also in social terms because of the big number of people occupied. During the last years, even if the contribution of the rural sector in the GNP is reduced, it continues to be the highest in the EU.

Regarding the exports trade, the deficit enlargement of the commercial balance of rural products, that is owed mainly to the imports by the remainder members states of the European Union and more specifically to the imports of meat and dairy products, makes obvious the problem of discrepancy between demand and supply in the internal market.

The problem becomes more intense with the reduction of investments, especially the private ones, as the public ones are increased due to financing by the European funds.

The agricultural exploitations of Greece are requested to correspond in the challenges presented in their new frame of operation, as this is determined from evolutions in the World Trade Organisation and the European Union (Agenda 2000). Estimates for aid of competition, reduction of protectionism via the prices and the subsidies and aid of structural policies makes imperative the need for the modernisation of structures in Greek agriculture.

New flexible, organised exploitations with managerial control and adaptation in the requirements of market are required. This makes necessary the presence of people with entrepreneurial spirit and innovative ideas that will develop comparative advantage and will extend the production potential of Greece.

Efforts towards the modernisation of exploitations are: investments via the Development plans of agricultural exploitations, incentives for 'New Farmers', introduction of new production methods eg. greenhouse cultivation and extension to non agricultural activities eg. rural tourism. However, these efforts have not yet accomplished to alter considerably the orientation of many of the exploitations.

The main agricultural products in Greece are hard wheat, maize, cotton, olives and olive oil, vegetables and grapes and they occupy 75% of total cultivated land, while the breeding of sheep and goats continues to be the most important animal production activity. The structural characteristics of agricultural production (Medium size of exploitation, multi-fragmentation of ownership) even if they are improved, they continue abstaining a lot from the agricultural model of the remainder European states. The degree of mechanisation of agricultural exploitations is substantially improving with the import of modern equipment and irrigation systems.

The human workforce of the rural sector is also decreasing at a faster pace than the population of rural areas. The problem becomes more intense with the ageing of population and the reduction of the family size in rural areas, which threaten with demographic collapse many regions of the country, especially the mountainous and isolated ones.

However, the upgrade of the educational level in the last decades, helps us assume that a critical mass of people have now the necessary knowledge and skills to identify the challenges presented in the sector globally. The ensuring of keeping the human workforce in rural areas, allows the undertaking of the necessary initiatives, in cooperation with the national authorities of rural policy, that will promote the modernization of agricultural exploitations and their transformation to farm companies, which comprises an attractive alternative to urbanization and the consuming model of our age.

The total cultivated land in 1999 (including the fallow fields) was 3, 918 hectares. This land is covered by arable crops (64%), arboreal cultivations (28%), while vegetables and vineyards cover 4% each.

Cultivated land presented a slight decrease during the 90's (0.8%). The decrease for the period 1980 – 1999 is 3%. This trend is mainly owed to the decrease of arable crops (8.1%) and secondly to the decrease of vineyards. On the other hand, arboreal and vegetable cultivations have presented an increase of the cultivated land of 15.8% and 5.4% respectively.

Irrigated land almost doubled during the years 1981 – 1999 (47.85%) with the most increasing, that of arboreal cultivation (49.2%) and irrigated vineyards by (52.46%). Vegetables presented an increase of 10.9% for the same period. The already high percentage of irrigated land did not allow a spectacular increase in irrigation levels. These advancements resulted in the irrigation of 42.5% of arable crops, 1/3 of arboreal cultivations, 90% of vegetables and 52.5% of vineyards.

The NGP increased by 15.2% for the period 1988 -98 with an annual rate of 1.74%. The rural sector NGP increased by 7.5% for the same period (0.7% annual rate). This difference results in the smaller contribution of the agricultural products to the total product (from 12.4% in 1988 to 8.5% in 1997).

The prefectures with the highest contribution to the NGP are Central Macedonia (by 18%) and Thessaly (13%), while the Aegean Islands, the Ionian Islands and West Macedonia have the lowest contribution.

1.1. AGRICULTURAL EMPLOYMENT

From the 1991 census it is derived that 671 476 individuals are employed in the primary sector. This figure represents 17,3% of the economically active population or 18,8% of the employees.

From the processing of the last three census (1971, 1981, 1991) it is derived that there was a reduction of almost 50% in the number of employees in the primary sector during the period 1971-1991 (1 221 756 in 1971, 671 476 in 1991), while from 37,56% of the population in 1971 it was reduced to 17,3% in 1991. The annual reduction rate was 2,3% during the first period (1971 – 1981), and raised to 3,6% during the second period (1981 – 1991). It should be noticed that the number of employees in the primary sector represent 46,5% of the economically active population in 1991, while the reduction rate during the period (1981 – 1991) was 4,1%.

Furthermore, the processing of the data from the annual labour studies – not a reliable source since they are based only on sampling methods – may be utilized in the monitoring of the tendencies in employment. Thus, according to the data obtained for the period 1989 – 1999, there was a reduction of 28% in the number of employees in the rural sector, or, an annual reduction rate of 3,2%, resulting in only 15% of the economically active population of the country.

The growth of the reduction rate during the period 1981 – 1991, combined with the access in the European Union (1981) and the application of CAP, has raised serious questions, since this period was considered to be characterized by a significant growth in the agricultural income through the price supporting policy. The answer to these questions should also be sought in the contribution of the CAP assistance, since the system operation favoured the exploitations of high production; as a result, 20% of the exploitations received 80% of the support (E.U. 1991).

Another important element, which is extrapolated by the data processing, is that, while the number of people in rural areas employed in the primary sector was reduced by 48% during the period 1971-1991, the reduction of the economically active population for the same period was 19,7%. This means that the abandoning of the agricultural is not necessary translated to a definite exit from the rural areas, as it was observed until the 70s, when the reduction of the rural population was the same with the reduction of the population in the rural areas, employed in the primary sector, in favour of the secondary and the tertiary sector in the urban areas where most ex-farmers migrated.

The particular phenomenon is combined with the end of the immigration during the mid 70s, and also with the gradual overpopulation in the urban areas that resulted to unemployment and led the population of the rural areas in search of alternative -non rural- income resources, without leaving their homes. It is when the concept of multi - activity is introduced, as a new employment and income strategy for families in rural areas.

In studies performed in rural areas, it was observed that in some areas multi-activity was adopted by more than 50% of the families (Moysiadis, '95).

Seasonal work is extensively used since 72.9% of exploitations (1995) use it for their seasonal production needs. Exploitations using seasonal work, use 35 man days annually. It is impressive to consider that only 30% of exploitations used seasonal workers in 1991 while the number of daily wages increased by 70%. This fact is attributed to the massive coming of immigrants from neighboring countries. The fact that exploitations create even seasonal employment is encouraging and supports the view that there are still possibilities to exploit the production capability of existing resources. The number of permanent workers increased by 49% in the years 1991 - 1995 but without exceeding the 9216 people.

1.2. THE CURRENT LEVEL OF KNOWLEDGE, SKILLS AND QUALIFICATION LEVELS ACROSS THE SECTOR

The progress observed on the educational level of the farmers is supporting the aspect that the qualitative changes in the composition of rural population, although they proceed slowly, have resulted to the gradual change in the image of the Greek farmer.

The massive induction of non-rural professions in the rural sector, as a main profession and income resource and also as a *modus vivendi*, through the multi-activity phenomenon or, separately, is accompanied by the characteristics of the social composition of the urban population. Therefore, according to the 1991 census, 4.5% of the rural population are university students or graduates. This group of people, no matter if agriculture is their primary income resource or not, is in the centre of the social and cultural development of the rural areas, creating in this way the adequate conditions for their economical reformation.

Moreover, most of them belong to the group of people that rural sociology has defined as 'pioneers', since they adopt more easily new technologies and methods for the productivity and the administration of their exploitations.

The percentage of secondary education graduates (high school or senior high school) was 21.3% of the rural population in 1991, while it was 11.7% in 1981.

The majority of the people that live in rural areas are primary educated (48.6% in 1991), without any remarkable alterations during the period 1981-1991 (-0.89%). On the contrary, there is a remarkable reduction in the percentage of those who are illiterate or not primary education graduates, since only 1 out of 4 people of rural areas (25.8%) belonged in this category in 1991, while it was 35.9% in 1981.

In addition, there was a reduction in the percentage of illiterates, since it was 14.4% in 1981 and 11.2% in 1991.

The population of 'new farmers' mainly consists of people aged up to 40 years old, most of whom were slightly occupied in agriculture. Part of them ended in participating in the 'new farmers' after several unsuccessful efforts in obtaining another profession and a struggle through more or less occasional jobs. These persons consider that they ended up in agriculture after having failed to avoid it, in the way they expected to. For these people the agricultural profession signifies their failure in the other sectors and not a conscious choice of a long-term profession. Therefore, they are not primarily interested in the relevant educational programs. However, a small - though increasing - number of young farmers not only have considered agriculture to be their future profession, but are also interested in matters of agricultural policy and international economical policy more than they used to.

Young people who belong in the latter category are more highly educated and possess a well organised mode of information (newspapers, media) on political and economical matters; however, their number is small. In addition, the educational level of today's young people is not necessarily associated with their interest for agricultural education, or their comprehensive performance.

Young people who come after early-retired farmers compose another uneven category. For some of them it is a conscious choice, while some others enter the program because of the economical benefits, since the elderly retired farmers continue to work in the field. Most of the women that participate in the program belong in this category, a small number of which aim to develop the exploitation, while the rest are just intending to support their family.

Farmers that have submitted projects for the development of their exploitations are the ones that are mostly interested in the educational programs. These people have consciously entered the agricultural profession and intend to obtain the knowledge that may help them to retain and develop their investment.

The lack of homogeneity observed in the motives that have led trainees in participating the programs reflect their attitude and behaviour during the program. The trainers' work is therefore difficult, so they have to form the educational procedures according to the relevant conditions towards a more moderate educational level. As a result, the educational level is degraded and fails to meet the educational needs of the farmers that intend to develop their investment.

The lack of homogeneity is further increased by the participation in the programs of farmers without the application of certain criteria, affecting in this way the educational context. The obsolete but still applying attitude, where the utilization of the program allocations is of first priority, has led to serious effects on the programs' performance and on the quality of the agricultural education.

In addition, the fact that the trainees are being subsidised is contributing in the programs' problematic performance. Since the participation in the program is obligatory, it is not expected to increase by the subsidization, while the economical benefit may be the only motive for participation in the program.

However, the trainees' behaviour is always associated with the trainers' performance, the subject and the educational context.

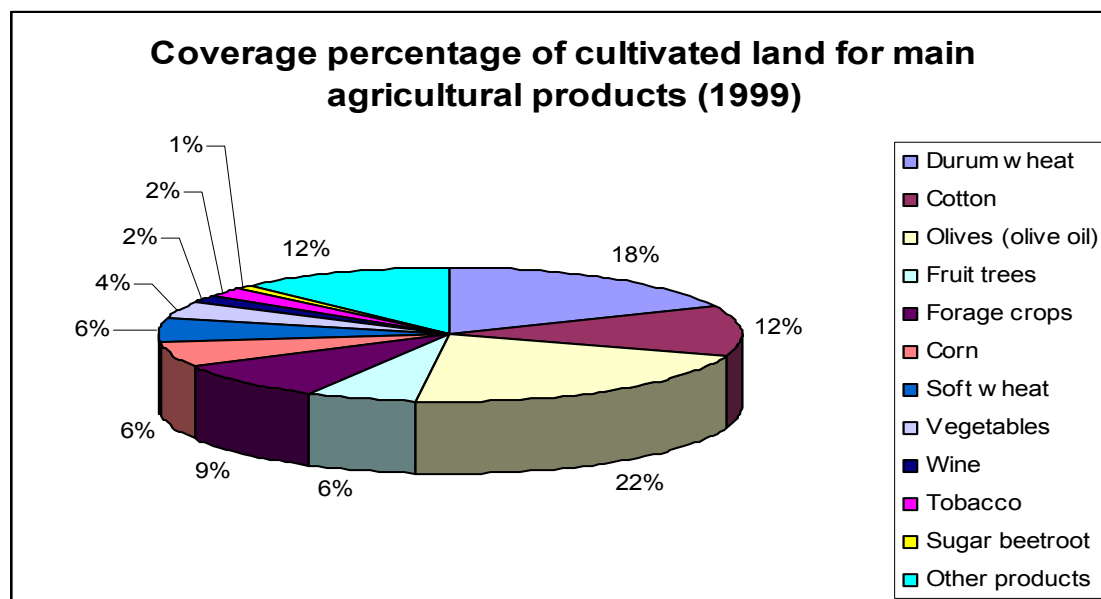
1.3. MAIN FARMER PROFILES, SIZE, ACTIVITY ETC.

The number of agricultural exploitations is presenting a stable decrease the last years. In 1995 there were 799 353 exploitations of which 797 851 belong to owners of cultivation land. In the period 1981 – 1995 there was a decrease of 19.4% with an annual rate of 1.6%.

The average Greek cultivation covers an area of 4.48 hectares and is composed of 6.2 fields with average size of 0.72 hectares. Even if the average cultivation size increased during the last years by 25%, it still is very small compared to the EU average (16.5 hectares) and the number of average fields per exploitation increased from 5.9 in 1981 to 6.2 in 1995, which highlights the lack of appropriate structural policies (redistribution of land, hereditary law) which would reduce problems and increase the exploitation production capability.

