

# **Capital and Finance in Western and Eastern European Agriculture**

**H.J. Silvis, editor**



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## Preface

This report is a result of the 32d seminar of the European Association of Agricultural Economists (EAAE), which was held in Wageningen, March 22—23, 1993. The seminar was organized by Wageningen Agricultural University (P.C. van den Noort, J.A. Renkema, W.J.M. Heijman and H.J. Silvis), in co-operation with the Agricultural Economics Research Institute LEI (L.C. Zachariasse and K.J. Poppe), the Dutch ministry of Agriculture, Nature Conservation and Fisheries (H.R. Toxopeus) and Rabobank Nederland (A.M. Dierick).

The seminar attracted more than a hundred participants from all over Europe. The theme of the seminar was the situation and perspectives (policies included) concerning capital and finance in Western and Eastern European agriculture. In his opening speech Rector H.C. van der Plas noted that Wageningen Agricultural University was celebrating its 75th anniversary. He stressed the importance of the seminar's theme for society and the university, saying that 'in fact, all our basic and agricultural knowledge would be useless without capital'.

The scientific programme of the seminar consisted of four parts:

- General Aspects of Capital and Finance in Agriculture;
- Capital Needs and Investment Priorities;
- Methods of Financing in Agriculture; and,
- International Institutions and Co-operation.

All four parts had one or more invited lectures, whereas part II and part III also contained the six contributed paper sessions (of three papers each). This report contains a selected number of papers, which cover the main parts of the seminar. The contributed papers, which have been distributed earlier, are available on request. The titles and authors of the papers of the seminar are given in annex I.

November, 1993

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## Introduction

*H.J. Silvis*

This report contains six papers of the 32d EAAE seminar 'Capital and Finance in Western and Eastern European Agriculture', which was held in Wageningen from March 22-23, 1993. Details of the programme of the seminar with the contributed and invited papers are given in an appendix of this report. The purpose of this introduction is to give an overview of the selected papers.

The first paper is by the Chairman of the Executive Board of Rabobank Nederland, H.H.F. Wijffels. He presents a broad and practical analysis of the problems of capital and finance in European agriculture. Attention is focused on the external factors (agricultural policy, trade policy, legislation) and internal factors (solvency, liquidity, profitability, entrepreneurship) of general importance in financing the agricultural sector. Each of these factors is treated with respect to developments in Eastern and Western Europe. Finally, the contributions which the governments in Eastern and Western Europe can make to improve the situation for the Eastern European agricultural sector are examined. Wijffels concludes that the position of agriculture in Eastern Europe is rather poor. Credit granting will scarcely be able to get off the ground without assistance. The EC can make a contribution by opening its market for Eastern European agricultural products. In Eastern Europe itself the establishment of a good leasing system can limit the need for capital, whereas a co-operative banking system could provide an important stimulus for the creation of a good financing structure.

The second and by far the longest paper is by K.J. Poppe (LEI-DLO, The Hague), who gives a well documented, comparative perspective on financing in Western European agriculture. His paper starts with some observations concerning basic financial accounting in relation to the profit and loss account, the balance sheet and the statement of the flow of funds (or cash flow statement). Next, the current situation in the EC and some currently controversial issues are discussed. Data from the EC's Farm Accountancy Data Network (FADN) are used to describe the current financial situation in the EC. Then the paper deals with investments in land and with the various

methods used to finance the use of land. In both Eastern and Western Europe the relationship between profitability and land values is considered to be a central issue. One issue further is the transfer of the land and farm to the next generation. The increased use of capital in agriculture makes farm succession more difficult. A section of the paper is devoted to that topic. Having discussed how farmers acquire debt, the paper turns to the topic of farmers in financial difficulties, and investments by farmers in agricultural co-operatives. After having treated the role of agricultural policy, the paper ends with some recommendations for the research community for further action. Poppe argues that agricultural economists should look more closely at the indicators used in financial accounting. This should help to more fully understand the observed differences between regions and farm types throughout Europe. Some co-operation with colleagues in (tax-) law and sociology could be beneficial in this type of research. Tool box and theory could be applied more often in policy analysis and in the advisory role. For policy analysis the relationship between the farm and the sector level needs more attention. As capital becomes even more important, according to Poppe, the academic world should study finance in more detail and in closer contact with non-agricultural colleagues.

Professor P.C. van de Noort (Wageningen Agricultural University) contributes the third paper, which deals specifically with tenancy. It is stated that tenancy has at least four important functions: able farmers can be helped to farm, even when they have inadequate capital for a family farm or a commercial enterprise; tenancy increases the stability of the land market; the tenancy system attracts capital for land improvement, buildings, and even for new land; and a good farm structure is more likely under tenancy, because there are fewer reasons for splitting up holdings than for splitting up owner-operated farms. Focusing on the tenancy system in the Netherlands, Van den Noort shows that tenants are not the submissive, poor farmers of former days. On the contrary, many of them can even afford to buy farms and they have a strong social, legal and political position. Old sentiments have misled policy makers, resulting in policies that are now leading to the decline of the system. Unless policies change in the Netherlands, the tenancy system will continue to decline until it reaches a level comparable with that in the rest of Europe, where a large majority (80%) of farmers own their farms.

In the fourth paper Professor C. Csáki (World Bank and University of Budapest) focuses on investment priorities in Central and Eastern European agriculture. The paper starts with the observation that Central-Eastern Europe and the former USSR are undergoing a fundamental economic and political transformation. This process has not yet been completed in any of the countries concerned: many details have yet to be clarified, especially in the former USSR, and there is much uncertainty regarding future developments. All these changes, however, will fundamentally reshape the agricultural economy in the region and set new demands for capital and priorities in investment. After having described and analyzed the current situation in agriculture in Central-Eastern Europe and in the former USSR, the paper turns to the transformation of agriculture. Investment needs are rather closely related to the results of the ongoing transition process in agriculture. The main direction of the transformation of the region's economies is shaped by the legacy of the command economy. In each country, the objective is to develop an economic agricultural structure based on a market economy, which leads to private initiatives and an economy based on private ownership. Major areas of investment are: the development of the physical facilities for a working market for agricultural products and inputs for agriculture; rehabilitation of production facilities to reach a minimum level of food security in most of the FSU countries; recapitalization of agriculture according to the emerging new farming structure; reconstruction and major modernization of support services (such as the seed industry and machinery maintenance); reconstruction and major modernization of agro-processing; introduction of environmentally friendly technologies. Csáki concludes that there are a lot of problems, but that there is no reason for despair. He feels that it is best to be realistic at the outset. The early euphoria envisioned a quick transformation, followed by an equally quick supply response. But developments thus far, and the experience of both Eastern Europe and East Germany, suggest otherwise. Gradually, the perception is growing that the process will be slower than anticipated and that, consequently, the social and political strains on these very fragile systems will be greater. However, one also has to believe that the whole task is not impossible. The region has all the natural, economic and human resources necessary to become a fully integrated and prosperous part of the developed world with developed and productive agriculture in the foreseeable future.



In the fifth paper M. Franco (Commission of the EC) gives an interesting overview of what the European Community is doing for the Central and Eastern European Countries (CEECs) at the moment, not only the PHARE programme but also other initiatives and activities. First, he deals with the general accomplishments in Central and Eastern Europe. Next, attention is focused on the relationship between the European Community and Central and Eastern Europe. To what extent has the European Community provided the necessary support for the transformation process? The political and the commercial efforts are described, and further the financial and technical areas of co-operation. In the field of technical and financial co-operation three types of problems are treated: stabilization, transformation, and development. Finally the paper turns to the role of PHARE and TACIS (a program for the former Soviet Union) in the transformation of agriculture. For PHARE the percentage of the total amount spent on agriculture in CEE is around 12% or 300 million ECU. For TACIS this is also between 10 and 15% or approximately 120 million ECU over 1991 and 1992. This money has been spent on supply programmes, technical assistance, and financial assistance. The paper gives a number of practical problems encountered with the implementation of the programme.

The sixth and final paper is by M. Tracy (Agricultural Policy Studies), who picks up some of the points that have been made in the invited and contributed papers of the seminar, and adds a few points of his own. Attention is directed at Eastern Europe, though also something is said about the role of the West. Some fundamental topics for the CEECs with respect to agriculture in the market economy are dealt with, such as pre-conditions for the establishment of a market economy, institutions relevant to the financing of agriculture, and the role of incentives and subsidies. With respect to institutions relevant to the financing of agriculture, Tracy stresses that we must be very careful about giving advice based on Western experience to our colleagues in the CEECs. Institutions that have evolved in a given social and economic context cannot necessarily be transposed into a different context. At the most, we can say: here we have an institution which has worked quite well for us - maybe you will find it useful too. But it is for those responsible in the CEECs themselves to decide what can work in their circumstances, according to Tracy.

## **Problems of Capital and Finance in European Agriculture: An Outlook**

*H.H.F. Wijffels<sup>1</sup>*

### **1.1 Introduction**

We are living in a period in which the agricultural sector is experiencing difficulties. The changes taking place in the former communist states in Central and Eastern Europe are even absolutely revolutionary. Since the Iron Curtain disappeared in 1989 the economies of these countries have rapidly declined. In addition, every sector, including agriculture, is confronted with the transition from a planned to a market economy and must deal with the problems and uncertainties which accompany such a transformation.

But it is not only in Eastern Europe that agriculture is confronted with changes. In the EC, too, the agricultural sector is having to cope with a marked change in policy. The transition from a market and price policy to an income supplement policy can be regarded as fundamental. As a result of this, agricultural prices will move increasingly towards the world market level in the coming years. In the future, therefore, farmers in the EC will be guided by developments on the world market to a greater extent than before.

The transformation in Eastern European agriculture will have to be accompanied by the establishment of a good financing system. At present, acute financing problems are emerging in Eastern Europe due to widespread disinvestments. One result is that capital - already a scarce commodity - is being withdrawn from agriculture. People are using up their assets in order to keep their businesses going. The changes in Western Europe will also be accompanied by changes in the method of financing.