In 1995, 75.1% of exploitations had average size less than 4.9 hectares and covered only 30.9% of the cultivated land. On the contrary, exploitations bigger than 8 hectares comprise the 13.5% of exploitations and cover the 53.2% of cultivated land.

The following figure presents the coverage percentage of total cultivated land for the main agricultural products (1999).



Source: National Statistical Service of Greece – Annual Agricultural Statistics.

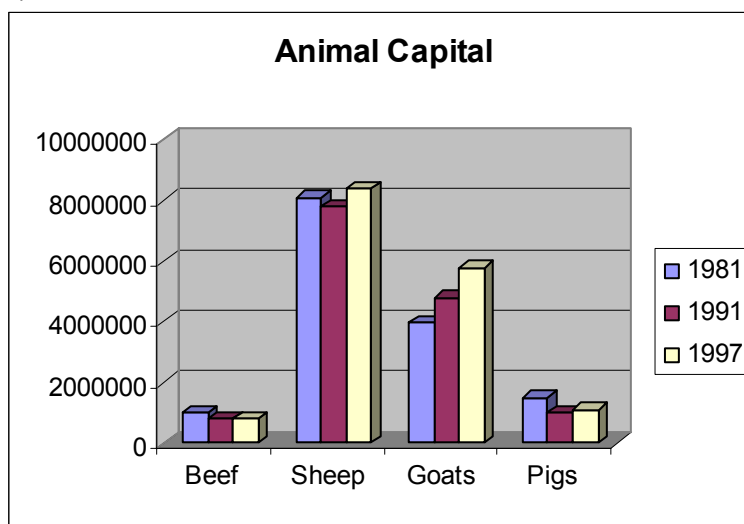
The production trends for the main products are presented in the following table:

Soft wheat	In 1981, 75% of land was cultivated with wheat, while in 1999 only 30% is covered. As a result internal production covers only 40 – 50% of demand and imports are made (1400 tons).
Hard wheat	Until 1991, the cultivated land doubled and remained stable in the following years. National demand absorbs the 30% of production and 70% is exported. These contradictory trends of these two products are justified by the increase of support measures for hard wheat due to the insufficiency of hard wheat in EU. As regard production yields, environmental conditions in most EU favor the wheat cultivation resulting in better yields. In Greece, production yields represent 45% of the European for soft wheat and 90% for the hard wheat.
Corn	There is a 6% coverage of cultivated land, with fluctuations during the '90s. Production has increased substantially since 1981 due to high production yields which reach 10 tons / hectare. Only 2/3 of internal demand (mainly for animal breeding) is covered and 1000 tons are imported per year.
Tobacco	One of the traditional cultivations in Greece. Cultivated land is reduced in the last years. Low product value for the EU, increased expenses for support and the non smoking campaign do not favor the cultivation of tobacco, even if 90% is exported with substantial potential for quality improvement and increase of competitiveness.
Cotton	There is a three times increase of cultivated land in the last 20 years. In areas with lowlands, 50% of cultivated land is used for cotton production. Production and exports have also increased (in the mid 90s it was 30 times more than that of 1980). Greece holds the 5 th place in the global ranking in production yields and due to the environmental conditions and the advanced methods and equipment used by the producers the fibre quality is excellent.

Sugar beetroot	After 1992 the cultivation land is decreasing (with exception of the year 1997) due to losses of yield and the inability to confront diseases and pests affecting the cultivation.
Olive tree	It covers the biggest percentage of cultivated land and presents a continuing increasing trend. The substantial increase of producer prices in the mid 90s led to extensive cultivations and improvement of cultivation practices (irrigation, fertilization, plant protection etc.). which increased the production yields. However, the improvement of cultivation practices was not combined with improvement of the trading system and most of the production is exported as bulk. The increase in cultivated land led to mid term price decrease resulting in a crisis in the olive oil market the last years.
Vineyards	The sector is undergoing through a crisis period since cultivated lands and production yields are reduced, mainly due to the competition from quality wines produced in other EU countries. In the last years, production is oriented in wines of specific areas and local wines in order to increase market shares.
Fruits - Vegetables	They cover almost 25% of total cultivated land and have a substantial positive contribution to the commercial balance. The most important products are: tomato and potato, citrus fruits and peaches. The last years cultivated lands are stable and production yields fluctuate strongly due to weather conditions. Traditional markets for fruits and vegetables are the east European countries which have reduced demand due to the economic crisis after 1990.

Animal Capital

Goat and sheep breeding remains the most important sector of animal breeding, with an increase of the animal capital the last years (8.9% for the period 1981 - 1997). The biggest increase is presented in the number of goats (18.1%) followed by the number of sheep (3.9%).



Source: National Statistical Service of Greece – Annual Agricultural Statistics.

Apart from the increase in the number of animals, the modernization of animal breeding exploitations resulted in the increase in milk production (9.3%). Also there is an increase in meet (lamb and goat) by 18.4%.

In the beef sector, even if there is a substantial increase in local demand, the animal capital presented a decrease, especially in the first decade of accession to EEC (27.9%). Meat production was also reduced by 27.9%, which is mainly due to the competition from the more technologically advanced in beef production north European Countries. However, in the cow milk sector there is an increase in production of 66% (1981 – 1991). Similarly, in the pig sector, animal capital reduced by 21.3% and meat production by 7.75%.

Fishery

Fishery is one of the most dynamic production sectors in Greece mainly due to the distinctiveness of Greek area with a large coast line and many islands.

Fishery holds a 2% of the NGP and 15000 are employed or 1.5% of the human workforce, while a substantial number of people are occupied in relevant sectors (shipbuilding, trade, aquaculture, processing etc.)

The fish and sea food production over-doubled (110% increase) in the years 1981 – 1994 by reaching 190.000 tons, while in the years 1995 – 1998 there was a decrease of 41%.

There is a development trend in the aquaculture sector with 708 units (1997) and a production which increased from 7600 tons in 1990 to 46000 tons in 1996 (with a value of 160€ million, which means an increase in production by 500% and in value by 750%. This substantial advancement is owed to the culture of sea species, as the annual rate of aquaculture for fish (sea wolf, flat fish) and shell culture (mussels) were 59% and 38% respectively. This makes Greece rank first in the production of sea food products in the EU (producing the 45% of the Mediterranean production). 70% of aquaculture products are exported. The commercial balance for fish products is presenting a deficit (1996), since imports (87000 tons) are twice the exports (42000 tons).

Forestry

Forests cover 250000 hectares i.e. 19% of total land area of Greece. The broad – leaved tree forests (oak, beech etc) comprise the 62% of the total while pine trees (fir, pine etc.) the 38.5%.

The forest products production did not vary a lot in the years 1980 – 1998 and more specifically round wood production increased by 3% and fire wood production by 4.1%.

The following table presents the main agricultural products and the percentages of exploitations they are cultivated (1995). It is important to note that 51.6% are used for olive oil production, while 28.2% are used for hard and soft wheat cultivation.

Main products and percentages of exploitations

Olives for olive oil production	51.6
Vine yards for wine	19.53
Hard wheat	16.28
Corn	12.26
Soft wheat	11.89
Cotton	11.85
Oranges	9.17
Tobacco	8.34
Peach	4.58
Lemons	4.19
Sugar beetroot	2.63

Source: Agricultural Articulation Research (1995)

Comparing the data presented in the diagram and this table we conclude that the level of production specialization of exploitations is increased in cases of intensive cultivations. Hence, olive tree cultivation, which in many areas is the basic, if not the exclusive cultivation, comprises a supplementary activity for an increased number of exploitations. Reasons for that are the few cultivation activities needed and the harvesting period which does not impose the single cultivation of olive trees. This is certified by the fact that it comprises the production orientation of 51.6% of exploitations and covers only 22% of cultivated land.

Contrary to the above, intensive cultivations which need many cultivation activities, such as cotton; vegetables; arboreal cultivations, sugar beetroots etc are usually the only cultivation of exploitations. This is justified by the small percentage of exploitations cultivating these products which is more or less the same as with the coverage percentage of cultivated land.

Regarding the ownership regime, there is an increase of lent land in the last years. It increased from 19.5% in 1981 to 25% in 1995, a fact which indicates a mobility of the most important production factor in the production activity and can be presented as an expression of the development potential of exploitations.

Degree of mechanization

The degree of mechanization in agriculture is not only an indication for modernization but also for the production orientation of agriculture.

In this context, the increase of tractors by 34% combined with the same level of decrease in cultivated land per tractor in 1984 – 1996 as well as the advancement in specialized equipment and irrigation systems lead to the conclusion that producers use the new technologies and intensify their cultivations for performance improvement. It is important to consider that irrigation systems increased by 40% along with improvements in quality and the introduction of new methods such as drip irrigation.

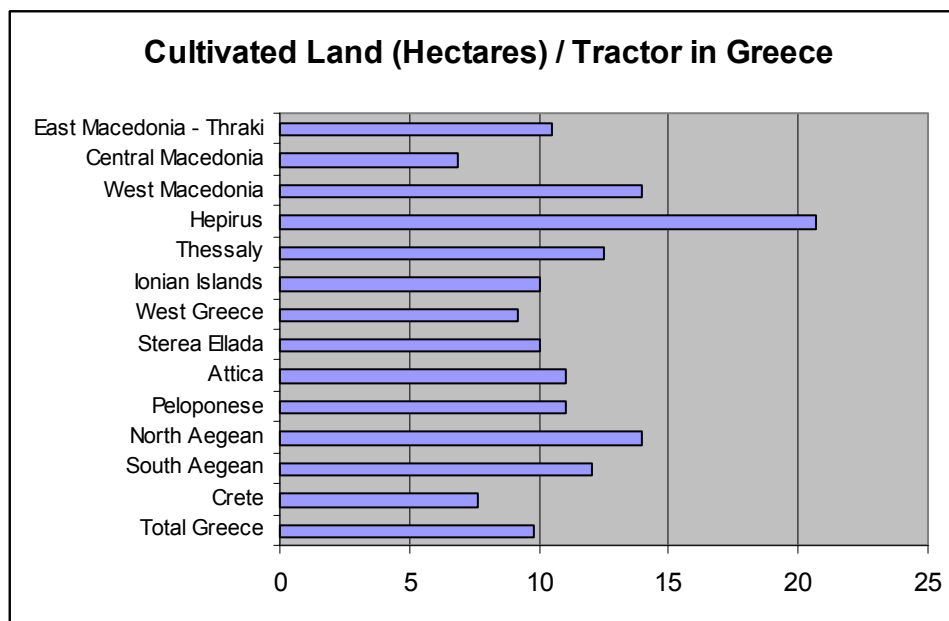
The difference among the country areas regarding the degree of mechanization depends on a number of factors such as the participation level of agriculture in the product of each prefecture, the income level of the exploitations, the geography of the area and the production specialization.

The prefecture of Central Macedonia has the lowest ratio of land / tractors (6.88 hectares / tractor) which is mainly due to the expanded lowlands, the increased contribution of agriculture to the prefectural product and the production specialization to intensive cultivations such as arboriculture. In Crete the value of this ratio is 7.61 and in West Greece 9.17. However, in the mountainous areas of Heparus and West Macedonia the ratio value is 20.66 and 13.97 respectively which is due to the already mentioned factors as well as the intense presence of the animal breeding activity.

Agricultural Equipment

Machinery / Equipment	1984 (number)	1990 (number)	1996 (number)
Tractors	273347	338852	365908
Reaper – Threshing	6488	6247	5656
Cotton Harvesters	-	2118	2833
Beet Extractors	-	953	867
Pumps	281065	313609	326195
Artificial Rain Systems	139721	184820	177485
Drip Irrigation Systems	-	52039	85282

Source: National Statistical Service – Annual Agricultural Surveys



Source: National Statistical Service – Annual Agricultural Surveys

1.4. CURRENT LEVEL AND USE OF ICT TECHNOLOGIES IN AGRICULTURE

According to a survey conducted in 2003 by the General Secretariat of Research and Technology, Ministry of Development the level of diffusion and usage of new technologies in rural areas is rather low. People in rural areas use a PC by 15.2%, while only a 9,7% use the internet. This fact indicates that the usage of PC and Internet is less for people in rural areas that are activating in the agricultural sector. This survey also indicates that young people are those that use more the new technologies. A fact proving that they are more familiarised with IT and Internet. Apart from the technical expertise another factor prohibiting the expansion of Internet usage in rural areas is the fact Internet services providers limit their internet services in urban and semi urban areas and people in many rural areas do not have the ability to connect. The situation is different for mobile use. In rural areas people use mobiles by 57.6%. This is owed to the fact that telecommunication services have been expanded to almost every area in Greece and furthermore, people are more familiarised in using mobile phones, since they have a long term experience in using telephone and thus, it was easier for them to adopt the new technology. Even though the mobile usage in rural areas is less that in urban areas, their extensive usage indicates that it is a convenient means for communication for farmers because they have the ability to communicate when they in the farm where typical phones do not exist.

There is a growing use of the Internet by many public agencies for information dissemination to the farmers. The Ministry of Agriculture and many of its subordinate organisations offer information online. Furthermore, efforts have been made by exporters to gain a global presence with the use of the Internet. They have their websites for company and product presentation and many of them have order forms. This is typical for some cooperatives, producers groups and many rural tourism cooperatives. At the moment the transactions with clients are finalised though phone or fax since they do not have developed sophisticated e-commerce applications and they do not trust the medium for conducting their commercial

activities. They only use it as a promotion tool. Other services offered to farmers through the Internet are online magazines and information for purchase of equipment and input supplies through specialised portals for agriculture.