In my paper, I would first like to focus attention on the factors of general importance in financing the agricultural sector. Next, I shall deal with each of these factors individually and give an outline of the developments in Eastern and Western Europe. Finally, I will examine the contributions which the governments

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1. Chairman of the Executive Board of Rabobank Nederland.

in Eastern Europe itself, but also in Western Europe can make, to improve the situation for the Eastern European agricultural sector.

## 1.2 Financing problems

In the agricultural sector there is a need for borrowed capital which, in Western Europe, is frequently supplied by banks and family members. In the near future, incidentally, this financing may come under pressure as a result of the reforms of the Common Agricultural Policy. The farmers will be confronted with lower prices for their intervention commodities, in which case they will admittedly receive direct income support by way of compensation. Every agricultural entrepreneur will have to take advantage of the new developments in order to offset downward pressures on profitability.

In Eastern Europe, on the other hand, farmers are confronted with very sharp price drops without receiving any counterbalancing income support. To keep the business going in spite of this, they sell more and more of their production resources as time goes by. These disinvestments point to a great and acute need for external finance. If this need were to be met, positive change could be achieved in Eastern European agriculture.

The willingness to supply finance, however, depends on both external factors and internal factors. External factors relate to aspects over which the entrepreneur has no control, such as developments in agricultural policy, national trade policy, legislation on agriculture and the situation in the banking world. Internal factors are the aspects which vary from one business to another: solvency, liquidity, profitability, entrepreneurship and the collateral a business can provide.

## 1.3 External factors

First of all, I will discuss the developments of the external factors in Western and Eastern European countries. Up to now the common *agricultural policy* of the EC has been based on high guaranteed prices for particular products and protection from agricultural products originating outside the EC. Generally

speaking, the farmer did well under this system, and this policy therefore had a positive effect on the willingness of loan capital suppliers to provide finance. In spite of the latest reforms, quite a few income certainties of this type will continue to exist, such as the hectare supplements. There will therefore be scarcely any pressure on creditors' willingness to supply finance. Eastern European agricultural policy is hardly concerned with providing income guarantees, while farmers in these countries were accustomed to receiving high guaranteed prices under the communist system. Nowadays, however, they have to produce for the world market or even for prices below world market level. This situation causes problems in the sector, resulting in a decreased willingness on the part of banks and other bodies to grant credit.

Another external factor is *trade policy*. To a certain extent it is closely connected with the agricultural policy pursued. In the EC, the sale of many agricultural products is guaranteed. If an entrepreneur cannot find a customer himself, he can offer his products for intervention. The intervention agencies can either store these products or sell them on the world market with the help of subsidies. Conversely, EC's frontiers are practically closed for a number of agricultural products which want to enter the Community from outside. This protection also exists on the frontiers of Eastern Europe. These countries are therefore also confronted with limited competition from countries abroad. Intervention prices however, scarcely exist. Sales problems resulting from this have a negative effect on the extent of credit granting.

A third external factor is legislation. The *legislation relating to agriculture* in the EC has mainly been dominated by environmental legislation in recent years. Increasingly strict requirements are imposed on the use of crop protectants, artificial fertilizers, the production of manure related to ammonia emissions, and so on. The manure problem is highly controversial, particularly here in the Netherlands, where we have a very intensive cattle farming sector. Frequent investments must be made in order to meet legal requirements. These investments bring little or no improvements in earnings. As a result, the profitability of a business can decline and thus limit the possibilities for financing. In Eastern Europe the environmental problem plays a much more limited role, at least in agriculture. What is important in the former East Bloc, however, is the legislation on landownership. Since a great deal of land was taken into use by the large agricultural co-operatives in the years following the Second World War,

there are now large areas which can be reclaimed by the original owners or their descendants. This is organized differently in each country, but generally speaking, the possibility exists, for land and buildings in agricultural enterprises, to be claimed back by the original owners. As long as there is still no certainty about the extent of the claims on the agricultural enterprises, no definitive business plan can, in fact, be drawn up. This can be an important barrier in a credit application.

I now come to the last external factor: the health of the local *banking system*. Generally speaking, this can be described as good in Western Europe, particularly when it is compared to the situation in Eastern Europe. When the other external factors are assessed as positive by the banks, credit in the Western agricultural sector will generally be granted at reasonable rates as a result of the competition between the banks. In Eastern Europe, on the other hand, the position of the banks is extremely weak. This weak position is due in part to bad debts, which originated before the transformation, but which still appear on the balance sheet. The limited funds available to the banks are invested in the strongest sectors as far as possible. Unfortunately, agriculture is not one of them. An additional problem is the fact that despite the establishment of some foreign banks in the various Eastern European countries, competition between banks is still limited. The scant competition which does exist has little or no influence on the primary agricultural sector, which explains why the limited possibilities for credit in general become particularly evident in agriculture. For even if the banks are prepared to grant credits to the agricultural sector, they will always charge very high rates because of the lack of competition. This makes it even more difficult for agricultural companies to meet debt service requirements. With the negative development of the other external factors, and limited possibilities for the banking industry itself, credit granting to the agricultural sector does not get off the ground. As it is thus difficult to make improvements in agriculture, this sector seems to be caught in a vicious circle.

#### **1.4 Internal factors**

Internal factors become important when external factors have developed in such a way that they no longer constitute an obstacle to credit granting. Banks must

take a positive attitude to granting credit to the agricultural sector, and they must also be in a position not to charge absurdly high rates for this. Despite the presence of some negative aspects in the external factors, this is clearly the case in Western Europe. In Eastern Europe the situation is much more difficult. Consequently, the requirements to be met by the internal factors will probably be higher there than in Western Europe. Only highly promising companies qualify for credit.

### *Western Europe*

*Solvency* can be defined as the ratio between equity capital and the balance sheet total. In a large part of the agricultural sector in the EC this amounts to well over 90%. This can mean two things. On the one hand, it can indicate that the businesses are so sound that external financing is scarcely necessary. On the other hand, it can point to very moderate prospects, so that it is hardly possible to find financial institutions or persons who are willing to provide loans to the company. The latter is probably closest to the truth, since solvency is lowest in those countries where agricultural productivity is best. One exception may be Denmark, where solvency is extremely low and productivity is high. In general it may be said that even in the EC, with its Common Agricultural Policy and its sound banking industry, many farmers are mainly dependent on their own capital equity.

*Liquidity* is almost by definition a greater problem in arable farming than in cattle farming. The cyclical nature of sowing and harvesting provides the farmer with an irregular cash flow. Liquidity is also linked to *profitability*, the third internal factor. Profitability is one of the most important items that play a part in credit granting. Before credits are granted, there have to be good prospects of profit in order to be able to repay the interest and capital.

Under the influence of the reforms of the Common Agricultural Policy, profitability in Western Europe is under pressure to some extent. The prices of cereals and beef will fall sharply in the coming years, while production costs will probably rise. This is partly offset by some income support from the government, however.

The fourth internal factor, *entrepreneurship*, is a very important matter for the credit granter. Good plans and knowledge can be of decisive importance for the bank in making the ultimate decision. Entrepreneurs in Western Europe are

in general very familiar with the situation in the agricultural sector and can take excellent advantage of it as a result. This can be credited to the reasonably stable situation in Western European agricultural policy.

Finally, in the field of *collateral*, farmers in the EC may be confronted with a drop in land prices as a consequence of the decline in selling prices. But the land, which meanwhile acts as collateral for the bank, has frequently been assessed at a fairly low value, so this decline in prices does not have to be an obstacle to the granting of further credits.

### *Eastern Europe*

Internal factors in Eastern Europe are being affected by changes in agriculture to a much greater extent than those in Western Europe. *Solvency* naturally plays an important role in financing in this region as well. As it happens, however, solvency in Eastern Europe in general — and hence also in agriculture — is difficult to determine. This is connected with the transitional phase in which these economies at present find themselves. For them, balance sheet management is a new phenomenon. Even the concepts of profit and loss are completely new to many enterprises.

In drawing up a balance sheet, assets and debts should be expressed in terms of value. To do this, it is first necessary to determine what production resources a business owns, and then to establish the value of these production resources. Granting rights of ownership of the production resources in the former East Bloc countries is a politically charged and therefore time-consuming task. Next, determining the value of these production resources is a problem, for there has scarcely been any trading based on free market principles. And where there is no market, no market prices are established; where there are no market prices, no valuation can take place.

Organizational structure can also influence solvency. Since agricultural enterprises frequently still have to opt for their structure, it is important to recognize the consequences of a specific organizational structure on the capital position of a company and hence its solvency. In this respect one can think of different organizational structures.

First, there is the co-operative, based on the communistic principle, or following the Western style. The Western style co-operative is completely different from those which, until recently, were familiar in communist countries.

In the West, co-operatives are organizations whose members actually have a say, which operate within the market and, in addition, function in line with market principles. The ties between the limited membership of such a co-operative and the business itself — just as in a family business — can be very strong; the members will often be prepared to commit themselves to it entirely. A co-operative structure can achieve an improved solvency position because each member can contribute capital. As a result, the volume of equity capital increases and the dependence on borrowed capital becomes limited. A negative aspect of the co-operative structure, however, is the danger of a member leaving the business and taking his capital with him, which may have a negative effect on solvency and hence on the continuity of the company.

The second conceivable legal form in agriculture is the private limited liability company. In such a company the dependence on borrowed capital, just as in the co-operative, can remain limited because the shareholders contribute capital. An advantage of the private limited liability company compared with the co-operative is that there is no possibility of leaving the company with the invested capital. Of course, members can always try to sell their shares, but this implies by definition, that there will have to be a buyer. On the other hand, the involvement of the employees in a private limited liability company will probably decline more rapidly in the long term than it will in a cooperative. This has to do with the mutual solidarity on which a co-operative is based and the financial accountability which exists for the members of a co-operative.