Regarding the supply of specialised software for agriculture, some Information Technology companies offer software applications for the accounting department of cooperatives (which are usually more organised). Some technologies are developed abroad and are used in Greece, at a minimum level. Research activity in the private sector is mostly directed towards technologies with direct application, determined on the basis of demand for certain services from the producers. The main aim of private operators is to maximize profits and, to this end, they often concentrate on importing technical applications from abroad and selling them in Greece through organised commercial networks.

With regard to processed input and large facilities for intensive farming units, Greek agriculture relies almost exclusively on imports, since domestic production is often restricted to the final stages of manufacturing before the products are sold to farmers. The situation is similar for the equipment used to check the health and safety of agricultural products and to observe quality requirements, but also for the up-to-date organisation and trading of agricultural products, where computer technology and modern forms of data processing are required.

When importing technological developments from abroad, producers depend highly on foreign centres, given the oligopolistic nature of the market in agricultural technology. It should be pointed out that intensifying production by using unsuitable technologies can increase production costs with no corresponding increase in productivity, creating additional problems as regards competitiveness. At the same time, exploitation of imported technology is restricted, because there is no effective way to rationalize priorities and check the suitability of technological innovations, so as to match or adapt to the requirements of agricultural practice in Greece. Furthermore, inadequate funding makes it impossible to set up and staff research institutions with specialised personnel or provide the necessary equipment and infrastructure.

It can be concluded that there is a need to accelerate general awareness, use and experience of information technology and online activities. Especially important is the availability of PCs and Internet access in schools, since the low general use of ICT cannot be dramatically increased overnight, so it is the expectations, knowledge and decisions of future decision makers, workers and managers that will be most decisive in shaping Greek's longer term participation in the Information Society.

1.5. THE MAIN VOCATIONAL TRAINING, CONSULTANCY AND EXTENSION INSTITUTES AND THEIR ACTIVITIES

The huge alterations in the composition of the rural population and the new framework in which the rural exploitations are required to participate have created new conditions as far as the content and the role of the rural extensions and education are concerned. This role, as far as the developed countries are concerned, is determined, according to many researchers, by the consultant of the rural exploitation or of the rural community in order to achieve the most precise decision-making through the provision of analytical information on certain matters (Michailidis, '86). In this context, the role of Rural Extensions is not only the implementation of the norms of rural policy or the flow of new technologies, but to deal with the whole spectrum of rural matters.

The new policy, as it is formed by the recent changes in the Common Market Organizations and by the greater context of CAP, maintains the social aspect of the Community protection.

Moreover the role of market is enforced, the competition is encouraged, the reduction of the gap between the legislated prices and international prices of the rural products is pursued, the role of the product quality is upgraded, the complexity of the trading system is increased, the financing resources are extended, and the need for a collective activity through rural corporations and groups of producers is getting more intense. In other words, rural production is tending to be a business activity that should operate according to the rules of business practice in order to be more effective.

This is why the correlation of education and training with productivity, effectiveness, and the business dexterity of the rural exploitation are required in a contemporary policy of Rural Extensions. High quality in labour, tendencies, skills, and capabilities – properties obtained through practice, education and vocational training – compose the conditions required for the effective operation of a rural exploitation in a rapidly developing context, and in order to face the increasing competition.

Rural activity is obtaining more and more the characteristics of a business activity like all the other economy sectors. The changes in technology (machinery, pesticides, fertilizers, genetic materials, etc), the reduced protection by the government and the instability of the market are leading to the need for a new farmer profile that should have not only technical skills, but also organizing, administrative and management skills, and properties that meet the business like operation of an economical activity.

Therefore, it is obvious that the traditional way of passing simple techniques from father to son is not enough for a farmer in order to manage his business effectively; the systematic educative contribution of the Rural Extensions (state or private) is required in order to provide knowledge and information on the new fields (technical, economical, administrative).

Rural Extensions specialists, that mainly provide rural know how and information, should now investigate the real needs of the farmers according to the criteria formed in the market context, the utilization of the information resources, the passing from the simple production process to the one where the results are being investigated and to the financing of new practices.

In this new context, the Agricultural Vocational Education Training and Employment Organization (O.G.E.E.K.A.) 'DIMITRA', founded in 1997 has assumed the coordination of all the education, training and information activities. Its basic aim is to improve the effectiveness of such activities, their further development, and to achieve an easier access to the relevant services.

The activities include the initial education, the continuous training, the green certificate process - which certifies the provision of specialized know how to the owner, and information dissemination to the rural population. In order to achieve these goals, O.G.E.E.K.A. 'DIMITRA' has 3 Technical Educational Establishments (T.E.E.) and 71 'DIMITRA' Centers (former K.E.G.E.) countrywide, for the conduction of short term and long term training programs targeting to the farming population. DIMITRA also organises day conferences and information campaigns for important matters to the farming population such as women employment, the euro effect in agriculture, the CAP reform and generally aims at the provision of the necessary information, knowledge and skills to the farming population for the upgrading of the human workforce. One important activity is the conduction of training programmes of specific content to young farmers and those that have been funded for development of their agricultural exploitation. These training programmes are organised in the framework of the Ministry of Labour 3rd CSF Operational Programme for Employment and Vocational Training. The three general thematic areas of these training programmes involve plant production, animal breeding and rural tourism. The Ministry of Agriculture is also funding the Organisation for the Upgrading of structures and the development of libraries for the rural population

through the 3rd CSF Operational Programme for Agricultural Development and Restructuring of Rural Areas. The Organisation undertakes also European Community Programmes and Initiatives for the provision of knowledge and skills to the farming population in the fields of employment, vocational training and general education.

Prior to the establishment of O.G.E.E.K.A 'DIMITRA', the Directorate of Rural Extension of the Ministry of Agriculture undertook all the training activities to the farming population. Today, the role of the directorate is to control the organisation activities. Furthermore, the directorate has a division that produces TV documentaries related to agriculture which are broadcasted to many local TV stations for information dissemination to farmers.

In the field of Initial Vocational Training, the Organisation of Vocational Education and Training, subordinate to the Ministry of Education provides post - secondary Vocational Training through its Institutes of Vocational Training in Greece. The specialties provided cover almost every profession and some of them are specialised to the agricultural activities.

In the field of continuous vocational educational many private owned centres of Vocational education undertake to organise training programmes for special target groups such as unemployed, people with disabilities, people from minorities etc. These programmes follow under specific measures of the 3rd CSF Operational Programme 'Employment and Vocational Training' of the Ministry of Labour. Even though, these programmes are not exclusively targeting to the farming population, they provide knowledge and skills for agriculture related and environmental issues.

In the field of Initial Vocational Education, apart from the three Vocational Education Establishment of OGEEKA 'DIMITRA' already mentioned, the Ministry of Education owns a number of VTEE, which provide general education and education of several expertises, some of which are related to agriculture.

The Educational Institute undertakes the operation of VTEEs as well as the training material development.

Consulting services to the farming population are offered by the Directorates of Agriculture in every prefecture of Greece. These are public sector offices of the Ministry of Agriculture which employ agronomists. Furthermore, the Research Institute owns many local centres conducting experiments on cultivations and other production methods issues. Other specialised institutes exist in several areas in Greece such as the Mediterranean Agricultural Institute of Chania, Tobacco Institute in Drama and Agrinio which are usually specialised in cultivations of the area.

Apart from the public services, a number of developmental companies established in every prefecture undertake the administration of National and EU programs and initiatives such as the LEADER, and consult farmers for their accession in such programs. Furthermore, freelance consultants have their offices, and they provide their services to farmers. Usually agronomists have the consulting role in production issues but they can also provide market information and inform farmers on new cultivation trends. Also, private companies selling input supplies offer consultation services through their sales people which are usually agronomists, to farmers not only on their products but also in production techniques and equipment. Organic farming, lately adopted by many farmers, has a different nature from conventional farming. Usually farmers are more interested in new methods and the fact that they decided to follow this production technique characterises them as innovators that pay attention to market needs and make efforts to improve their income. Private companies such as DIO, offer consultation services on how to cultivate, and they control farmers for using proper cultivation practices. These companies have a network of local auditors in every area in Greece which frequently control the organic producers. If the control results do not comply with the company standards and methods, farmers may lose their licence of producing organic products.

Contract farming and Integrated Farm Management are new phenomena in Greek agriculture and are adopted by few innovative farmers. These farmers have contracts

with traders that buy their products on condition they follow specific cultivation methods. These producers are consulted by their buyer on how to produce their products, what input supplies to use etc.

A new trend also adopted by a minimum level of farmers is the application of Good Agricultural Practice Codes. Special private consulting offices exist that offer the consultation services, control their clients and give them certification on Good Agricultural Practice.

Consultation on special types of products, such as Appellation of Origin, Geographical Indication products as well as subsidies on specific products is rather centralised and is offered only by specific services of the Ministry of Agriculture, a fact which limits the potential of farmers to be accurately and properly informed on such issues.

1.6. ENVIRONMENTAL OR OTHER KEY COUNTRY ISSUES RELATED TO AGRICULTURAL OR RURAL DEVELOPMENT AT THE PRESENT TIME

It is a fact that since the mid 80s, after the achievement of the basic CAP objective concerning the autarky in agricultural products, there is an intense examination for the negative and undesirable consequences to the environment from the application of modern agricultural practice. (extensive use of fertilizers and chemicals, exhaustion of water resources etc.)

The violations to the environment were not conceived anymore as the inevitable consequences from the application of a, in any other way effective agricultural production. They were conceived as aberrations of the new environmental morality (Lowe et al. 1997) which were charged to the application of the agricultural policy.

One problem is the discredit of the European consumers gained a political and social dimension the last years with the appearance of the SBE disease of cows, dioxins etc. Hence, there is more than ever necessary to include the environmental dimension in the CAP, a fact which led to the promotion of the symbolic term “Green Europe”. (Louloudis, Beopoulos, Vlaxos, 1999).

The agri- environmental regulation 2078/92 seems to represent the most important attempt, at the institutional level, for the application of the new European policy. This foresees practices which protect and are in favour of the environment, such as:

- Deterioration of chemicals' use
- Introduction or continuation of organic farming
- Transformation to more extensive forms of plant production or transformation of arable lands to extensive grasslands.
- Reduction of the density of the animal capital (beef or sheep)
- Maintenance of abandoned agricultural land or forests.
- Fallow fields for at least 20 years.
- Land management for public access and activities of leisure and spare time.

The objectives of the regulation are:

1. The encouragement of the application of environmental friendly agricultural practices
2. The decrease or avoidance to produce a surplus of agricultural products
3. The achievement of a reasonable income for the producers.

Its implementation, in combination with other measures such as ‘afforestation’ and ‘early retirement’ contributed to the ‘Greening’ of CAP.

Evolutions in the internal of EU and CAP reform in 1992 as well as the GATT agreement (World Trade Organisation) have called for a change in the philosophy of supporting the rural sector, in order to abrogate the negative consequences derived from subsidies related to production yields and to include environmental improvement in the CAP objectives.

Agenda 2000 follows the same concept with income support through direct payments, while the level of interventions to the market is decreased. Also measures related to the maintenance and the designation of environmental quality are enhanced and expanded.

More specifically, CAP reform in 1999 establishes a discrete axis of CAP for the respect of the environment with measures and programs in each member state or prefecture favouring the environment. These measures involve training, agri-environmental measures, less favoured areas and afforestation.

One very important term introduced is that of “cross compliance” in the framework of the Common Organisation of Markets of many agricultural products, some of which are of interest to Greece. Especially in the framework of the “horizontal” regulation 1257/99, it is foreseen for member states to voluntarily establish maximal levels of subsidies per cultivation and the obligatory observance of some environmental rules in order to provide direct land payments to producers.

In the case of Greece, this settlement involves the support framework for wheat, olive oil and tobacco. In this framework, if the use of forbidden agrochemicals is identified after the conduction of potential controls, the provision of subsidies ceases for delinquents.

It is important to mention the general principle which will control the agri – environmental philosophy: In any case farmers provide services to the environment, which exceed the basic level of ‘good agricultural practice’ and environmental legislation, they should be awarded properly mainly through the agri- environmental measures which will be set in a voluntary or contractual base (Council of the European Union, 1999). This fact assumes the conduction of ‘Good Agricultural Practice Code’, with direct correlation to local conditions, the observance of which will be an important element of support frameworks of certain products and will comprise a minimum reference level.

Several agricultural production methods are considered to combine in a positive way the social, economic environmental dimensions of agriculture, these are: organic farming, integrated production, traditional low intensity farming and local productions (CEU, 1999).

2. SPECIFIC PROJECT ISSUES:

Our findings are based in a previous field survey conducted with interviews and questionnaires to farmers – owners of agricultural exploitations. This survey conducted by the Research Centre of the University of Pireaus aimed at investigating the factors promoting or prohibiting the entrepreneurial spirit in the agricultural sector in Greece. This survey also involves the analysis of a number of best practices (case studies). The selected sample covers the whole Greek area for objectivity purposes, while it is focusing on the most dynamic and productive regions of Greece, such as Macedonia, Thessaly, Attica, Peloponnesus and Crete. The islands of Greece have been excluded from the survey as the agricultural activity has limited potential in these areas and, furthermore, the main activity and the expression of entrepreneurship are promoted through tourism.