The third form is the family farm, well-known to us in Western Europe. As regards the involvement in the company this is an ideal business structure, but solvency is much more difficult to achieve.

A last possible organizational structure is a different type of family farm, one which seeks intensive co-operation with other family farms. The need for borrowed capital can also remain limited here because it is possible, for example, to manage a range of machines together with several businesses, while continuing to operate entirely independently. A structure such as this has already been frequently employed successfully in the Netherlands.

The optimum business structure is partly determined by the farm's specialization. For example, the intensive attention required in dairy farming means that this form of business will probably function optimally as a family farm. On the other hand, intensive cattle farming — a branch of agriculture



which can be run along almost industrial lines — is more suitable for the private limited liability company or cooperative. Successful examples can already be found in the USA. In the case of arable farming, cooperation between family businesses is probably the easiest solution as regards machinery. On the one hand, this limits the need for borrowed capital and, on the other hand, flexible use can be made of the available labour for the very irregular division of tasks.

The other internal factors are also problematic in Eastern Europe. As already described, the lack of *liquid assets* — which arises because there are no forms of income support — is solved by disinvestments. This is obviously not a long-term solution. It will be very important to improve this situation very soon. However, *profitability* has deteriorated seriously in recent years. It is difficult to determine *entrepreneurship* in the former East Bloc. Businessmen are confronted with many uncertainties, which makes it difficult to adjust optimally to the circumstances or to make plans for the future. Nevertheless, one can assume that good businessmen can be found in this part of Europe too, so that this is not by definition a negative aspect as regards credit granting. Providing the bank with *collateral* is a new phenomenon in Eastern Europe. Since there has been scarcely any trading in production resources as yet, it is very difficult to determine to what extent these production resources can act as collateral. Generally speaking, this will result in a low valuation. As a result, the value of the production resources which act as collateral will remain relatively limited.

On the basis of the foregoing, it may be stated that the possibilities for agricultural financing in Eastern Europe are very much poorer than in the EC and will therefore remain very limited for the time being. This brings us to the question of what actions could be taken to bring about an improvement in this situation.

## 1.5 Government policy

National governments in Eastern Europe — in the same way as the EC — could give a helping hand. Financing in agriculture can be improved, for example, by providing income support, although this will probably be impossible because of lack of funds; by providing temporary interest rate subsidies to agriculture; by setting up good leasing legislation and by establishing a co-operative credit

institute.

### *Interest rate subsidies*

Interest rates in Eastern European agriculture will be very high because of a lack of competition between banks. In addition, farmers in these countries are confronted with very unfavourable price developments and a clear deterioration in the terms of trade. The specific price increases in agricultural products are lagging behind the price increases in general. The consequence of this is the higher-than-average real interest rate for the agricultural sector. If the government proceeds to grant interest rate subsidies on a sectoral basis, this can mean that entrepreneurs in each sector will be confronted with corresponding real interest rate percentages. In Poland, a budget already exists for interest rate subsidies for investments in agriculture. When such subsidies are granted, the entrepreneur can borrow money more cheaply. The basis interest rate in the agricultural sector is already about 15% lower than the market rate, and additional discounts of between 30 and 50% are given on this. Such interventions are at odds with present market developments, but in the difficult transitional period they might create some temporary relief.

### *Leasing*

Since financing by banks will continue to be limited for the time being — if only because the banks' funds are restricted — it is necessary to look for other financing instruments. Land is a means of production which, in principle, is very suitable for obtaining finance outside the bank. Financing the purchase of land by the farmer himself, or financing by means of bank credits, is even inadvisable. The point is that if a farmer buys land with his own capital from a person who is leaving the agricultural sector, then that capital, which is already scarce in the sector, and which is freely available in this case, disappears to other sectors. Financing by means of leasing is therefore a better alternative. A tenant farmer is in the comfortable position of not requiring any capital in order to buy land, but only needs working capital to be able to produce on this land. Leasing therefore does not make any claims on the solvency of an enterprise and is thus very important in the transformation taking place within the agricultural sector. As regards the annual charges, the differences need not necessarily be great, but that depends on the ratio between the interest rate and repayment, on the one

hand, and the rent, on the other hand. At present, this probably works out to the clear advantage of leasing as a result of the unfavourable interest rate structure in agriculture in Central and Eastern Europe. The government can promote leasing as a form of financing by establishing good leasing legislation and creating stimulatory measures. In this respect, one can think of stimulatory tax measures consisting partly of a higher tax levy for the landowner if agricultural land is not in production, and partly of a certain tax exemption on the rental (e.g. 2 ha free). A differentiation in policy according to landowner is probably important in this respect.

In the case of land owned by individuals, the legislation should emphasize the balance between the interests of the tenant and the landlord. For the landlord, it must continue to be possible to recover the right to use his own land, while for the tenant there must be some degree of certainty. It is important that uncertainty concerning the period for which the land will be available to him, is reduced as much as possible. In the case of companies and other land-owning bodies the leasing system can be aimed more at the interests of the lessee, since such organizations are frequently willing to give up their land for a longer period of time. This gives the lessee more certainty as regards the duration of use. State-owned land is ideal for initiating a complete structural improvement in the agricultural sector. Business relocation and expansion can be achieved by land redistribution and re-allotment. Extra opportunities can be created for promising companies by granting them the right to use state-owned acreage. If the good entrepreneurs make use of such opportunities, structural improvements also become possible at the locations which become vacant. Up to now, I have mainly emphasized the advantages for the lessee, but there are also clear advantages for the landlord: he receives an annual rent instead of only a low, once-only return when he sells. The value of land can rise when market conditions improve. A drop in value at the present price level is virtually impossible. His land is normally well maintained by the lessee, particularly if a long-term contract is involved. And finally, in the case of a long-term leasing contract it is profitable for the lessee to invest in the land, which is advantageous to both the lessee and the lessor.

Let me repeat here that it is important to realize that leasing legislation can also disturb the land market. It must continue to be possible for the land owner to act flexibly. It must not be the case that if a land owner proceeds to lease his

acreage he will run the risk of never being able to have his land freely available again. The fact is that the interests of the lessee and the lessor can also become opposed to each other. A balance can be found, for example, by means of variable-term leasing contracts with a minimum duration and possibly also with the right to extension. In that way one can avoid a situation arising in the long-term such as exists to a certain extent in the Netherlands: landowners are scarcely prepared to lease their land any longer, for as a result of the existing leasing legislation it is hardly possible for them to regain free control of this land within a period of 6 to 12 years. This has led to a relative decline in the amount of acreage leased.

### *Co-operative banking*

To enable financial resources to be obtained on reasonable terms in spite of the so far limited credit possibilities in Eastern Europe, a co-operative financial institution could probably offer a solution. At the time of the agricultural crisis in the nineteenth century it was Wilhelm Raiffeisen who saw that the agricultural sector in Germany was suffering too greatly under the yoke of the credit granting organizations of those days. The mutual solidarity which existed among the agricultural population led to the possibility of raising and investing money within this community on reasonable terms. Solidarity within the agricultural population in Eastern Europe may now perhaps exist, but the volume of savings required by the banks is probably inadequate. It is therefore important to tap another source of funds. The EC could possibly play an important role in this area. Technical and financial support in setting up a credit system for the agricultural sector can lead to positive development within this sector. It is the EC itself that can benefit by this. It is important to realize that agriculture — the primary sector in Eastern Europe, in which some 15% of the working population are engaged — will have to develop positively in order to stimulate the economy as a whole. Failure to achieve economic growth might result in internal conflicts or lead to a flood of economic refugees heading for the West. The situation in Eastern Europe can be compared to some extent with the position of Germany after the Second World War. At that time it was the Kreditanstalt für Wiederaufbau — which was able to grant credits thanks to American support — that enabled the German economy to develop positively at an accelerated rate and rapidly close the gap between Germany and the countries around it.

The credit granting which would become possible with a comparable instrument for agriculture in Central and Eastern Europe would have to take place on reasonable terms; borrowers in the agricultural sector would be charged an affordable, possibly even a temporarily negative, real interest rate. The additional advantage of a credit institution concerned especially with agriculture is the expertise which can be built up as a result. Agriculture is a special sector with sharp fluctuations in its results. The credit granter must certainly have some feeling for this. If that exists it is possible to make a much more realistic estimate of the risks involved in granting credit. An improvement in risk assessment will probably also lead to an improvement in the credit conditions.

In my view, it is preferable for such an institution to have a co-operative structure. The area in which a co-operative financial institution aimed at the agricultural sector operates will have to be confined to the local community so that it can check on the projects it has financed. In this way a banking network can be created. Moreover, a co-operative credit system may be expected to grant credit at lower rates than other financial intermediaries because maximizing profit is not its primary aim. This is very important in a sector where margins are limited.

## **1.6 Conclusion**

Summing up, I would say that the position of agriculture in Eastern Europe is rather poor. Credit granting will scarcely be able to get off the ground without assistance. The EC can make a contribution by creating more opportunities for the sale of Eastern European agricultural products on the Western European market. The reforms of the European agricultural policy already initiated, with the changeover from a market and price policy to a system of direct income support, can be regarded as a first contribution. But a further expansion of the agricultural paragraph of the treaty of association between the EC and various Eastern European countries and the successful conclusion of the GATT negotiations are also essential. In Eastern Europe itself the establishment of a good leasing system can limit the need for capital. Finally, a co-operative banking system can provide an important stimulus for the ultimate creation of a good financing institute.

## **Financing in Western European Agriculture: A Comparative Perspective**

*K.J. Poppe<sup>1</sup>*

### **2.1 Introduction**

The Agricultural University of Wageningen should not only be congratulated with its 75th anniversary, but also with the choice of the theme for this scientific celebration: the role of capital and finance in agriculture normally receives very little attention. To quote Boehlje (1992): 'The traditional approach to the financial / organizational structure of most farms and agribusiness firms is very myopic. The historical focus in financing has been primarily on internally generated equity with debt used if internal sources of equity are not adequate to finance the growth of the business. The dominant organizational structure has been the sole proprietorship with limited forward or backward linkages.' As a result, the textbooks used at this and other universities (e.g., Boehlje and Eidman, 1984; Warren, 1982) devote much more space to concepts on farm planning and management than to finance. Investment analysis and capital budgeting procedures seem more popular than the core finance topics like leverage, the sources of funds, and the influence of risk, taxes or business organization (including contracts) on finance. Agricultural policy making is another example of the neglected role of capital. Policies, including the need for them, are often discussed in terms of their effect on income, not on assets or wealth.

Confronted with this ignorance, this paper starts with some basic financial accounting. It is shown further that academic terminology is not always consistent and on some points out of date. Next, the current situation in the EC and some currently controversial issues are discussed. Data from the EC's FADN (CEG, 1989) are used to describe the current financial situation

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in the EC and to illustrate some topics. Investments in land and the various methods used to finance the use of land are topics of much interest in Eastern and Western Europe. In both regions the relationship between profitability and land values is a central issue. One step further is the transfer of the land and farm to the next generation. The increased use of capital in agriculture makes farm succession more difficult. A section of this paper is devoted to that topic. Having discussed how farmers acquire debt, the paper will turn to the topic of farmers in financial difficulties, and investments by farmers in agricultural co-operatives. From there it is a small step to the role of agricultural policy. The paper ends with some recommendations for the research community for further action.

## **2.2 Financial accounting**

In farm accounting three statements describe the financial situation of the farm: the profit and loss account, the balance sheet and the statement of the flow of funds (or cash flow statement). As an indicator of the financial health of European farming the current statements contain several problems. First they are often restricted to the farm as a business, ignoring the fact that most farms are family farms. As the farm family allocates resources not only to the farm but to other activities as well (Schmitt, 1989; Hill, 1991) such a split is arbitrary and difficult to make. Non-farm income, for instance, will clearly influence the possibilities to borrow.

Secondly, the indicators used are sometimes of poor quality or are ill-defined. A few examples: in the profit and loss account or income statement (scheme 1), the key indicator Family Farm Income (FFI) measures the income of the farm family (or families if two entrepreneurs share one farm), but this is a poor indicator for the efficiency of the farm (Hill, 1991; Poppe, 1992). In some member states like Denmark, England and the Low Countries additional indicators (net farm result, management and investment income) have been introduced to overcome this problem. In those cases imputed costs (opportunity costs or remuneration claims) for labour and capital are deducted from the FFI to calculate the needed efficiency indicators.

---

	ECU
Crop output	20187
Animal output	20468
Other output	1459
	-----
Total output	42114
Specific costs	13995
Overhead	6512
	-----
Intermediate consumption	-/- 20507
Current grants and taxes	+ 664
	-----
Gross farm income	22270
Depreciation	5052
	-----
Farm net value added	17218
Investment subsidies and grants	+ 206
External factors	-/- 5002
	-----
Family Farm Income	12422

---

Scheme 1: Profit and loss account, illustrated with data of the average EC farm as represented in EC's FADN, 1989/90

---

Family farm income		.....
Income from non-farm assets	.....	
Income from non-farm labour	.....	
Income from social security	.....	
Other non-farm income	.....	
	+ -----	
Total non-farm income		.....
		+ -----
Total family income		.....
Taxes paid (incl. social security)		-/- .....
Disposable income		.....
Paid wages to family members	.....	
Other family consumption	.....	
	+ -----	
Total family consumption		.....
		-/- -----
Current savings		.....

---

Scheme 2: Income statement, format used in the Dutch FADN



ASSETS		ECU
Land and permanent crops	.....	
Buildings	.....	
Machinery	.....	
Breeding livestock	.....	
	+ -----	
Total fixed assets		127,417
Other livestock	.....	
Stock of ag. products	.....	
Other circulating capital	.....	
	+ -----	
Total current assets		25,923
		-----
Total assets		153,340
LIABILITIES		
Net worth		130,784
Long and medium term loans	.....	
Short term loans	.....	
	+ -----	
Total current liabilities		22,556
		-----
Total liabilities		153,340

Scheme 3: Balance sheet, illustrated with data of the average EC farm as represented in EC's FADN, 1989/90

As personal taxes and family expenses have to be paid from the FFI, it also does not illustrate the debt-servicing capacity of the farm. For that purpose an extra income statement could be introduced. Scheme 2 shows the format currently used in the Dutch FADN.

The balance sheet (scheme 3) has its own problems. The introduction of tradeable quota, like the milk-quota, seems to have been overlooked by the EC's FADN. It is unclear if all quota, or only the quota that have been bought, should be entered on the balance sheet. In addition, the depreciation of these intangible assets is in discussion. Where the United Kingdom's FADN takes the view that quota values will not decrease, others write the historic costs down over different periods (e.g., the Netherlands 15 years, Germany 10 years). Another issue regarding the balance sheet is the treatment of deferred payments on product sales by co-operatives. Some co-operatives now oblige their members to leave a part of the remuneration for their deliveries in the

co-operative for very long periods (10 to 15 years or even for the lifetime of the membership), sometimes with an interest below the market rate. A third issue is the classification of animals on the balance sheet. Not everyone takes the correct view of the EC's FADN that only breeding livestock should be treated as fixed assets and as an investment, and that animals for fattening have the same economic characteristics as unfinished products (Broeks et al., 1991).

Assets on the balance sheet are often valued at replacement value. This simplifies comparisons between farms and between regions. However, for the analysis of the financial position of the farmer and of investments in farming it also has negative consequences. The annual accounts do not show the realized and unrealized capital gains. Hill (1989:180) suggests that they should be considered when the economic position of farmers is analysed. Perhaps they also should be used in calculating return to capital. That discussion is related to the use of a gearing adjustment when applying current cost accounting (CCA), (Lewis and Jones, 1980). It also implies that net worth is actually lower than estimated in the balance sheet: as tax authorities do not recognize CCA, net worth includes a deferred tax claim.

Even more problematic is the third statement of the annual accounts, the statement of the flow of funds (or cash flow statement). In annual reports of companies there is a sharp difference between the profit and loss account and the statement of the flow of funds. However in agriculture these are often mixed up (e.g., Hill, 1991; CEG, 1989:67). Based on the Dutch FADN, scheme 4 gives an example of such a statement. The statement shows how cash flows have been used to finance operations, investments and financial obligations. It should be noted that several types of statements exist, each with different methods of estimating cash flows (direct and indirect). The choice of appropriate indicators in this field could benefit from recent literature that discusses Exposure Draft 36 "Cash flow statements" of the International Accounting Standards Committee. In general, indicators used in agriculture should be discussed more often and in the framework of non-agricultural literature.

---

<b>SOURCES</b>		
Depreciation	.....	
Current savings	.....	
	+ -----	
Cash flow	.....	
Inheritances and gifts	.....	
Subsidies on capital	.....	
Results on disinvestments	.....	
Other changes in net worth	.....	
	+ -----	
Own financing		.....
		+ -----
New long term loans	.....	
Changes in long-term credits	.....	
Changes in short-term liabilities	.....	
	+ -----	
Outside financing		.....
		+ -----
Total financing		.....
<b>APPLICATIONS</b>		
		.....
Redemption of loans		
Gross investment intangibles	.....	
Gross investment land	.....	
Gross investment buildings	.....	
Gross investment machinery	.....	
Gross investment breeding livestock	.....	
	+ -----	
Total gross investment fixed assets		
Changes in stocks		.....
Non-farm investments		.....
Changes in circulating capital and accounts receivable		.....
		+ -----
Total applications of all funds		.....

---

Scheme 4: Statement of flow of funds, format used in the Dutch FADN

### 2.3 Financial situation of farms in the EC

Based on the definitions described in the previous section, this section provides some data on the use of capital and the financial situation in EC farming. Figures 1 and 2 relate the total farm capital (including the value of the owned land) to the acreage and the number of agricultural work units of the farm.

Farms in the Netherlands, Northern and Central Italy and along the Spanish coasts and Galicia have the highest investments per ha. The characteristics of the farm system (intensive livestock, horticulture, permanent crops) determine the level of investments. (Rented land is relatively scarce in some of these regions). The amount of capital per agricultural work unit (AWU) is low in the Mediterranean area, especially in Greece, Portugal and Southern Italy. The investments per AWU are high in Denmark, the United Kingdom, Northern Germany and Bavaria, Luxemburg and the wine regions Champagne Ardenne and Rioja. The regions in Central Spain, with their large extensive cereal farms, also have a high level of capital per farmer (figure 2). However, as output is low in many regions with a low level of investments, the amount of assets used to produce 1000 ECU of output is relatively high in Italy, Spain, Wales and Ireland.