300 exploitations have been selected from the above mentioned areas, 1/3 of which are characterised as ‘farm businesses’ and 2/3 are considered traditional farm exploitations. According to theories expresses the definition of the farm manager is composed of the following attributes:

“A farm manager is the owner of farm exploitation, who either due to:

- Special organisation of his exploitation
- Technology used
- Advanced educational level
- Improved relationship with customers/ consumers / suppliers
- Improved product attributes (product differentiation)
- Specialised training / education
- Entrepreneurial skills
- Or a combination of the above,

Has developed the production / promotion of his products / company in a way and pace, which differentiate him from the average of the colleagues in his region.

Some of the survey results are presented in the following paragraphs of this report, as there is a high correlation with the issues investigated.

2.1. FARM MANAGEMENT

2.1.1. Planning and Decision making

More than 80% of the existing agricultural exploitations have passed to the ownership of their today owners either through heritage or assignment. Almost half of the exploitations have been assigned to their new owners (48.8%) mainly due to early retirement measures for farmers in the ‘80s. The 18% of exploitations have been created from the beginning. It is observed that 30.5% have been created by the characterised farm managers while only 10.9% have been created by traditional farmers. This fact indicates that farm managers do not come from an agricultural background and furthermore, only the farmers with an entrepreneurial spirit tend to increase their land through purchases or rents.

It is also observed that only 48.3% of farm managers used to work in their fathers agricultural exploitation while this is the case for the 80.6% of traditional farmers.

The evolution of agricultural exploitations presents a positive trend as a total. More specifically, there is an increase of the production and trading activity by more than 50%, while there is an increase of 70% for the processing activity.

By comparing the two groups, farm managers and traditional farmers, the first present a greater increase of the production activity (71.2%) comparing to the second (44.6%). Regarding the processing activity, the first group presents an increase for

the 75% of cases, while for the second group the corresponding percentage is only 26.1%. This fact indicates that farm managers tend to extent their business to activities which are better controlled by them (such as processing). It may be that the trading activity is related to higher profit margins than processing, but the place of the activity is far from the farmer's action place and is influenced by factors which are out of his control.

Among those considered as farm managers the primary goal of the agricultural exploitation is the maximisation of profit and the second one is the increase of product added value. They also consider as necessary, the expansion of their company, both in terms of profit and in terms of market share. Increase of added value can be represented as vertical integration, avoidance of intermediaries, exploitation of production etc. One very important aim is also to reach the consumer. However, traditional farmers consider as most important goal of their exploitation the achievement of sufficient income for living. These answers have not been significantly affected by the educational level, the age, the number of employees, the marital status or the previous occupation of the farm owners.

Another important point is the increase of organic farming among the dynamic agricultural cultivations. Products cultivated organically are fruits, vegetables, olives, wine and grapes as well as wheat, tobacco and corn. The organic farmers expressed their environmental sensitivity and their concerns for a healthier life for them, their family and consumers in general. They believe that the future belongs to organic farming and demand from the state to provide experts for organic farming locally, to inform consumers about the production methods of these products and ensure their distribution to the markets with appropriate marketing channels.

It is important to consider the impression farm managers have for the expansion and development of their companies. By no means have they believed that this is a quick procedure which will exploit market conditions or any competitive advantage of the company. Rather, they consider this as a step-by-step process which leads them to gradual development. The common logic followed is: *'I achieve a specific level of development, I stabilise my position to the market and then I proceed to the next step'*.

Cooperation is identified in most of the agricultural exploitations with a business nature. Different types of cooperation exist, involving different groups and serving several roles.

From the perspective of needs / problems to be resolved, cooperatives involve:

- Common use of equipment
- Distribution of time and tasks
- Technical or consulting services provision
- Exploitation of ideas
- Certification services provision
- Common purchase of equipment and input supplies (economies of scale)
- Common distribution of products
- Coverage of investment capital
- Transfer of know – how
- Production planning (selection of cultivation type, varieties, quantity and quality of produce)

The main types of cooperatives are:

- Producers groups
- Agricultural cooperative
- Company (Ltd or SA)
- Cooperation (formal or informal)

People involved in a cooperative usually are:

- Parents and brothers

- Other producers (producing the same or other products)
- Third parties (traders, agronomists, consultants)
- Private companies

An example is the producers of organic products cooperating with BIOZEUS for technical support and distribution of their products as well as DIO for products certification.

Another example is that of producers which established a Ltd. Company in cooperation with another one, for their products promotion in Greece and mainly in Athens, through their private owned sales store, and occasionally abroad.

Numerous examples involve the establishment of Producers Groups. One of them established a greenhouse part for the supply of input supplies, product distribution and investments (refrigerators, sorters etc.)

A group of producers in Macedonia established the company ZEUS S.A. for the management of their products. Production planning (products, varieties, and yields) is based on the company capacity and potential to promote and distribute the products and is aiming at the company development. Usually they jointly purchase input supplies for the achievement of better prices. The company is a pure “entrepreneurial” one. The voting right and the dividends shares depend on the size of each member’s exploitation and not like the normal agricultural cooperatives.

Other examples involve the establishment of ltd companies for contractual cooperation with producers and export of produce to EU countries.

Some problems are common for farm managers. One important problem is the issue of product pricing. In small companies, there seems to be a problem because not all factors are easily calculated. Such factors are production losses, distribution expenses, indirect costs in organic farming etc. Those that have some knowledge on economic matters, make efforts to arrange product prices while others use the service of consultants. *‘Without the accurate calculation of cost you have no lack’* says for cost control a producer that wants make a company.

An investigation of the most important issues for farm owners, lead to the following conclusions:

The issues that mostly concern farm owners are

- Purchase of supplies
- Sales negotiation
- Product pricing
- Variety selection
- Bank relations.

Farm managers are more concerned on the above issues than traditional farmers especially for variety selection, product pricing and bank relations. This fact indicates the dynamic nature of farm businesses opposing to the traditional farms that are cultivated with what is already known to the farmers. Among the group of issues presented above the most important are the bank relations and the difficulty in obtaining loans for the operation of their company.

Major business decision are made by the owner of the farm exploitation (35.2%) or upon agreement with the family members (51.5%), a fact reflecting the family nature of farm exploitations and the substantial control over decisions from family members. The decisions in cooperation with consultants have a small percentage of 6.1%. These percentages involve decisions about the following issues:

- To whom are we going to sell our products?
- What investments will be made?
- Product prices
- What to produce?
- What input supplies are we buying?

The issues:

- What amount are we producing?
- What credits will be made to buyers?

Are usually determined by market (external) factors and do not especially bother farm owners.

The issue of investments to be done is the most important for farm managers, while it is not so important for traditional farmers. This fact indicates the strong correlation between entrepreneurship and investments.

How do they make decisions?

Usually two methods are followed, before a decision is made:

- A. exploration (scientific research) by 41.3%
- B. Family discussion by 38.2%

As expected, farm managers usually follow the first method while traditional farmers prefer the second.

As regards consultation, farm managers usually make their own decisions (by 35.8%). However, they use the consultation of their family members, colleagues, friends and agronomists by 25.8%. It is observed that farm managers understand more the importance of experts' consultation than traditional farmers.

Regarding factors that affect company performance, farm owners consider as the most important the unpredictable weather conditions, the cost of equipment, the cost of input supplies. They consider as less important the Ministry of Agriculture measures and consumers' income. The least important factors are workers wages and land cost.

2.1.2. Monitoring and control

Control involves the continuous monitoring of the production activity and of the final product during and at the end of a time period and especially to the investigation of a potential gap from the expected results. It also involves the identification of reasons that cause this gap, and the action for adjustments and change, with the aim to improve the production results. The importance of control is based on the fact that production factors and resources are properly used and that business goals and objectives are achieved. The level of achieving the business objectives is an indication of the quality of management. A big issue has to do with time management in a way that the company owner has the ability to monitor the various business activities (production, supply, trading, bank contacts and contacts with other agencies) as well as family and social activities. Furthermore, he has to allocate the work to personnel (permanent or seasonal) and to be informed about trends and evolutions in the sector. When the company cannot afford the cost of high level personnel, the farm manager needs to be fully employed. *'We learn to live with our problems'* says a producer that has little time for his family.

2.1.3. Financial Accounting and Analysis

Limited capital is a problem for many farm companies, especially when they need to make new investments. Another important issue is the change of cultivation and the introduction of new products / varieties. One flower producer presents the problem: *'While our colleagues from Holland have hundreds of choices of varieties and many experts, we have to choose among 3 or 4 representatives, without the help of specialised executives'*. The cost of equipment which is usually imported is another important issue.

Bank relations generally seem problematic. Most farm managers attempt the least possible dependence on bank loans. They prefer to self – fund their activities and reinvest their profits as well as the intensive personal and family labour (for decreasing their working capital needs). Those that have a loan, they usually got it at the beginning of their activity and they attempt to free themselves from loans. Until 1980, Agricultural Bank of Greece financed exclusively the agricultural sector,

through a set of rules determined by the state and the Bank of Greece. The low capital cost and some other premiums provided to the Agricultural Bank, gave it the opportunity of financing the rural sector with favourable conditions (low interest, long term loaning and kind handling of exploitations facing problems such as unpredictable weather conditions, diseases etc.).

Furthermore, the special attributes of the agricultural sector (dependence on biologic and environmental factors), including the structural attributes of the Greek rural sector (small farm exploitations etc), increase the business risk and, therefore, justify this favourable treatment.

This fact contributed to a great extent to the increase of the agricultural product, but, at the same time led to the augmentation of the capital liabilities of the Agricultural Bank of Greece and the creation of substantial losses for the bank. This situation, combined with the stop of state subsidies to the bank's capital (in 1988), deteriorated the potentiality of the bank to provide low interest loans resulting in the gradual convocation of interests in the various economic sectors (and the agricultural sector). Thus, the agricultural bank's loan interests reach the 94 – 97% of the corresponding interests to the other economic sectors (Spathis, 1999).

The proliferation of the banking system since the mid '80s and the establishment of many private banks led to the broadening of the provided services and increased the efficiency of the capital market. These trends affected directly the rural sector with the emerging of new bank products and services and the gradual formulation of lower interest levels.

In the competition among the several economic sectors, the agricultural one is presented as less advantaged due to the low performance of the agricultural loans and the relatively high credit risk. The situation is worse in the case of small medium agricultural exploitations, as well as those with low competitiveness.

The alternative sources of loans for the agricultural sector are:

- The Agricultural Bank of Greece, which provides an extensive network of branches in the whole country and is experienced in financing the agricultural sector.
- Agricultural credit cooperatives, which ensure easier access to producers.
- Urban credit cooperatives, which present substantial development the recent years.
- Other banks, which usually have fewer restrictions and faster procedures than the Agricultural Bank of Greece and are mainly preferred by the business form units.

As it is clear from the current situation, the financing of the agricultural sector is not different from that of the other economic sectors. Therefore, the survival of the agricultural companies entails the structure improvement as well as the better management of the production activity, so that these companies are presented as reliable and competitive investors.

2.1.4. Insurance and Risk

The basic feature that can be extracted from surveys and case studies is pluriactivity (multiple cultivations). Except the wine production and animal breeding, pluriactivity is conducted in almost all cultivations. Usually, producers do not depend on only one product and this is a general trend observed in the agricultural sector of Greece.

One of the producers characterised by entrepreneurial spirit declares: *'Producers that count to a great extent on subsidies, produce only one product and do not proceed to investments for their exploitations will have to confront unpredictable conditions in the future'*. Pluriactivity is essential when the producer wants to confront the unpredictable market and environmental conditions. Of course it is needless to mention the unpredictable weather conditions which can alter the companies' plans in a limited time. Their insurance coverage is little, compensations are paid overdue and estimations have many problems. However, some people

declare: *'Unpredictable conditions are reduced when we are making good and organised work'*.

Agricultural population is concerned both for insurance related to people and for insurance of the production capital from bad weather conditions and bad market conditions (imbalance of demand and supply). In the conventional sense of insurance are included the insurance of production capital and products. Although, there might be insurance against the uncertainty of markets. Insurance of this kind comprise the intervention mechanisms included in the framework of Common Organization of Markets for fresh fruits and vegetables enacted by the European Community.

In Greece, the full insurance system for producers and agricultural production was enacted in 1961 with the law 4169/61 "Concerning agricultural insurance", by which the Organization of Agricultural Insurance (OGA) was established. The primary goals of OGA were to provide:

- Pension to farmers
- Health insurance to farmers and to their family members
- Compensation for damages caused to production by hail or frost.

With the law 1790/88 the Organization of Greek Agricultural Insurance (ELGA) was established in which were transferred the responsibilities of organizing and implementing active protection and insurance of agricultural production and capital. The insurance covers the plant and land capital. In practice, only the production of plant production is implemented. The active protection refers mainly to protection of hail and frosts. The formative law of ELGA anticipates the insurance of production for damages caused by natural or other reasons. Practically, the covered dangers are: hail, frost, windstorm, flood, extreme heat, excessive or untimely rain falls.

2.1.5. Marketing

As expected, in Greece, cooperatives and agents / traders comprise the most important marketing channels of agricultural products. Cooperatives are used by the 68% of the respondents while 50.5% use the agent / traders. 13% to 14% use direct selling methods in local markets or kiosks. These marketing channels and the extent they are used are common in both farm managers and traditional farmers. However, there is substantial differentiation in direct selling to retailers. Farm managers use this method by 38.1% while traditional farmers use it by 11.4%. Exports, even if they are ranked last in the list of marketing channels are used by 13.6% of farm managers and almost not at all by traditional farmers. This fact is expected, concerning that the export activity is highly related to increased standards of quality, relationships and consistency.