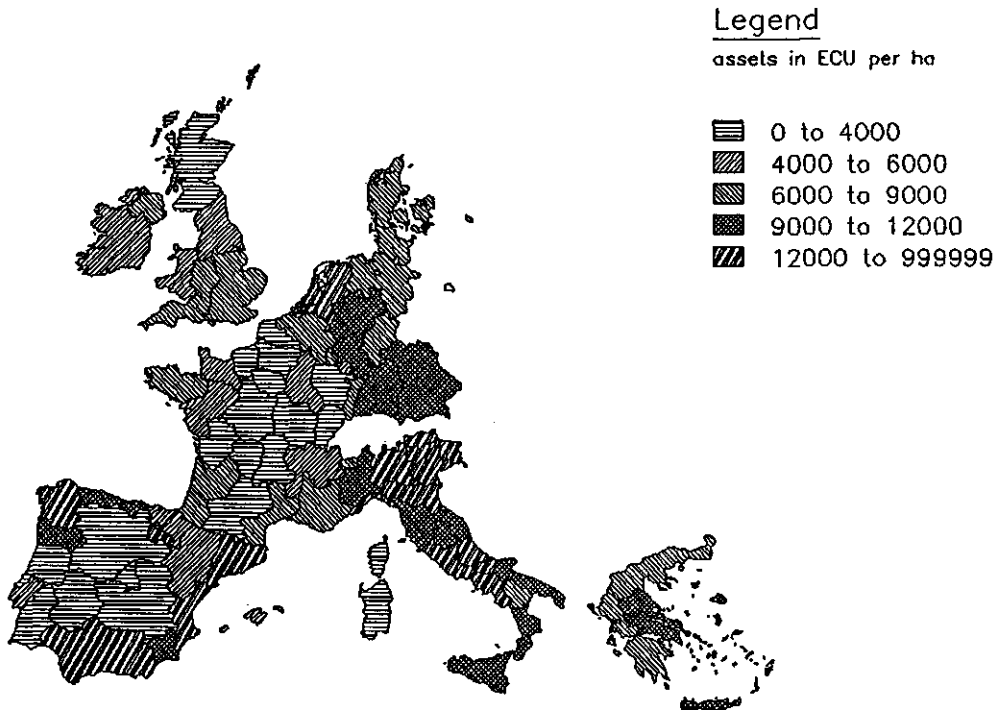


Figure 1: Total assets per ha, 1989

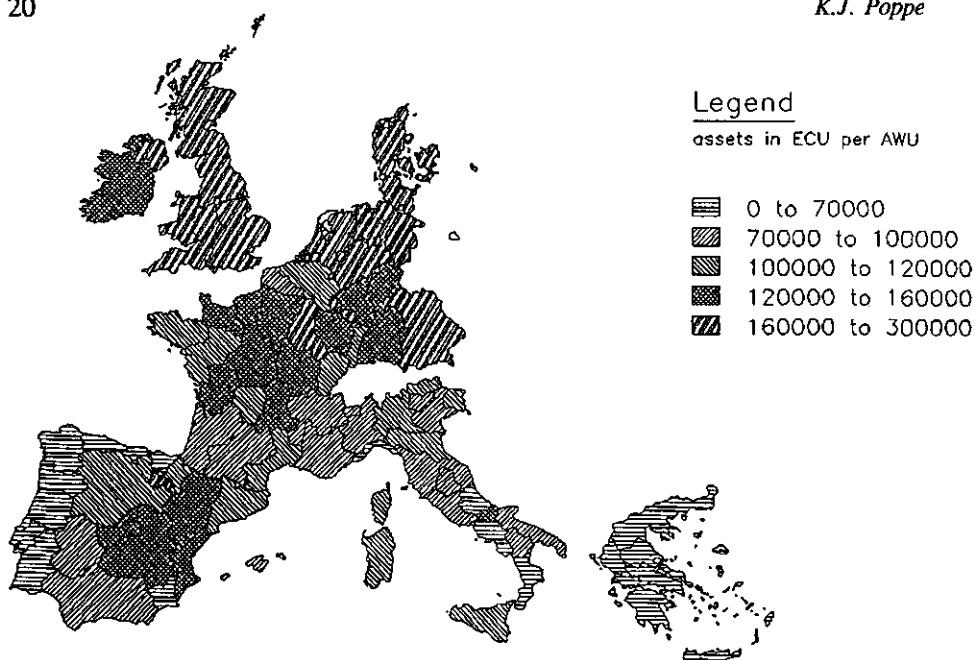


Figure 2: Total assets per AWU, 1989

A small example might illustrate the role that capital plays in determining the farm system and hence the effect of agricultural policy (Poppe and Koole, 1991). The dairy farming system depends on relative prices. For instance in the Netherlands, compared to Bretagne, labour is expensive and compound feeds are cheap: for a Dutch dairy farmer the cost of 100 kg compound feed equals the costs of two and a half hours of labour (price level 1988/89). This statistic is nearly four hours for his competitor in Bretagne, who will therefore buy less compound feed and use more roughage from his own farm. That substitution increases the value of land as a roughage producing asset, but due to technical relations this effect is limited. The Dutch dairy farmer spends twice as much on feedstuffs per 100 kg milk than his counterpart in Bretagne. The result of sharing out a larger part of cultivating feedstuffs to farmers in the USA, Brazil and Thailand is that a Dutch farmer needs less labour per 100 kg milk, and that milk production per ha is higher. As a result land prices are higher in the Netherlands than in other regions: in Bretagne the value of less than 500 hours of (non-agricultural) work buys a ha of land, against nearly 2000 hours in the Netherlands (prices 1988/89). These relatively high land

prices force individual farmers to have a land-intensive farming system; they could otherwise not meet the resulting financial obligations. This small example shows that relative prices of labour, capital, other inputs and outputs determine the farm system and hence the amount of capital per ha and per farmer. Using a lot of capital can result in a difficult inter-generational transfer of the farm (a subject discussed in more detail in a later section) and in high indebtedness. This is most likely to occur on large (efficient) farms operated by young farmers. These farms are very sensitive to drastic changes (like severe price cuts or a limit per ha on payments per head) in agricultural policy.

Indebted farms are mainly found in Northwestern Europe: solvency is low in the Netherlands and in several French regions, and extremely low in Denmark. On the other hand it is high in Italy, Spain, Portugal and on the Greek islands. In all regions of Southern Europe, the debts are less than 5% of the total value of the farm (figure 3).

Debts as such are not a problem. Only in combination with a low cash flow can they cause troubles. Figure 4 shows for how many years of total family farm income (1989 level) are needed to pay off all the existing debts of the farm<sup>1</sup>. In Italy, Spain and Portugal (with the exception of the Alentejo) the debts are equivalent to a few months of income. The average farmer in most German and French regions would need his total farm income for 2 to 3.5 years to redeem all his loans. The Dutch, Danes, Englishmen and the Scots, together with farmers in Western France, the Central Massif and Southwestern Germany would need on average even more than 3.5 years of income.

Farms, production, capital and loans are distributed very unevenly between the member states (table 1<sup>2</sup>). Compare for instance France and Italy: one in eight (12,5%) of the EC farms is located in France and in 1989 they were responsible for more than one fifth (22.3%) of total production. French farmers have, however, taken up one third of all the agricultural liabilities in the EC, backed by 15% of the farm-owned assets. In contrast, nearly one in three of the EC farms is located in Italy, and they were responsible for nearly one fifth (17,5%) of the production. These farms have taken up only 3% of the total credits. A comparison between countries like Denmark, the Netherlands and the UK on the one hand and Spain on the other hand is even more striking.

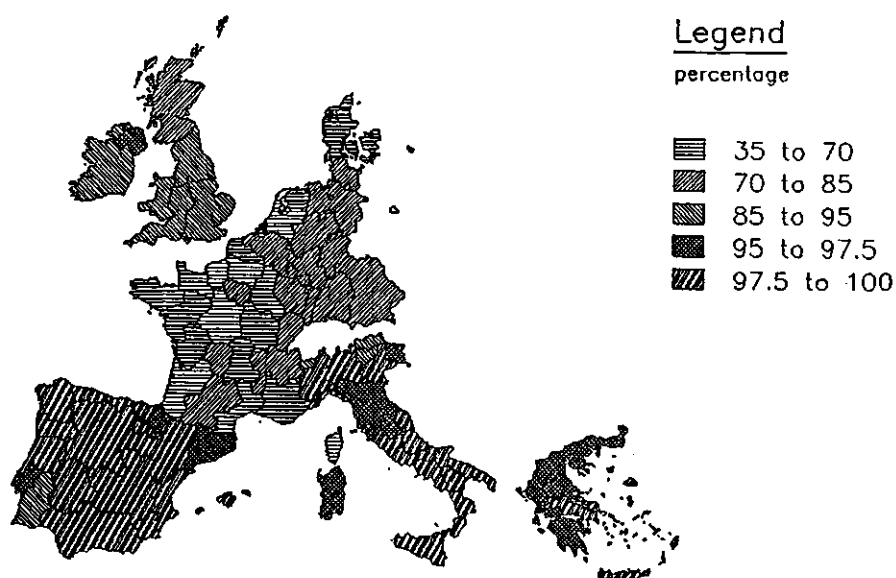


Figure 3: Solvency, 1989

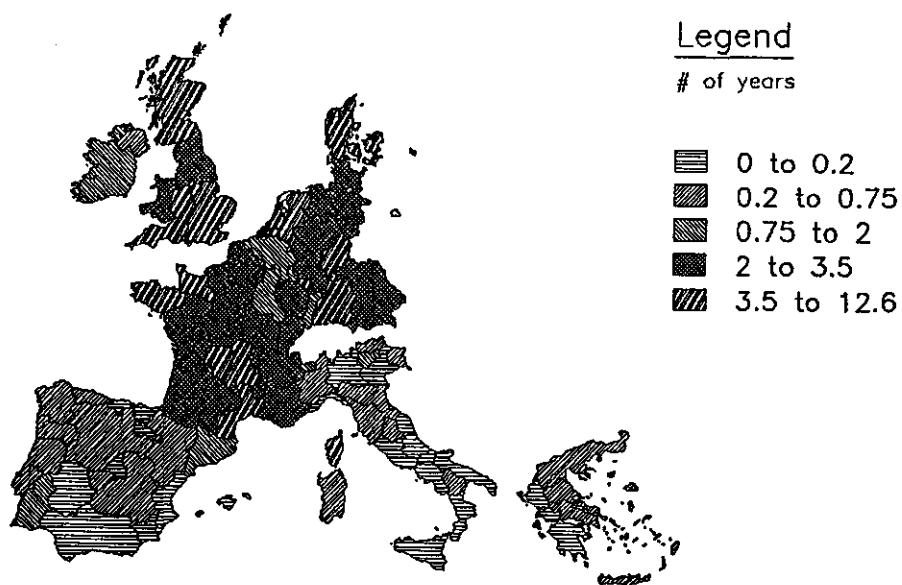


Figure 4: Indebtedness: payback period, 1989

Table 1: Share of EC member states in the number of farms, total output, total farm owned assets \*) and total liabilities, 1989

Member state	Farms	Output	Assets	Liabilities
Germany	8.3%	16.0%	14.3%	20.3%
France	12.5%	22.3%	15.0%	32.5%
Italy	30.8%	17.5%	22.8%	2.8%
Belgium	1.2%	2.9%	1.5%	3.0%
Luxembourg	0.1%	0.1%	0.1%	0.1%
Netherlands	2.1%	8.8%	7.0%	15.6%
Denmark	1.8%	4.3%	2.7%	11.4%
Ireland	3.1%	2.4%	3.8%	1.5%
UK	3.2%	10.7%	11.3%	10.1%
Greece	11.1%	3.7%	3.9%	0.9%
Spain	15.8%	9.0%	14.5%	1.1%
Portugal	9.9%	2.4%	3.0%	0.7%
EC	100%	100%	100%	100%

\*) excluding the value of rented landed, which differs between member states.