Other marketing channels are also used by the 22.1% of farm managers and by only 8.6% of traditional farmers. These are:

- Private owned retail stores
- Direct selling to consumers (such as farm selling observed in products such as wine and honey or door to door selling for products such as olive oil and honey)
- Selling to processors (for production of animal food and processed products)
- Selling through companies (the case of organic products)
- Selling to wholesale market stores

2.1.6. Human Resources

Human resources problems are very complex and difficult to overcome. By human resources problems we mean the difficulty to find and employ specialised personnel. It seems that the problem of employing unskilled workers has been resolved to some extent with the economic immigrants that came in Greece the last decade. However, the problem with specialised workers, technicians and clerks becomes more intense.

The consequences are more obvious in the high technology green house cultivations and organic farms and generally in farm companies.

Greeks are not working with seasonal employment conditions, because they seek permanent employment that companies are not offering, due to the kind of the activity. The immigrants, who are unemployed, are usually employed but they have low productivity, need training, they are not stable and finally they increase cost.

The problem is not only the permanent employment. There is also a problem with the bad working conditions as well as the considered (theoretically low) image of working conditions.

2.1.7. Quality assurance

In the last years consumers' concerns for nutrition products' quality have been raised with the appearance of diseases occurred by the consumption of animal products, such as the SBE disease from cows etc. At the same time, the awareness of the harmful content of many food products, such as dioxins, hormones and genetically modified genes raise concerns about the nutritional model. Therefore the ensuring of healthy products production is based on proper cultivation and animal breeding practices, which involve the protection of the environment, the proper usage of agrochemicals, the avoidance of using genetically modified varieties and the maintenance of natural resources, the sustainability and pluriactivity of agriculture. The Mediterranean climatic conditions as well as the small farm exploitations give the opportunity to Greek farmers to produce traditional, local and organic products with natural production methods which are considered healthier than those produced with extensive cultivation methods. Two important tools for the production of quality products are the legislation concerning the Products of Appellation of Origin and Products of Geographical Indication. The certification process, aims, among others, at the assurance of guaranteed product identity either through certification of the product itself or through certification of the production activity as a friendly to the environment, traditional etc. The EU regulation 2081/92 defines the Products of Appellation of Origin and Geographical Indication Products. Greece has so far submitted applications for a total of 149 Products of Appellation of Origin as well as Products of Geographical Indication and 76 of them have been recognised by the EU. These involve 22 olive oil types, 19 cheese types, 18 fruits, vegetables and dried fruits, 10 olive types and 7 other products.

Important is also the legislation involving the activities of production and distribution of products. EU has introduced several directives and regulations for:

- Sweeteners and colour substances in food products (EU dir. 94/35, 94/36, 95/2 and 94/34)
- Weed controllers and their use (EU dir. 91/414, 94/29 and 94/30)
- Food and beverages packaging and proposed types (EU dir. 94/62 and 90/82)
- Food products hygiene and labelling etc.

Apart from those horizontal measures, several other types of Quality and Marketing Standards exist for each type of Product.

These standards are adopted and taken into consideration especially for exports to EU countries. However, many of those standards are not important for the trading of products in the internal market or other non EU countries. This means that producers that do not adopt these measures either in terms of production activity or in terms of product attributes cannot export their produce to the European Market and achieve a better price for their products. The adoption of these measures is often a difficult process which increases the production cost, but the producers should pay attention to the long term benefits arising from this process and include this adaptation in their development strategies. The certification of products of appellation of Origin and geographical indication products is conducted by AGROCERT and the establishment of HACCP system as well as the ISO standard is

conducted by ELOT. Quality controls of food products are conducted by EFET, the National Agency of Food Control.

2.1.8. Environmental issues

The 3rd Community Support Framework through its Operation Programme for Rural Development and Restructuring of Rural Areas takes into consideration the agri – environmental measures of the EU Regulation 1257/99. Therefore the Good Agricultural Practice Codes are applied and combined with specific kinds of subsidies to farmers, especially those for development plans of agricultural exploitations. The decision of the Minister of Agriculture, assumes as a prerequisite the application of Good Agricultural Practice codes in some of the exploitations in order to gain subsidies, otherwise some penalties are foreseen. The aim is that the GAP codes will be gradually adopted by any type of exploitation in order to adopt environmental friendly cultivation methods and to ensure animal welfare. In this sense the agricultural legislation aims to establish uniformity in the cultivation methods of Greek agricultural product, a fact which will be a necessity for their competitiveness in the near future. At the moment only few of the producers adopt the good agricultural practice codes. Young farmers and those that aim to long term benefits are the early adopters and are aware of the GAP codes.

The GAP codes comprise the minimum commitments to the environment that producers must undertake for their accession in the agri – environmental measures of the EU Reg. 1257/99 as well as the minimum commitments referred in the Article 3 of the EU Reg. 1259/99

In agriculture some general obligations are:

- Soil analysis is necessary before fertilization.
- The application of fertilizers should be in instalments.
- Irrigation: Proper irrigation systems should be used according to soil type and slope.
- Pest control: The application of agrochemicals should be done according to the national legislation and the product guidelines written in the label.
- Crop rotation: Crop rotation programs aim at land improvement and proper land use, weed control, pest and disease populations control, reduction of pollution caused by agriculture
- Protection of flora and fauna.

Several other codes involve the natural areas management, biodiversity and landscape. There is also consideration for land cultivation, equipment and material and specific measures for specific soil types (acid, sloping) as well as ecologically sensitive areas and areas with exhausted water resources.

In animal breeding the GAP codes involve the density of the animal capital and the definition of pasture capacity of areas which is different in lowlands, mountainous and semi – mountainous areas and islands.

2.1.9. Use of ICT and software applications

As already mentioned in Part A of this report, people in rural areas and especially farmers comprise the late adopters of Information Technology and the Internet. This fact can be attributed to their profile (old people, a lot of illiterate etc.). However, attempts are made from some people especially from those considered as farm managers to get informed through the internet and adopt the new technology for the better organisation of their business. The state (through the Ministry of Agriculture) now supports the purchase of PCs by subsidising part of their purchase costs. Similar actions for purchasing computer and internet connection as well as the development of a website are funded by the go-online programme, administered by the Ministry of development. The adoption of PC and Internet usage is more common in cooperatives and producers groups which use the technology for the mechanization

of their accounting department. These companies have they ability due to larger company size to employ people with the necessary skills for using computers, the internet and similar technologies. Furthermore, farmers that have a superior educational background can easily adopt new technologies. Generally speaking we could say that the diffusion of ICT and software application is rather low and appropriate training for the acquisition of these skills is required.

2. 2. PRODUCTION PLANNING

Production planning aims at selecting the optimal combination of available production factors for the production of products, that maximize the economic benefits, taking into consideration the existing conditions and restrictions in and out the company.

The production planning work involves the following:

- The determination of the company objectives and specific goals.
- The distribution of activities between the various departments
- Forecast of alternative solutions in specific problems.

2.2.1. Production approaches, trends and strategies

The biologic nature of the agricultural activity as well as the environmental conditions formulate a distinctive environment, in which people along with other factors formulate the individual character of any agricultural exploitation. In each activity we perform we can identify two stages: a) The decision and b) the implementation. In the family enterprise it is usually the same person that does both. The organisation of production of the agricultural exploitation is the time the farmer spends to prepare and make decisions and to resolve problems of his company. The capital increase and the dependence on market conditions oblige the farmer to spend more time for managerial work which is characterised by the following tasks:

- **Forecast:** When someone is forced to make decisions for the production of products he is going to sell nine months later, the only tool he can use is forecast. Forecast is difficult today since many factors must be considered such as changes occurred in the production systems (providers, technical support, sales, etc.)
- **Planning:** The producer has many alternatives but he must select one combination each year. This combination may be efficient or not. Independently of the way the farmer concluded in that decision, the farmer made worked to combine the elements that he has in mind and he reached conclusions. Apart from work production planning involves risk taking which is based in his decision.
- **Organisation:** With organisation the production planning decisions are implemented. The aim of the organisation in agricultural exploitations should be the performance improvement and functionality. The farmer can achieve this by choosing the best system which will maximize the production factors efficiency.
- **Management:** Proper management ensures the normal functioning of the company. Management is a very important process because its success ensures the economic benefit of the company. Proper management means that the producer defines properly the progress of his company and gives the right guidelines to the personnel (family or not). It is also related to proper decision making for both production planning long term decisions and everyday trivial matters.
- **Coordination:** It is another necessary task for the coordination of production factors, in order to reach the optimum outcome according to the company's

aims. Coordination is necessary in agriculture since many production factors are used in many production activities (eg. Equipment). With coordination we achieve to serve all production sectors of the company and to ensure the facilities optimum use.

- **Control:** The farmer should control each process every day to see that everything is done according to his decision; he must correct mistakes on time before he faces irreparable consequences. He must also investigate the difficulties in the implementation of his decisions, and to find solutions.
- **Evaluation:** Evaluation compares the results achieved with those foreseen. It also identifies the impact of the dominant conditions. It should be done at the end of each phase and lead to conclusions that will enhance the company performance. Evaluation is not an easy task and should be conducted by well trained farmers that are aware of their problems.

2.2.2. Approaches to production scheduling

Producers are at the same time the owners and managers of their exploitations. Therefore they have the full control and decision making for their production scheduling. Their production scheduling procedures is based on a combination of factors (environmental, market, legislation, know-how etc.). Usually the decision on what to cultivate is done at the beginning of the cultivation period. The producers organise the allocation of their resources and their time schedule according to cultivation needs and environmental conditions. In green house cultivations producers arrange to be able to sell their products during the high seasons of Christmas and Easter. All these scheduling activities are done experimentally and there are no formal rules for the production scheduling process. This fact is rather time consuming and occupy a lot of their time arrange their cultivation activities. The aim is to coordinate the cultivation activities and to better allocate resources, especially when more than one product are produced.

2.2.3. Raw materials supply approaches (fertilisers/chemicals etc.)

Producers usually supply their raw materials through local stores or cooperatives. The size of cultivation and therefore the size of purchase of raw materials define the purchase agreements and the negotiation power of producers. Large scale producers buy their raw materials (seeds, fertilisers, chemicals etc) directly from providers, and in this sense they achieve better prices (they do not pay the premium for intermediaries and resellers). The same situation exists for cooperatives. They purchase supplies on behalf of their members to achieve better prices. Also prices can be lowered if purchases are made in low season periods. But this implies that the producer makes a good forecast for the supplies he is going to use.

2.2.4. Use of land, buildings and other assets

Usually producers cultivate their own land or they expand their cultivation through land purchases or rents. In order to make investments they can be funded in the framework of specific National or European programmes and actions or they can reinvest their capital. Furthermore, they can obtain a loan from a bank or have a leasing arrangement.

Some storage, freezing or other type (eg. Ovens for tobacco) facilities for can be shared among producers. These facilities may belong to cooperatives or professionals that lease them for use. This is sometimes the case for specialised equipment eg. machinery for irrigation, harvesting, plant protection etc. In this way they can achieve reduction of the production costs. A general observation would be that farmers tend to use their own facilities, if they can afford it and that they avoid to get

loans from banks. Regarding the low cost equipment they usually have their own vehicles and tractors as well as water and pesticide containers.

2.2.5. Use of ICT and software tools

As already mentioned, the level of use of ICT is very low in the rural sector. Farmers comprise the late adopters of new technologies. An exception is the use of mobile phones that seems to be convenient for the type of work they perform. However, the use of the internet is somehow exploited by some farmers especially at the level of producers groups and cooperatives. They use the new it for electronic mail, communication, internet presence, products promotion etc. However, they do not use the new technologies for electronic transactions and more sophisticated applications. The introduction of new technologies and the familiarisation with PCs and Internet are a prerequisite for their usage. Attempts at the national level are made from the Ministry of Agriculture (through funding and short term training programmes). Also the Ministry of Development, through the go-online initiative funds the purchase of computers and the development of a web page for SMEs in the rural sector. Specialised software tools for productions planning for agricultural exploitations have not been investigated so far. However, some software companies have developed software for the mechanisation of the accounting department of cooperatives. It seems that the demand supply rule is applied in this case since the market for software in the rural sector is very small.

2. 3. ENTREPRENEURSHIP AND INNOVATION

A consolidated framework appropriate to define entrepreneurship in the case of the agricultural sector, is proposed from Shapiro¹

According to Shapiro, four factors are cumulatively responsible for the development of entrepreneurial activity. These are:

- A case leading to displacement of the economic – social situation of the person
- Tendency to entrepreneurship, a character and personality element
- Social acceptance of the cultural environment, in which the potential entrepreneur belongs
- Sufficiency of resources, which make feasible the undertaking of entrepreneurial activity and the creation of a company.

A farmer – in the traditional sense, even when being the leader of the simplest agricultural exploitation – is the owner of at least some of the ‘entrepreneurial’ attributes. In specific:

- The undertaking of risks, especially due to the uncertainty of weather conditions and all unpredictable factors affecting the yield.
- The responsibility for decision making, the planning and coordination of production factors.
- The non – apathetic (even typically) attitude to new opportunities for improvement of the economic output of his exploitation.
- As the final cost and benefit recipient of his production activity.