Source: adapted from CEG-RICA

Literature that explains the differences in the financial situation between the European regions is scarce, and it often only provides descriptions, without explanations. Hullot and Loyat (1990) applied principal components analyses and hierarchical clustering to the FADN data of 1986 to identify thirteen clusters of regional farm types (annex 1).

The results of that study show a clear north/south division. Farms in the north are more indebted and thus more integrated in the capital markets than in the south, where farms remain more self-sufficient. A complete and theoretically funded explanation has not yet been offered.

From an economic point of view one would expect that the perceived rate of return (net of inflation) and opportunity cost of the capital, risk and the fiscal treatment of debts play a role in the organization of the farm and its financial structure<sup>3</sup>. However, as equity, management and labour are often provided by the farm family (which hampers the calculation of the rate of return on equity) and as fiscal and legal aspects of farming are not well documented throughout Europe, it is difficult to provide a complete picture. Nevertheless, more effort should be made in this area, for the sake of scientific theory and policy making.



Table 2: Solvency (net worth in a % of total capital) according to the age of the farm manager for different member states, 1988/89

Age	all	< 25	25-35	35-45	45-55	55-65	> 65
Germany	78	78	75	76	80	80	82
France	67	50	56	65	75	80	77
Italy	98	98	97	97	98	99	98
Belgium	72	34	53	71	81	85	94
Luxembourg	80	79	70	82	86	82	85
Netherlands	66	60	53	62	70	76	79
Denmark	37	11	13	27	38	51	67
Ireland	94	94	93	92	93	97	98
UK	87	88	86	86	85	87	90
Greece	96	98	95	95	96	98	99
Spain	99	99	98	99	99	100	99
Portugal	96	94	96	95	96	98	98
EUR-12	84	76	74	80	86	90	93

Source: CEG-RICA

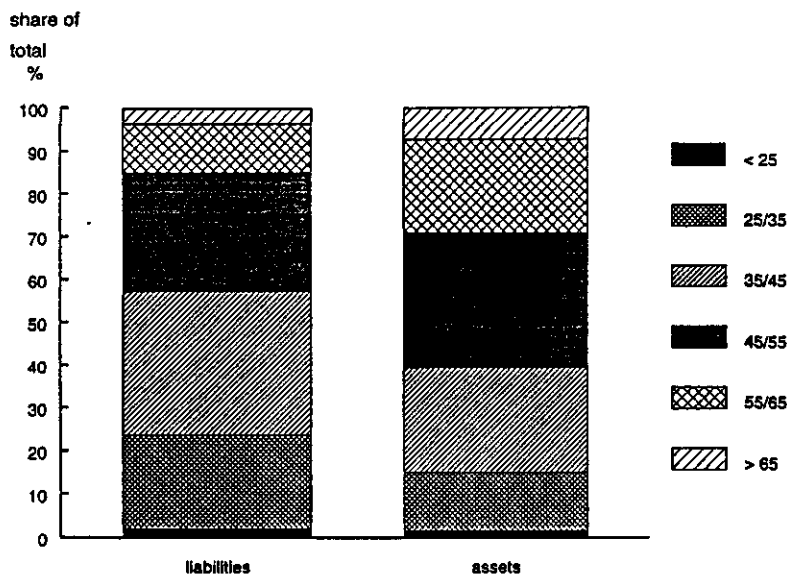


Figure 5: The share in total liabilities (left) and total assets (right) of farms classified according to age of the farm manager, 1988/89. Source: adapted from CEG-RICA

In comparing average data of regions, the life cycle effect of finance has to be considered. The data show that the average age of the farmer is an important factor as younger farmers are more indebted (table 2). In several member states, and in the EC as a whole, farmers in the age-class 35-45 years have on average larger farms (and a higher net value added) than younger and older farmers. Based on FADN data it can be estimated that 37% of the farms have a manager who is younger than 45 years. These farms control 39% percent of the total assets and realize 42% of the total aggregated net value added. However, they have 57% of the liabilities and pay 57% of the total interest (figure 5)<sup>4</sup>.

The structure of the banking industry could also have an effect on indebtedness: some argue that in a heavily competitive industry without specialized agricultural banks, farmers have easier access to loans (based on the value of their land) or only at terms comparable to other sectors (like variable interest rates), and are more likely to default. This hypothesis could be tested by comparing different member states (e.g., Denmark and England compared with France and the Netherlands).

In addition to economic factors, some would argue that farm management styles have an influence (Van der Ploeg et al., 1992): some farmers prefer to stay independent of banks or the agribusiness that provides long-term contracts, while others are less averse to integrating in the market. Their preference is based on economic, but also sociologic or psychologic motives.

## **2.4 Land**

Land prices are often high in regions that have high economic performance. One explanation is put forward by Von Thünen: the land price contains a rent that reflects a comparative advantage in transport costs. Another explanation could be that in these regions the non-farm sector sometimes influences land prices by creating extra demand for housing, roads, recreation and nature preserves. Probably the main reason is that the regional economies provide off-farm employment for this and the next generation and pushes up the opportunity cost of labour. This leads to the introduction of labour saving technologies (Hayami and Ruttan, 1985) that are capital intensive. Optimal use

of these technologies by existing farmers (who individually have a low opportunity cost for their labour) leads to a high marginal value for land (assuming that the profitability of the innovations is related to the scale of the farm; Veerman, 1983). As a result the marginal value of land will be higher than in a situation with less (human) capital.

Annex 2 provides some information on the relation between farm income and land prices in the EC. Although the quality of the data is far from perfect<sup>5</sup>, this cross section analysis shows that there is a clear relationship between Family Farm Income per hectare and the land value in several types of farming. Mediocre results for some types of farming can be influenced by the fact that data from only one year have been used, without paying attention to price bubbles<sup>6</sup>. In addition, land prices can be influenced by expected capital gains (see Daouli and Demoussis [1992] for a recent analysis of Greek data).

Since at least the Middle Ages the best agricultural regions have also had the most thriving regional economies. More backward regions tend to be less favoured in an agricultural sense: the backwardness of agriculture in LFA-regions can at least partly be explained by a less developed regional economy. Due to the subsistence character of agriculture in the recent past in these regions, the agricultural structure remains small-scale (measured in output, not in ha). Probably less has been invested in modern techniques. Land values reflect the marginal character of these areas. If such regions are part of a richer member state of the EC, relatively high subsidies per ha are handed out to conserve this situation (Tamminga et al., 1991).

Even where subsidies exist, the total gap in family farm income between less favoured and normal areas is rarely bridged. Other indicators for the financial position of farms in less favoured areas are not so negative (table 3). Although the value of the land is lower in LFAs than in normal areas, the farms are often bigger (measured in ha) and less burdened with debts. Solvency is therefore often higher: the low profitability of farming in LFAs does not allow a high indebtedness. The pay back period of the liabilities (measured in the number of years that total family farm income would be needed to repay the loans) is at the same level for LFA and non-LFA groups in most member states. This is in line with the analysis of Zeddies (1991), that also showed little difference between LFA and non-LFA regions in the

number of viable farms for each member state (with the exception of Germany).

Table 3: Financial situation on farms in less favoured areas (lfa) compared with 'normal' areas (nrml), per farm type and member state, three year averages 1987-1989

	FFI 1)		Loans 2)		Solvency 3)		Payback 4)		Land 5)	
	nrml	lfa	nrml	lfa	nrml	lfa	nrml	lfa	nrml	lfa
Dairy farms										
Germany	19.0	16.2	63.7	54.2	77	78	3.36	3.35	6243	5607
France	16.3	13.1	48.6	42.9	69	70	2.97	3.28	2895	2337
Belgium	35.3	30.5	50.6	44.8	74	74	1.43	1.47	12340	4918
Ireland	24.0	13.4	22.6	7.1	92	95	0.94	0.53	4517	3106
UK	35.4	28.6	68.3	39.0	86	89	1.93	1.36	6392	3033
Drystock farms										
France	13.7	12.4	54.5	47.5	71	74	3.98	3.85	2300	2009
Belgium	42.2	34.6	50.2	62.6	76	77	1.96	1.81	8638	4254
Ireland	6.8	5.8	11.0	2.9	95	97	1.63	0.51	4307	2198
UK	8.3	13.6	30.7	32.8	91	89	3.68	2.40	4458	1422
Spain	7.6	6.4	1.3	1.2	98	98	0.17	0.19	2233	2318
General cropping										
Italy	9.5	7.4	1.7	1.4	99	99	0.18	0.19	12592	9965
Greece	2.1	1.8	0.8	0.6	96	96	0.40	0.35	3442	2016
Spain	8.1	6.5	1.7	0.9	99	99	0.21	0.14	4527	3157
Portugal	3.1	3.3	1.3	1.1	97	97	0.41	0.32	6729	3489
Permanent crops										
Italy	7.4	7.3	1.1	2.6	99	97	0.14	0.36	14649	15019
Greece	2.4	1.7	0.4	0.3	98	98	0.16	0.17	4145	2762
Spain	3.6	5.9	0.5	0.4	99	100	0.15	0.07	9656	7042
Portugal	3.6	2.6	1.7	1.2	98	98	0.47	0.45	6768	4129

1) Family Farm Income in 1000 ECUs

2) Total liabilities in 1000 ECUs

3) Solvency: net worth in % of total assets

4) Total liabilities divided by the family farm income: income of .. years is needed to pay back the total loans.