Usually, in practice, farmers accept and aim at the cost – benefit sharing with agencies, especially the state, financial, technical support and intermediaries for the promotion of their produce to the markets.

The cooperation terms with these agencies are not always controlled by the farmers. Usually they are accepted as fact, because of lack of knowledge and tendency to

¹ A. Shapiro, An action program for entrepreneurship (US, MDRR Press, 1971 “The entrepreneur, the small firm and possible policies”, Six countries workshop program on Entrepreneurship, Limerick, Ireland (June, 1980),

argue. Exactly this negotiation inability deprives the farmers of the entrepreneurial authority more than the fact they have to cooperate with these agencies.

2.3.1. General Culture of Entrepreneurship across the sector

The entrepreneurial spirit of producers is expressed in various ways and bares distinctive features in any case. The entrepreneurial ability is expressed through the resolution of problems, exploitation of opportunities (derived from family, environment, the cultivation type, the economic situation etc.), the attempt to make changes, the undertaking of initiatives, risk taking. The entrepreneurial spirit involves innovation, invention, planning, forecasting and exploitation of ideas.

In any case, the effort and willingness to expand, both in terms of activities and in terms of exploitation size are observed. Usually growth rates of 20 – 30% annually are achieved and the produce is commercialised either from the farm owners or through wholesalers, retailers or it is exported. Farm managers usually undertake not only the production of their products but they also proceed to processing, standardization, commercialization, make investments and moreover their planning is based on a long term perspective.

The activity of farm managers is affecting the environment, social and professional. In any case, both family and colleagues follow the evolutions of the innovative farm companies. From the colleagues' point of view, which is more important due to the multiplying effect, this observation of activity leads to some forms of cooperation, motivation, depending on the conditions of the region (cultivation type, etc) and the producers 'culture'?

Once the activity of a farm owner is considered as effective, the imitation process begins. There is an interest observed for new products, new cultivation methods and cultivation management. This fact is an important consideration for policy makers! How one could contribute to increase the impact factor to avoid its accidental occurrence? How this imitation fact could lead to organised and efficient entrepreneurial breakouts?

The entrepreneurial activity of a farmer in a region is not only imitated but it also creates cooperation types with other producers (such as contractual farming). This ensures a stable production with controlled quality attributes.

The main findings as regards entrepreneurship in the agricultural sector, according to a survey conducted on behalf of the Greek Ministry of Agriculture², are the following:

- The expression and development of the 'entrepreneurial spirit' in the farming sector depends to a great extent on the educational level, especially the secondary, but is also affected by the family background. It is observed that the offspring of a farming family has fewer possibilities to evolve to an entrepreneur than one whose family is related to non – farming activities.
- Entrepreneurship is an attribute shaped in the early years, irrelatively to the expression of the entrepreneurial activity. Vocational training activities may affect and encourage entrepreneurship, provided that they are characterised by the proper form, method, goal and content.
- Entrepreneurship results inevitably to the increase of the required human capital and to the disengagement of the family labour.
- Entrepreneurs in the farming sector are not limited to the inherited or assigned land. They tend to expand their land through purchases or rents.
- They also have to a great extent, experience gained from non – farming activities.
- Those that studied, and spent many years in urban areas have a different culture, more progressive (in the sense of a more positive attitude towards anything new and a better preparation for change).

² "Entrepreneurship in the agricultural sector", Research center, University of Pireaus, June 2003

32.6% of the farmers that are characterised as traditional ones, support the view that the nature of their exploitation does not offer the opportunity for more intensified production methods (small farm land, low product demand, low soil capacity etc.). However, 23% believe that they did not manage to proceed to a more dynamic activity due to inability and other personal choices).

The sub-sample survey among the farm managers group highlights some facts related to the farm management activity:

The reasons that motivated the simple farmers to proceed to more complex forms of the entrepreneurial activity were:

- a) The realization of the opportunities arisen from this selection of a specific production method, the cultivation of a specific product etc.
- b) The need to adjust to the emerging market conditions
- c) The realization of threats arisen by continuing the production of some products or by following the same production methods.

It is important to note that imitation (in the sense of passive – reactive action) and an incident are not considered to be reasons for motivating farm owners to undertake entrepreneurial activity.

Regarding, who or what influenced farm owners to undertake entrepreneurial activity, most of the respondents answered that it was their own idea, followed by the influence of the family.

The need for cooperation in the beginning of the entrepreneurial activity is also expressed by 55.1% of respondents (cooperation with family members), another 27.7% reported the cooperation with colleagues or with people from other sectors such as agronomists or wine experts (13.8%). The reasons for cooperation mentioned are:

Insufficient funding (30.8%)

Lack of knowledge of market conditions (24.6%)

Lack of technical knowledge (18.5%)

Some other reasons have been reported, such as: better distribution of tasks, product promotion, etc.

Regarding the expectations (positive/negative) of people undertaking entrepreneurial activity, these are:

Positive: better exploitation of produce, achievement of bigger prices, penetration in new markets, better living standard etc. It is important to note that farm owners do not expect to stop their current way of living and increased social acceptance.

Negative: Need to allocate more capital and time, bigger sense of risk taking (committed to the entrepreneurial activity), more stress etc. Lack of knowledge and worse tax / auditing conditions are not so important.

Some barriers to entry expressed by the respondents are: the purchase of equipment and product pricing. Of medium importance were contacts with public authorities, time management, work distribution to new employees and the application of tax rules. Also some difficulties expressed by the respondents were the lack of the necessary capital and technical knowledge. Regarding the ways of resolving the barriers to entry the respondents reported the cooperation with experts, the support of Producer groups or cooperatives and the bank loans.

As regarding information gathering for their entrepreneurial activity, they reported the specialised magazines (for their activity), knowledge gained from customers / colleagues, consultants or exhibitions. It is important to note that some respondent use the internet as an information source, or they consult agronomists from local administration offices.

A summary of the profile of the Greek Farm Manager is presented in the Following Table:

Greek Farm Manager Profile
<ol style="list-style-type: none"> 1. Aims at profit and production activity expansion 2. Changes the cultivation type, to more intensive, organic or new technology forms. 3. Expands to processing and trading activity 4. Uses more dependent labour, releasing family members (at least partially) 5. Increases the size of the exploitation through purchases or rents 6. Is more productive in his activities 7. Uses more marketing channels than the most commonly used (through cooperatives and traders) 8. Proceeds more frequently to consultation from experts instead of resolving problems in a amateurish way 9. Gives priority to investments and product pricing issues 10. Explores in a scientific ways issues before making any decisions 11. Attempts alliances 12. Seeks for advice – information acquisition

2.3.2. Main encouragement/forces of change to encourage entrepreneurship and innovation (dit/tax relief, markets etc.)

The new structural EU Regulation (1257/99)³ intends to concentrate in an integrated framework of Rural Development, several policy measures and undoubtedly comprises the most important instrument of the EU policy for Rural development. To ensure that all rural areas in the Community are covered by the rural development policy, the measures provided for in this Regulation are included in the following multi-annual programmes:

- Objective 1 programmes: measures financed by the EAGGF Guidance Section;
- Objective 2 programmes: measures relating to early retirement, less-favoured areas and areas subject to environmental constraints, agri-environment measures and afforestation of farm land
- Rural development programmes: all other measures.

Rural development programmes are based on plans drawn up by the Member States at the most appropriate geographical level for a seven-year period (2000-06). These plans describe the current situation, the proposed strategy, the expected impact, the financial planning, the planned measures, including agri-environment measures, the necessary studies and technical measures, the competent authorities and the provisions required to implement the plan effectively. Finally, it defines settlements for public administration, geographical coverage and programming, monitoring and evaluation as well as financial provisions. Hence, during the period 2000 – 2006 of the 3rd Community Support Framework, this Regulation provides substantial opportunities for rural areas. It is important to note that member – states have the ability to define their priorities for rural development and proceed to their own choices among specific measures. And this is why, irrespectively to the geographic constitution of rural development plans (national or prefectural), there is a substantial degree of flexibility at the prefectural and sub – prefectural level, so that several measures can adjust to the local needs and opportunities.

To improve the effectiveness of structural measures, Regulation (EC) No 1260/1999 reduces the number of Objectives from seven during the previous period (1994-99) down to three for 2000-06:

³ Council Regulation (EC) No 1257/1999 of 17 May 1999 on support for rural development from the European Agricultural Guidance and Guarantee Fund (EAGGF) and amending and repealing certain Regulations [Official Journal L 160 of 26.06.1999].

- **Objective 1** promotes the development and structural adjustment of regions whose development is lagging behind, i.e. whose average per capita GDP is less than 75% of the European Union average. This new Objective also covers the most remote regions (the French overseas departments, the Azores, Madeira and the Canary Islands) as well as the areas eligible under the former Objective 6 (areas with low population density) created by the Act of Accession of Austria, Finland and Sweden. As before, two thirds of Structural Fund operations concentrate on Objective 1 and almost 20% of the Union's total population is affected by measures taken under this Objective.
- **Objective 2** contributes to the economic and social conversion of regions in structural difficulties other than those eligible for the new Objective 1. It brings together the former Objectives 2 and 5(b) and other areas facing the need for economic diversification. Overall it will cover areas undergoing economic change, declining rural areas, depressed areas dependent on fisheries and urban areas in difficulty. No more than 18% of the Union's population is covered by this Objective.
- **Objective 3** gathers together all the measures for human resource development outside the regions eligible for Objective 1. This Objective replaces the former Objectives 3 and 4. It is the reference framework for all the measures taken under the new Title on employment inserted in the EC Treaty by the Treaty of Amsterdam and under the European employment strategy.

The new Regulations also reduce the number of Community Initiatives from 13 during 1994-99 to four for 2000-06. New Initiatives are:

- **Interreg III** , which aims to stimulate cross-border, transnational and inter-regional cooperation;
- **Leader+** , which promotes rural development;
- **Equal** , which provides for the development of new ways of combating all forms of discrimination and inequality in access to the labour market;
- **Urban II**, which encourages the economic and social regeneration of declining towns, cities and suburbs.

The Commission can also support new and little-exploited ideas through innovative measures under the ERDF. The following three working themes have been selected:

- regional economies based on knowledge and technological innovation;
- eEurope-regio: the information society and regional development;
- Regional identity and rural development.

Since 1983, the support of private investments in the farming sector has entered into force, in the framework of the structural measures of Common Agricultural Policy. The constitution of the EU Regulation 797/85 introduced the Rural Development Plans which apply until today in the same form and philosophy.

According to the consolidated facts of the Ministry of Agriculture, 77.510 Productivity Enhancement Schemes have been submitted for the time period 1983 – 1999, of which 69.938 (90% of total) have been approved. The total amount of investment amounted to approximately 1.7€ billion. 74% of the investments have been fully accomplished, while only an 11% has not been accomplished. This fact indicates the desire of farmers to modernize their cultivation and exploit every opportunity for the improvement of their competitiveness.

The time period with the lower number of improvement schemes (1993 – 1996) coincides with the period of a 10% decrease of subsidies for investments (1992 –

1995) which highlights the affect of subsidies in decisions for investment in the farming sector.

A very important dimension of the structural policy of agriculture is the support of new farmers. In the time period 1995 – 1998, 10481 ‘Young Farmers’ were funded, 34% of which submitted ‘Productivity Improvement Schemes’ and the total funding amounted to approximately 196€ million.

There two possibilities for private investments support in the rural sector:

- The EU regulation 2328/91 which involves the ‘Productivity Enhancement Schemes’, ‘Setting up Young Farmers’ etc.
- The Developmental Law 1892/90 (2601/98)

The developmental Law 1892/90 was the main legislative instrument of Greece which acted as a basis for incentives for the conduction of investments. Among agricultural exploitations included in the legislative framework where: agricultural, animal breeding, forestry and fisheries (aquaculture). The percentage of funding for investments varied from 60% to 85% (Thraki Region).

During the period 1990 – 1998 private investments in agriculture, animal breeding, hunting and fisheries amounted to approximately 142€ million which correspond to 500 investment schemes. The average amount of investments is 287000€ (about 10 times higher that the average amount of investment in the framework of the Regulation 2328/91), while the average funding percentage is 41% which varies substantially among the specific areas. The average funding percentage according to the reg. 2328/91 is slightly higher.

The number of investment schemes submitted under the Regulation is 44.741, while those submitted under to Law are 500. This fact indicates that the Regulation contributes to the investment activity of family exploitations, while the developmental law supports few large scale exploitations. These two framework are complementary, since investments under the law focus mainly to sectors not supported by the regulation such as poultry, pork breeding and aquaculture, which absorbed the 71.8% of the total budget.

The increased degree of geographic concentration is the main attribute of investments in the framework of the developmental law, since 5 prefectures concentrate 74% of investments and 76.3% of the investments budget.

The average budget for investments varied a lot among the participating areas with the maximum in East Macedonia – Thraki (450000€) and the minimum in Western Macedonia (165000€).

2.3.3. Key areas developing e.g. farm diversification, tourism, niche markets etc.

Among the survey respondents, those that consider themselves as innovative support this view for the following reasons:

1. Introduction of a new cultivation method.
2. Dynamic expansion of activities
3. Introduction of a new product or variety
4. Use of specialised technology

Entrepreneurship is usually expressed with more intensive cultivation methods, organic farming, use of new technologies, independent to the product cultivated (agriculture or animal breeding). Hence, no agricultural product is excluded from the rule of entrepreneurial activity.

It is also combined with the extension to activities further to production (such as processing and trading) with an exception of industrial plants (cotton, wheat,

tobacco). Processing facilitates the creation of brand names and quality assurance, while trading assures the increase of profit margins.

Entrepreneurs in the farming sector tend to use more marketing channels than the traditional ones, through cooperatives and wholesalers, for the promotion and trading of their products. Usually they bypass intermediaries, in an effort to be in direct contact with retailers or even with the consumers (through private owned points of sale or other ways) and, most of the times, they attempt to enter foreign markets, where quality and consistency are considerably high.

Experimentation with new products and new methods is a common attribute of business nature exploitation. Some of them are really innovative. In Peloponnesus, a producer introduced a totally new product for his region, the sweet corn, without taking into consideration the negative attitude of family and social background. Insisting on his purpose, he created his own commercial company and today many producers of the region have contracts with the company for the production of sweet corn.

Farmers' interest for investments through the productivity enhancement schemes (for the period 1991 – 1998) is mainly oriented to five investment types, which absorb the 2/3 of the total investment budget. These are:

- Purchase of equipment (tractors) - 35.8%
- Drills for irrigation – 11%
- Greenhouses for vegetables production – 8.4%
- Other machinery and equipment – 7.3%
- Rural tourism – 6.6%

It is important to mention that part of the investments is used for the expanding of exploitations and the enlargement of production capabilities through the improvement of building establishments, the irrigation systems, and investments in plant and animal capital. 75% of investments involved plant production, with only 14.7% involved animal breeding.

Regarding the geographic distribution of investments (for the period 1993 – 1998), 48% were distributed in three prefectures:

Central Macedonia – 24%

Crete – 13%

West Macedonia – 11%.

The quality aspects of 'Young Farmers' investments do not differentiate to a great extent to the Productivity Improvement Schemes. This fact indicates that the existing agricultural structures in Greece are only changing in terms of mechanisation and expansion of irrigated lands. The same is valid for the production orientation, in which plant production has a dominant role. The difference in 'Young Farmers Productivity Improvement Schemes' lies in the increased participation in greenhouse cultivations and the expansion to non – farming activities such as rural tourism, for supplementary sources of income.

A general observation would be the intensification of the agricultural production activity, again with a slow rate, through mechanisation and increase of investments in greenhouse cultivations. This results to the augmentation of the agricultural product, added value and new employment opportunities in rural areas.

2.3.4. Future prospects for change

The Greek agricultural sector should proceed to the modernisation and the upgrading of its structures as well as the improvement of agricultural exploitations. The latter are called for improving the quality of their products and for increasing their competitiveness in order to correspond to the new market conditions. To this direction, tax relieves to farmers have a positive influence as well as the holding of input supplies prices and the loan interests.

Efforts made with development plans have not so far accomplished to change the orientation of the agricultural exploitations, although the introduction of new cultivation types like green house cultivations and the expansion to non agricultural activities, such as rural tourism have been observed.

What is necessary to be done is new, flexible, organised exploitations with managerial control and adaptation to market conditions. For this, the presence of people with entrepreneurial spirit and innovative ideas is necessary.

The new effective companies offering 'interesting' new products will not find difficulties to gain a market position, no matter the intensification of competition, especially when a strong relationship with the primary sector exists. Processing companies, especially the small ones, are today funded with more favourable terms and flexible procedures. At the same time, small companies (as is the case for most farm companies) have the ability to expand their sales with the use of traditional methods of products promotion (personal sales, door to door, small retail shops etc.) and to avoid supermarket practices (long terms credits, reduction of profit margins, additional services) which are necessary for big production companies.

However, it is necessary to re- examine the decision making method followed by farm managers. The undertaking of initiative and risks is necessary as well as the ability to analyse complex situations and to justify decisions for new types of problems.

In order to develop entrepreneurship in the agricultural sector we should:

- To intervene in the educational system, especially in the general education with the introduction of lessons that promote the entrepreneurial spirit of students.
- To develop vocational training adults programs with proper form, aim and content which will be able to enhance the entrepreneurial undertaking of trainees.
- To provide people from the agricultural sector concepts and experience of non farm activities. This should be done from the early years of their age (youth exchange programmes). In this sense the conservative notion of farmers which hinders the entrepreneurial activity, could be limited.

2.3.5. Key support agencies

The Ministry of Agriculture Services in every prefecture could be an efficient network for the promotion of the entrepreneurial activity in the agricultural sector. Cooperation with the local authorities (municipalities, universities, institutes, chambers, associations, cooperatives) could formulate a strategy for the enhancement of the entrepreneurial notion of farmers. This could be followed by appropriate training to the farming population. At the moment, few things have been done to this direction especially through programmes and initiatives of the Ministry of Agriculture. At the moment, a farmer that wants to develop entrepreneurial activity must have an initial idea and he can discuss it with agronomists, consultants or the offices of the Ministry of Agriculture. They can be funded by development plans or through other programmes such as Leader. Cooperatives and producers groups play an important role in the promotion of entrepreneurial activity in the sense that they inform their members on evolutions, new cultivation methods and new products. However, the issue of entrepreneurship should be handled more generally and be undertaken by all social partners in rural areas.

2.3.6. Examples of good practice

Some cases are described at this point:

- *“Even though the farmer is working all day, he keeps thinking the next step and the next investment. He forecasts changes that will occur as well as the ceasing of subsidies in some products and he is turning to other products so that he is ready to be present in the market when the time comes.”*
- *“Entrepreneurship involves the full change of notion, the introduction of new technologies, the allocation of increased capital, products standardization, and commercialisation. The result is produce increase in terms of yield and quality”. The same producer says “Choices and Solutions of inferior quality are double paid. An important factor for the undertaking of entrepreneurial initiatives is the personal education of everyone and his expectations for life.”*
- A producer from Peloponnesus made a vertical integration to his bee keeping unit. He developed a production method for bee food from second category honey. Today he is producing bee food at the small business level and he is the provider of other bee keepers. In this sense he covers all the value chain: production of supplies (food) – production – standardisation – distribution/marketing of bee food and products. He declares, *“Now that I have expanded my business, I have to occupy myself with managerial issues and to employ other people for the rest of the activities”*.
- A producer from Peloponnesus expressed from his early years his entrepreneurial spirit. With a peanut processing machine he collected money for the purchase of land in the ‘80s and he started to implement his child dream. He transformed his conventional cultivation to organic, undertaking a substantial risk. He produces himself the compositions for fertilization and pest control.
- Three brothers, producers -small business owners from Crete, introduce innovations in production and improve the quality of their products and their productivity. They plan strategies for penetrating the national market and already distribute their products in Athens. They have already developed an advertisement campaign in order to make their products known to the consumers.
- A producer in Thessaly undertook an exploitation of 0.5 hectares and today (after 10 years) he has a greenhouse of 0.5 hectares with high technology equipment, he rents a field of 0.7 hectares where he cultivates vegetables, he has his own storage facility and pack-house. He uses modern technology, special production methods and he commercialises the products himself.
- A wine producer from Evia produces appellation of origin products, he imported new varieties in his area and he is registered in the Guinness book for his wine labels.
- A producer from Macedonia foresees that only large exploitations have the potential to survive. He buys and rents land for his company expansion. In this way he increases his production yield, he reduces the production cost and formulates competitive prices. He is trading part of his produce as well as other producers’ products. He participates in an S.A. company together with other producers, which commercialises his kiwi. He is experimenting with other products and he does not hesitate to change his cultivation according to market needs.

3. TRAINING, TRAINING MATERIALS AND CERTIFICATION

A general observation would be that the concept of farm management is rather new in the Greek Educational System and therefore it is difficult to identify numerous training materials available. Until today, farm management was a subject of interest to only superior level students and some agronomist universities provide this knowledge. In the last decade efforts are made to introduce the concept at the secondary educational level as well as at adults training.

3.1. THE CURRENT TRAINING MATERIALS AVAILABLE

The educational institute provides the following training material for farm management, which is used in several Technical Education Establishments. These are:

- Management of Agricultural Exploitations, July 2000, Kitsopanidis, Zioganas, Soldatos, Gavriilidis, Vainas.
- Agriculture and Development, Kazakopoulos, Koutrou, Giannopoulou
- Introduction to agricultural economics, Zioganas, Paparguopoulos, Matas, Trachopoulos
- Computer Applications, Nelas, Soulis
- Marketing of Agricultural Products, Kontogeorgakos, Vasiliou, Nanos, Kontomixos.
- Small Farm Entreprises, Skandalis, Samara, Tziotzou
- Agricultural Economics and Policies, Tsiboukas, Provatas, Papageorgiou, Nelas, Tzelos

Furthermore, at the University Level many authors provide their work with advanced knowledge but they require a superior skills and knowledge level to be understood by simple farmers. In the adults training field, instructors use their personal notes which are not published and they are used for their training courses.

3.2. THE MAIN TRAINING COURSES AVAILABLE – DURATION, MAIN CONTENT ETC.

In the field of Initial Vocational Education, specialties taught in the VTEEs related to farm management include:

1. Farm entrepreneurship, with courses (in the second year):
 - Plant Production
 - Animal Breeding
 - Agricultural establishments
 - Mechanisation and Irrigation
 - Marketing
 - Agricultural Economics and Policies
2. Rural Tourism and Small Farm Enterprises, with courses (in the second year):
 - Alternative rural tourism types
 - Modern rural enterprises
 - Small farm enterprises
 - Rural Tourism enterprises
 - Marketing
 - Tradition and local culture
 - English language

104 VTEEs implement the total 8 agricultural specialties in Greece.

In the field of continuous vocational education: 200 long term training programmes to Young farmers have been implemented by O.G.E.E.K.A 'DIMITRA' in the year 2003. These involve training for specific cultivations and dedicate a training unit for farm management and National and EU policies for agriculture.

In the field of Initial Vocational Training, in the Institutes of Vocational Training operated by the Organisation of Vocational Education and Training, many specialties exist for the agricultural activity, however only one of them: Manager of animal breeding exploitations highlights the managerial skills, while the others have a more technical approach. However, they all involve computer use in their curricula.

3.3. THE MAIN TRAINING AND EXTENSION ORGANISATIONS DELIVERING IN THESE AREAS

The main Training Organisations delivering skills and knowledge related to the agricultural activity in general and to farm management in particular are:

Secondary and Post – Secondary Level

O.G.E.E.K.A 'DIMITRA': Agricultural Vocational Education, Training and Employment Organisation 'DIMITRA', subordinate to the Ministry of Agriculture. The organisation owns 68 DIMITRA centers that implement continuous vocational training programmes to farmers. It also owns 3 VTEEs conducting Initial Vocational Education Training Programmes; these programs involve two year education which is a combination of general education, specialty courses and practical exercise.

OEEK: Organisation of Vocational Education and Training, subordinate to the Ministry of Education. The main activity of the organisation is the administration of Initial Vocational Training Institutes. These involve two year training programmes at the post secondary level. Several specialties are taught in the IVTs and among other agricultural activities are taught.

EKEPIS: National Accreditation Centre of Continuous Vocational Training, subordinate to the Ministry of Labour. The Institute undertakes the certification of private continuous vocational training centers that undertake training seminars to adults. 130 CVTs for agricultural training programmes are registered in the EKEPIS records. Furthermore, the EKEPIS proceeds in certification of trainers.

OAED: Greek Manpower Employment Organisation, subordinate to the Ministry of labour. The Organisation through its network of structures undertakes training programmes for **Initial Vocational Training** (young high school graduates, young who haven't graduated from High School, young Lyceum graduates, long-term unemployed) and for **Continuing Vocational Training** (Non long term unemployed, who do not receive the unemployment benefit, self-employed (small family enterprises), SMEs with aim to improve the access to training, young scientists).

American Farming School of Thessalonica. It is an independent, non-profit educational institution that serves students at the primary, secondary, post-secondary and adult levels. The Institute provides formal agricultural education as well as technical and professional agricultural training. It offers secondary education: 3 year Lyceum studies. Post secondary: Dimitris Perrotis College of Agricultural Studies. Adult: Department of Lifelong Learning.

University Level

The Agricultural University of Athens. The university consists of 7 departments (schools), which provide university education in several areas in agriculture, apiculture, stockbreeding and food processing. The University is also a significant research center, with experimental fields and laboratories stocked with advanced technology equipment, in which several research projects are conducted every year. The University is also equipped with experimental greenhouses, in which research projects related to production yield, varieties sensitivity to diseases and pests etc. are conducted.

The Aristotle University of Thessalonica. The University consists of several departments, which provide university education on sciences and technology. One of the departments is the faculty of Geotechnical sciences. It is one of the most important departments of the University. The University also owns a university farm in which many research programmes are conducted.

The University of Thessaly. One of the departments of the specific University is the Department of Agriculture, Crop Production and Agricultural Environment.

The University of Ioannina. The Department of Natural Resources and Enterprise Management has two schools representing the broader areas of knowledge. These are: Environmental and Natural Resources Management and Farm Organisation and Management.

The Demokritean University of East Macedonia – Thrace.

3.4. THE USE OF ICT APPROACHES IN TRAINING COVERING THESE AREAS

The use of Computers and the Internet is introduced in most of the fields of training with specialised laboratories equipped with PCs and special trainers. The aim is to promote the use of Computers and to provide knowledge to young people. Training programmes are exclusively dedicated to the use of Information Technology. However, it is more difficult to include ICT approaches in the training programmes for adults since they are less familiarised with the new technologies. Generally, there is limited use of ICT in the training programmes concerning these areas and there is no link between the introduction of new technologies and their application for farm management, production planning etc.