5) Implicit value of land and permanent crops per ha of owned land.

Source: RICA, adaption LEI-DLO

Such analyses can provide clues for values at which land in Central and Eastern Europe could be privatized. For farmers in these countries it is interesting to know that private farms can do well even without owning the land. In large parts of Europe land can be rented on long-term contracts, but there are big differences between regions. For instance regions in (western) France are characterized by a high percentage of leased land, while farmers in Denmark, Ireland and England often own their land. The leasing of land is often governed by law to maintain the quality of the land and to give the farmer a preferred access to a renewal of his lease-contract.

The lease-price is sometimes set by the government (e.g., in the Netherlands) but the opposite exists too. Some contracts in France quote a lease price in kg of agricultural products (wheat), which in effect is a system of share-lease. In times of increasing prices the first seems attractive from the farmer's point of view, but policy makers should realize that a price control can lead to a declining area of land available for leasing. The area of rented land in the Netherlands decreased from 50% in the sixties to 35% today, where the area in Belgium and Germany were stable or increased. This is partly blamed on the fact that private investors found it attractive to sell the previously rented land on the free market at the moment the lease contract was ended by the farmer (Van Bruchem et al., 1989). The investors could then earn a so-called premium for vacant possession (Currie, 1981).

## **2.5 Financing the succession of the farm**

Land ownership with high land values hampers the inter-generational transfer of a farm. While equity in a limited company is permanent capital, the net worth of a family farm partly disappears during or shortly after the transfer from one generation to the next. Farmers often invest nearly all their capital in the farm, including funds needed for their own pension or in case they become disabled. Transfer of the farm to the successor therefore involves a flow of money out of agriculture.

This flow is even greater if the children who leave agriculture demand their own share of the family capital. Differences in inheritance law, taxation and in culture influence the methods of succession in the European regions.

Civil inheritance law is based on the equality of all heirs. In an impressive survey of agricultural inheritance laws in Western Europe, Winkler (1991) shows that most countries have introduced special regulation for the succession of farms. This is to prevent inherited farms from being burdened with excessive debts or being divided into uneconomical parts. Winkler (1991) adds that state control of the trade in farm real estate can act as a substitute for inheritance laws by restricting this split up. He expects that the current trend of introducing special regulations governing the succession of farms (especially in countries operating under a Roman-based legal system) will continue. The justification for having an agricultural inheritance law is that it ensures that inherited farms will remain viable. This implies that preference should be given to the beneficiary best fitted to manage the farm. Formulas to arrive at the amount of compensation to be paid to the remaining heirs are especially important. However, it should be noted that the absence of legislation could have its own merits. Winkler (1991) suggests that in such a situation real estate mobility would be higher with a consequent increase in the proportion of leased land and more structural change.

Young farmers are often not able to buy their parents' farm because the market value of the fixed assets (especially land and tradeable quota) is based on the marginal value of the assets for existing farms. A "complete" farm as a functioning business ('going concern') could easily be worth less than its stripped assets, if these include land. Where non-agricultural firms often contain goodwill most farms are characterized by "badwill".

In family farms the amount of "badwill" depends on the opportunity cost of labour. If market rates were applied to remunerate the family labour input, then only a very small percentage of Dutch dairy farms could generate a return to capital that is comparable with market interest rates. Luijt and Hillebrand (1992) showed that the presence of an heir and knowledge on the availability of fixed inputs, make a prediction possible on the probability of succession. The results showed that family members usually take over the fixed inputs at a considerably reduced price and that this determines the probability of a dairy farm being continued. Family members actually took over the parental farm if they could earn 11 guilders an hour, whereas about 14 guilders was paid for non-family workers.

Table 4: Average investments on Dutch dairy farms

	1983/84	1990/91	% change
Hectares (owned and rented)	24.8	29.1	+17
Number of cows	57.5	51.4	-11
Number of cows per ha	2.3	1.8	-22
Milk production / cow (kg)	5458	6564	+20
Total milk production (kg)	313,835	337,390	+8
Milk production per ha (kg)	12,654	11,594	-4
Total milk quota (kg)	.	334,666	
Assets (in HFL/farm):			
- land (market value)	380,000	658,700	+73
- other tangible assets	12,654	928,100	+51
- intangible assets (quota)			
* bought (historic price *)	.	58.800	
* granted (market value **)	.	945.198	
Assets per 100 kg of milk (in HFL):			
- land (market value)	1.21	1.95	+61
- other tangible assets	1.96	2.75	+40
- intangible assets (quota)			
* bought (historic price *)	.	0.18	
* granted (market value **)	.	2.80	
Total assets per 100 kg of milk (in HFL)	3.17	7.68	+142

\*) after depreciation over a 15 year period

\*\*) at a modest f 3.- per kg minus book value of bought quota, thus including capital gains on bought quota

Source: Dutch FADN

In the last ten years the Common Agricultural Policy tried to solve its financing difficulties by the introduction of quota. If these quota are tradeable (on their own or tied to the land), this can lead to inflated balance sheets as the discounted value of future cash flows shows up in the value of quota. Table 4 shows how the introduction of milk quota for Dutch dairy farms led to an increase in the use of capital. A rough estimate<sup>7</sup> suggests that during the period of the quota system, the value of assets (excluding land and quota) per kg of milk increased by 40% in nominal terms (inflation over that period was 8.8%). Although output increased (+ 8%), this is partly due to idle capacity of land and buildings: the number of cows and the stocking rate decreased. Farmers started buying quota (tied to the land) or leased quota to employ this idle capacity. In 1990/91 farmers had on average f 3.50 of quota costs (leasing, calculated interest and depreciation of bought quota) for every 100 kg of milk produced. That is equivalent to nearly 5% of the milk price. If, in the

future, more quota are transferred to new users, this percentage will rise dramatically. The quota system, with a high milk price, increased the value of the average Dutch dairy farm by one million guilders (ECU 430,000).

Such a creation of intangible assets can be attractive for outgoing farmers, but it could hamper the succession of farms if young farmers have to buy the production rights. Two parties would likely favour such a payment: the tax authorities (if the selling leads to a capital gain that is subject to a tax) and the relatives of the young farmer. They could view a transfer below market prices as an infringement upon their inheritance. Until now the Dutch dairy sector solved this problem by transferring land and quota at values far below the market price. To prevent the risk that the young farmer sells the assets and cashes in on the difference, a contract is recommended that gives the other heirs a right of profit sharing in such a sale for the following 10 or 15 years (Van den Hoek and Spierings, 1992).

## **2.6 Farmers in financial difficulties**

As agriculture becomes more capital intensive, financial risks<sup>8</sup> tend to increase. There is little agreement in the research community on how to measure financial stress of farmers. It is assumed, however, that financial difficulties start long before farms go into bankruptcy. Often the assets are sold "voluntarily", to save as much capital (and status ?) as possible. Efforts of business economists to predict farm failure based on accounting data of previous years have not been very successful. In 1966 Beaver, followed by Altman (1968), set the example for this type of research outside agriculture. In agriculture, applications (e.g., Peters, 1981; Zilahi, 1986) are hampered by the lack of data and theory. Frequently such studies of financial failure consist of little more than simple empiricism with a multitude of financial ratios, which are studied and discarded until a few remain that are found to be the best 'predictors' of failure in the businesses under study (Hill, 1991:124). For farmers and their advisers it also would be more helpful if they could predict lagging performance of the farm instead of failure.



The lack of agreement and theory also shows up in the measurement of the actual situation regarding financial stress. Several studies (Zeddies, 1991; Blogowski et al., 1992; Hill, 1992) have been carried out to research the extent of this problem within the EC. Table 5 (based on a study currently executed by Hill) shows that the number of farms with a negative net worth has increased dramatically during the eighties, especially in Denmark, Germany and France. However, in 1989 only 0.9% of the EC farms had a negative net worth. The trend of increasing financial difficulties is more or less confirmed by Blogowski et al. (1992).

Table 5 uses statistics that are based on the balance sheet. Although a negative net worth is a clear sign of financial difficulty low solvency (or a high proportion of debt) is not. If there is a steady and large cash flow (with or without valuable assets as backing) there is no reason for the business to be financed with equity. If the return on capital is higher than the market interest rate, leverage is attractive from the point of view of the provider of equity. To strive for a low percentage of debts is in a certain sense a weakness and not a strength of a farm: profitability is too low to make leverage attractive.

Table 5: Numbers of farms with total liabilities greater than total assets, by member state, 1981 and 1989

Member state	Number of farms		% change
	1981	1989	1989 to 1981
Denmark	4,532	11,601	+156%
Germany	4,819	8,260	+71%
France	4,156	13,462	+224%
Netherlands	5,648	5,183	-8%
United Kingdom	2,504	966	-61%
Other member states	872	1,574	+81%
EUR-10	22,531	41,046	+82%
Spain and Portugal	n.a.	319	

Source: calculations based on RICA by Hill, 1992

Thus it is understandable that some colleagues use income or the changes in net worth as a yardstick for financial stress, sometimes as an indicator of pay-back capacity. Zeddies (1991) measured viability by classifying the farms of the FADN into four categories. The first category (labelled I in table 6)

contains all the farms with increasing net worth and the farms with a higher income than the remuneration claim of family labour and family capital (Ia). So, these farms are profitable, be it with or without a withdrawal of net worth. This category is seen as viable because the farms are profitable (which allows them to attract factor inputs at market prices) or because the farm family is prepared to finance the losses from another source.