3.5. THE MAIN CERTIFICATION BODIES, PROCEDURES FOR CERTIFICATION AND LIST OF CERTIFIED MATERIALS OR COURSES

The main accreditation body for structures and trainers in vocational training is the EKEPIS. The EKEPIS is now prepared to proceed to the training material certification.

Other organisations that conduct certification are:

OEEK, that certifies trained training as well as structures and training programmes of private owned Institutes of Vocational Training (IEK).

The Educational Institute that proceeds to the certification of training manuals for vocational training. However the certification of training procedure is not yet institutionalised and formalised. The certification process is based in the formation of a committee of experts which checks the training material quality upon some indicators. Further explanations on training manual certification have been requested and will be considered for project training manual certification.

OGEEKA 'DIMITRA' work to the direction of providing the Green Certification to farmers. Certified farmers will have the ability to certify their knowledge and skills and benefit from favourable funding and financing conditions. The Green certificate award process is comprised on a number of training programmes of various duration depending on the knowledge and skills acquired by previous vocational training programmes. Also university and superior education graduates from geotechnical – agricultural background will be awarded the Green Certificate with no need to attend any training programmes.

3.6. FINANCIAL OR OTHER INSTITUTIONS SUPPORTING TRAINING IN AGRICULTURE

Several financial and other institutions have their own structures for continuous vocational training. Examples are the following:

1. Agricultural Bank of Greece Training Centre
2. Panhellenic Association of Cooperatives in Greece Centre of Vocational Training
3. Prefectural Training Centers
4. Private Centres of Vocational Training etc.

A full list of certified CVTs can be found in the website www.ekepis.gr

4. RECOMMENDATIONS FOR THE AGROPLAN PROJECT

4.1. KEY KNOWLEDGE AND SKILLS GAPS

Based on surveys and research conducted we can identify three groups of knowledge and skills where there is a gap. Farmers expressed their interest to acquire this knowledge in order to be more competitive and better organise their businesses. The three groups are summarized below:

1st Group:

- New cultivation methods (for products of the region)
- Quality control methods
- Marketing – theory and practice

2nd Group:

- Negotiations (theory and practice)
- Decision making (theory and practice)

3rd Group:

- Computerization of farm exploitations
- Financial / accounting / income – tax return monitoring
- Foreign Languages

4.2. THE MAIN ISSUES THAT WILL HAVE TO BE ADDRESSED BY THE PROJECT IN RELATION TO FARM MANAGEMENT, PRODUCTION PLANNING, ENTREPRENEURSHIP AND INNOVATION

The skills gap analysis indicates the areas that must be addressed by the project. One very important issue is the familiarisation with new technologies and the application of these knowledge for better management and coordination of farm business. Furthermore, farmers need to identify sources of information for agricultural markets, consumer needs and concern, prices etc. They need to acquire negotiation and pricing skills. In this context they need to know how to calculate their production costs and keep tracks of their profits and loss. Another important issue that there must be a change of notion i.e. the need to consider themselves as managers of their farm business and try to ensure better profits. Additionally they must be open to new ideas and think innovatively so that they can identify alternative ways to increase their income. Finally, they should be aware of the new legislations and market trends and be prepared to change their cultivation practices so that they can achieve sustainability and adopt environmental friendly methods. The project through its activities may achieve the above mentioned aims and give a hint to policy makers for the introduction of these issues in the various types of training for farmers.

4.3. PROPOSED CONTENTS AND APPROACHES TO TRAINING WORKSHOPS AND TRAINING MATERIALS

The survey conducted by the Research Center of the University of Pireaus, highlighted some important elements which are presented in this study:

- 80% of respondents initiated their need for some form of training which would help them resolve some problems arising from the operation of their exploitations.

There is an obvious preference of farmers for three specific **types / forms of training / technical support**, these are:

- Technical support from experts (especially agronomists) which would undoubtedly be the most valuable help farm owners would have.
- Short term training programs (preferably in their areas)
- Study tours (both in country and abroad)

These preferences seem to be affected to a great extent by the nature of the agricultural exploitations as well as by the type of exploitations. The attendance of a long term seminar away from their exploitations is difficult and almost impossible. Hence, short term training programmes are preferred, especially when they are conducted near farm exploitations. Furthermore, the need for study tours and experts' technical support is generally expressed since, on the one hand, the level of implementation is rather low and on the other hand, the daily information and knowledge acquisition of what is going on creates an increased interest for trends, evolutions and achievements in the sector.

Long term training courses as well as distance learning are also considered to be important but they comprise a secondary priority.

Regarding the **training material form** which would be more effective, the results of the survey indicate:

- Video tapes
- Printed material
- TV programmes

The lower importance of CD-ROMs is the result of a lower usage of computers in farm exploitations, the lack of the necessary time and also the lack of experience, since such training material are not used to a great extent up to date. However, those that are considered as farm managers consider more efficient the training through CD-ROMs, since they more familiarised with innovative and new technologies.

As regards the preferences expressed for the provision of training to the farmers, these are:

- The Ministry of Food and Rural Development, though its local agencies (O.G.E.E.K.A 'DIMITRA' – local centers)
- Universities
- Private companies (specialised experts, agronomists, educational organisations and companies, providers of agricultural supplies and equipment etc.)

The most important results of case studies analysis regarding training and technical support are also summarised at this point as they are considered to be of value to the planning and implementation of efficient training programs and technical support actions

Information dissemination

It is considered as very important, since it is difficult for farmers to get the right information for issues of their concern. The public sector should provide them services through training. This lack makes many farmers to continue cultivating products with no future and prospects.

Information dissemination should cover multiple areas, be accurate and continuous from every possible source. It should involve technical matters, processing and marketing. At the same time, diseases and pests problems as well as subsidies provided by the EU and/or the State are also important.

"Knowledge", says a farmer, "should be continuously provided to farmers, since everything changes very quickly and they are not always available to follow these changes and what usually happens is that they are informed when it is too late!"

Farmers themselves, do what they can in order to cover this need. They are informed through exhibitions, conferences, special magazines, special offices and institutes, even Greek and Foreign Universities. Some of them use the internet or travel abroad to see new products, varieties or cultivation methods.

The group of producers ZEUS S.A. in Pieria provides seminars for its members, where farmers are evaluated for their performance. Furthermore, the selection of producers and their participation in these seminars depends on their knowledge and the needs arising.

Technical Support

Technical support provided to farm companies, from the state side, is almost insufficient. The role of agronomists in the local directorates of agriculture seems degraded. They have been transformed to bureaucrats and with the passage of time they have forgot what they have learned. Specialised agronomists do not exist where they are needed.

Hence, producers are forced to consult agronomists working for private companies selling input supplies or equipment or even in consulting companies of Greece or other countries. Furthermore, the fact that many agronomists are operating their own farm business is not accidental. In this way they can exploit their competitive advantage derived from their knowledge.

Proposals for Technical Support

As expressed from the above situation, the local directorates for agriculture should be upgraded and decentralised. Farmers need continuous technical support near the place they work. The knowledge gained from agronomists is minimum and fragmented since agronomists are characterised by lack of knowledge and they do not have the time to give solutions to problems arising in the modern farm businesses. Also lack of information dissemination regarding the trends formulated in the external markets is essential and very important for many of the Greek agricultural products.

In this framework, there are the following proposals:

- a) The establishment of specialised and decentralised institutes in the regions with research areas the products produced and the cultivations of the region (the bee keeping centre in Peloponnesus).
- b) The provision of information services to farmers in the local directorates of agriculture. Through these, information will be provided to farmers and their views can be expressed. Therefore, they will serve as contact points between the farmers and the support providers.
- c) The introduction of organic farming in Universities.
- d) The training of the human workforce by O.G.E.E.K.A “DIMITRA”

Proposals for Education / Training

The need for education / training (in every form) is widely accepted by farm managers. Some of them declared:

- “I would like my child to be a perfectly trained farmer with a university degree”
- “A necessary condition for the undertaking of any entrepreneurial activity should be a minimum level of knowledge or proved experience regarding the basic area of the new activity”
- “Employment in agriculture entails multiple geotechnical knowledge, commercial skills as well as administrative and negotiating skills and it can not be implemented by the less educated part of the population”

- “New specialised schools are needed for the creation of new farm businessmen as well as specialised technicians for the exploitation needs. State should teach the farmers to think and judge. This is the only way to develop efficient producers, managers and sellers”

Therefore some recommendations for the agricultural sector training are:

General recommendations for training

- a) The constitution of life long training for agronomists and farmers.
- b) The development of a Data Bank with easy access for farmers concerning:
 - Sources of funding and finance
 - Cultivation methods
 - New cultivations and varieties
 - Prices and markets
 - Tax issues
 - Export possibilities
- c) The organisation of study tours in other countries with a real training context that will ensure the participation of people that really need this form of training.
- d) The application of distance training for farmers.

Special recommendations for training

Special recommendations mainly involve the context of training programmes offered. The comments at this point are many:

- training programmes should be generalised and not specialised.
- They should target people with real interest in the topic and a uniform audience.
- Instructors – trainers should have a deep knowledge of the topic and should take into consideration the educational – knowledge level of the trainees.
- Training programmes should be conducted in seasons with low production activity (for example winter).
- They should involve the areas of marketing, management and negotiation.
- Training programmes should be customised according to the trainees needs and knowledge level. They should enhance critical thinking, problem – solving and provide a general view of the topic.
- A small number of trainees should attend the training programmes.
- They should involve case studies and exercises.

Institutional Proposals for the enhancement of entrepreneurship in the rural sector

- Simplification of access procedures in the National and European Development programs, so that farmers are encouraged to participate.
- The support of middle size farm companies (not only small) from experienced agencies.
- Transparency in the evaluation of investment proposals and short cut of subsidies and incentives provision to the beneficiaries
- To avoid funding development plans for products are in an over supply state.
- To stop direct payments to production yields (because they are not effective and they harmed the sector) and to promote incentives which are not collected by the producers but which indirectly contribute to cost reduction (eg. To subsidise the price of diesel)

- To fund research for organic farming
- The establishment of a national agency for the control of organic farming and the private owned certification companies, so as to overcome the questioning and lack of trust of consumers.
- To establish strict quality controls for residues of agrochemicals
- To stabilise the taxation system
- To upgrade the Ministry of Agriculture services, so that they can be more flexible, executive and decentralised.
- The Organisational of Agricultural Insurance should be more effective

4.4. PRESENTING PROPOSALS FOR CERTIFYING MATERIALS

In Greece, the certification of training programmes is not yet established (institutionalized) or formalized. However, experts committees proceed to certification of material through examining the material against some quality factors. OGEEKA Dimitra addressed the issue of certifying the training manual in the major certifying organizations OEEK, EKEPIS and Educational Institutes and the possibilities of certifying the material will be further examined.

4.5. PRESENTING PROPOSALS FOR ENCOURAGING GREATER USE OF ICT TECHNOLOGIES WHEN TRAINING IN THESE AREAS

The training programmes conducted within the agroplan project should actively involve the use of ICT (software, Internet, mobile services) in their training. It can be achieved through examples and case study and the benefits arisen by the use of ICT should be presented and understood by the target audience. Ideally, practical exercise and examples with the participants will enhance their interest for ICT.

To this direction, the identification of these technologies at the national and European level is necessary. Farm must be aware on these technologies and see how they can help them with their work. They must also learn to explore and identify information of their interest through the web. This will give them more ideas and help them become more innovative. They must also understand that ICT can serve as major facilitator of their work in several ways (communication, advertising, identification of suppliers, information, promotion, cooperation etc.).

4.6. PRESENTING PROPOSALS FOR ENABLING ACCESS TO LEARNING ON THESE AREAS TO REMOTE LOCATIONS AND PARTICULARLY AMONGST YOUNG PEOPLE, WOMEN AND DISADVANTAGED GROUPS

An important factor for enabling access on remote areas is to disseminate the AGROPLAN project to related local agencies. In Greece, the DIMITRA centers can serve as multipliers for dissemination of the AGROPLAN project. Also dissemination can be achieved through the Prefectural offices of the Ministry of Agriculture and other local agencies. Regarding Young people, they can be informed through Youth Information Centers and Young Farmers Associations. In this sense, information about the project can expand at the local level and important feedback of these people can be achieved. The website can work as a facilitator and contact point where they can be informed of the project achievements and give their own ideas.

4.7. BODIES OR TRAINING CENTRES INTERESTED (OR LIKELY TO BE INTERESTED) IN USING THE AGROPLAN TRAINING MATERIAL ONCE IT IS DEVELOPED

The training material can be presented to key players of the sector (farm companies, producer groups and associations and discussion can be made for the organisation of

training programmes related to the topics of AGROPLAN). OGEEKA 'DIMITRA' through its participation in exhibitions, forums etc. such as AGROTICA has already proceeded in disseminating the project and in collecting information for interested farmers and groups of farmers for the project. This effort will give us a database of interested people in which we can later provide training services.

4.8. PRESENTING IDEAS FOR LINKING WITH OTHER ORGANISATIONS/AGENCIES FOR TRAINING/MATERIALS DEVELOPMENT OR DISSEMINATION

The above mentioned training organizations must be aware of the Agroplan project. OGEEKA 'DIMITRA' as a country partner will include the project achievements in his activities but furthermore the project could be disseminated and discussed with other organizations for example CVTs, OEAD, OEEK etc.

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