Table 6: Viability of farms, estimated from FADN data 1983/84-1988/89

	Percentage of farms in group*					Number of farms in IV
	I	Ia**	II	III	IV	
Germany	29	8	27	19	25	92,000
France	61	14	18	9	11	65,000
Italy	16	8	24	56	4	48,000
Belgium	58	35	23	14	5	2,900
Luxembourg	59	19	22	11	8	200
Netherlands	53	30	23	8	17	16,000
Denmark	59	14	16	2	23	20,000
Ireland	62	5	12	23	3	4,500
UK	59	19	19	18	4	6,000
Greece	46	11	22	27	5	24,000
Spain	70	16	8	20	2	12,000
Portugal	49	17	6	22	23	70,000

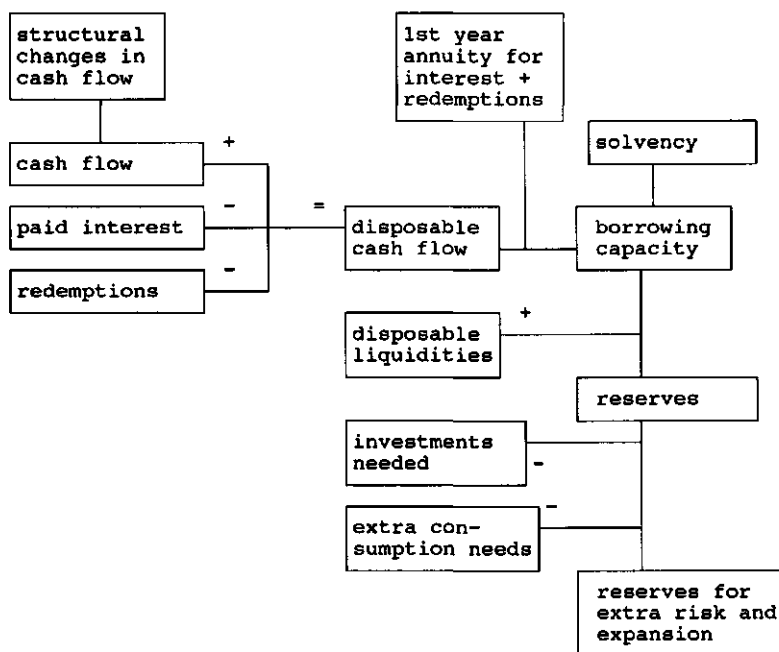
\*) see text for meaning of groups

\*\*) percentage of farms that is profitable (income higher than remuneration claim of own labour and capital)

Source: Zeddies, 1991

The second category (II) contains the farms with negative capital formation, but where the capital losses are lower than depreciation (at current cost level). The idea is that there could still be a positive cash flow on these farms. Group III contains farms in which capital losses are larger than depreciation, but the liabilities are smaller than the sum of current assets, breeding livestock and machinery. The last category (IV) contains the remaining farms. The analysis carried out by Zeddies (1991) suggests that Germany, France, Denmark and the Netherlands rank highest among the member states in their percentage of farmers that are "at risk". The method used here indicates that many more farms are facing financial stress than Hill suggests (1992). Blogowski et al. (1992) also report that in the countries studied

(France, Denmark, Netherlands, United Kingdom, Ireland) 10 to 30% of full time farms face financial difficulties. In their methodology they combine the two points of view (income versus solvency) by stating that the analysis should be based on a combination of the solvency and the income or internal financing. In the Netherlands we developed a cash flow approach, summarized in a simplified form in scheme 5.



Scheme 5: Scheme used in the Netherlands to calculate financial stress (simplified)

Based on the statement of the flow of funds (scheme 4) the cash flow before interest payments is calculated. As profitability changes from year to year, and as history can be a bad predictor of the future, this cash flow is corrected for incidental effects, which results in a "normalized" cash flow. Deducting interest and redemptions gives the disposable cash flow. In theory this amount is available annually for extra payments to creditors, and can therefore be restated (by calculating an annuity) as a one-time borrowing capacity. Occa-

sionally a lack of assets (solvency) can restrict this capacity. In other cases the balance sheet contains current assets (like savings accounts) that are not needed for farm operations. Those disposable liquidities can be added to the borrowing capacity. However, not all these reserves can be used to balance extra business risks. It could be that investments are needed to keep the farm's production capacity at its current level or to approach up to date production standards. If, for instance, a farm has very old buildings, the cash flow and available liquidity will be relatively high. The scheme would then overestimate the reserves available to take up extra risks.

Based on this scheme, Mulder (1991) developed a model to estimate the short- and medium-term continuity of the farm. It is often used to estimate the effects of proposed agricultural and environmental policies. Scheme 6 gives a simplified presentation.

Type	Main characteristics
Bad	Normalized cash flow too low to pay costs, taxes and private consumption
Poor	Disposable cash flow is negative
Moderate	Reserves (based on the borrowing capacity and disposable liquidity) are too small to finance all investments needed to maintain up-to-date production capacity
Fair	Reserves are high enough to finance investments needed to maintain up to date production capacity, but too small to finance expansion
Good	Reserves are high enough to finance expansion

Scheme 6: Typology of farms, based on the level of available funds for continuity in the short- and medium-term. Source: adapted from Mulder, 1991

Frengley and Johnston (1992) used the ratio between interest payments and consumption as a measure for financial stress. They argue that the individual's perception and expectations about future events should be considered: a low present income with poor future prospects must undoubtedly be more stressful than if future prospects are bright. Faced with fluctuating incomes, farmers save and withdraw money from their reserves to support a desired level of household consumption (or utility). When farmers use reserves

to support current consumption needs, they do so at the expense of future consumption, suggesting that they consider themselves to be more stressed now than they foresee themselves being in the future. Then their 'marginal consumption time preference rate' exceeds the market interest rate and the expected return on invested funds: consumption now is preferred above more consumption in the future (Frengley and Johnston, 1992). Their analysis of data on sheep and beef farmers in New Zealand shows a clear relationship between the (adjusted) household stress indicator and solvency.

Although detailed research into the history of farms currently at risk is not available, several studies on financial stress suggest that most problems arise from investment decisions by farmers that (with hindsight!) should be classified as wrong. In periods with high incomes and low (sometimes even negative) real interest rates, expansion is financed with debts, sometimes secured with inflated prices of fixed assets. Timing is essential in this case: if the situation stays unchanged for some years, debt can partly be paid off and the farm prospers. But if the boom ends sooner than expected or real interest rates shoot up, severe difficulties can result. As stated above, for young farmers the taking over of the farm is a huge investment, but they are not the only category that run the risk of financial difficulties. Efficient farmers, with large cash flows, who have paid off a part of their original debts and then enlarge their farm (sometimes because a successor is in sight) can overplay their hand.

## **2.7 Financing market development<sup>9</sup>**

The future of farming depends not only on the decisions of the farmers but also on the actions taken by the food industry, especially now that agricultural policies show signs of becoming more market oriented. This section highlights agricultural co-operatives and the financial relationship with their members.

Agricultural co-operatives are developing new strategies to cope with the changes in the mature food and agribusiness industry. Co-operatives have to compete within an oligopolistic setting. This means that their major competitive instruments are product innovation, market segmentation, optimalization of product portfolios and internationalization. Market share, strong brands

and proven marketing and distribution methods are key instruments for success.

As a marketing oriented firm the co-operative requires more capital than is needed for investment in physical equipment and buildings to process the farmers' produce. The investments that are evoked by the changing strategies are risky. Often it will be impossible to measure the profits of these investments directly. Sometimes (like research and development of new products, developing new brands, buying other firms or brands by paying goodwill) the costs of these investments are calculated immediately or over a very short period. That depresses "profits" or net worth.

As most co-operatives are already heavily indebted, it is unlikely that these investments can be financed by additional loans. In such a situation a risk-bearing capital injection is needed. Sometimes outsiders can provide risk-bearing capital. One method is to float subsidiary companies, or even the co-operative firm itself, on the stock market. This method has been used by Irish dairy co-operatives (Dijsselbloem et al., 1991).

If the co-operative wants to attract more capital from its members, it has to examine the decision making process of its individual members. In general, the 'typical' member does not exist: there are poor and rich, young and old, risk-averse and innovative members. Finance proposals that call on all members and to provide capital with the same obligations have a small chance of success. Heavily indebted members lack the money and members with a very profitable farm can often make a higher profit by investing in their own farm.

A breakdown of the dairy farms into three groups, depending on the size of their investment in cooperatives (table 7) suggests that differences between members are greater than is often assumed. Larger farms have higher investments in the co-operatives, even relative to their economic size, total output or total farm assets. These larger farms have above average incomes, and they invest not only in their co-operatives but also outside agriculture (in stocks, bonds and long-term bank deposits).

A similar difference between farms is revealed by a breakdown according to the age of the farmer (Van Dijk and Poppe, 1992). Older farmers without a successor have provided relatively more capital to their co-operative than younger farmers or even farmers from the same agegroup with a suc-

cessor. It is also clear that farmers have to allocate their cash flow to investments in their farm (e.g., fixed assets), in their co-operative or outside agriculture.

Table 7: Classification of Dutch dairy farms in three groups, depending on their level of investments (in Dutch guilders per farm) in forward and backward stages of the product chain, 1989

Level of investment	Average	Low	Medium	High
Liquid co-op. participation	2741	150	2386	5669
Fixed co-op. participation	18282	2302	12436	39959
Shares	155	9	4	450
Other participations	3	64	0	33
	-----	-----	-----	-----
Total investment *)	21211	2525	14826	46111
- per sfu **)	100	14	81	168
- in % farm output 1988/9	6.6%	1.0%	5.5%	10.7%
- in % total assets	1.5%	0.2%	1.2%	2.6%
Characteristics of the farms				
Economic size in sfu **)	212	178	184	274
Family farm income	125,566	100,140	116,752	159,574
Investments during the year:				
- in fixed assets	73,318	68,265	67,857	83,755
- in financial securities ***)	3600	30	1000	9900

\* excluding short term accounts receivable based on product deliveries. Participation in co-operatives include members titles and long-term loans. Liquid participation means that the money will be paid (back) to the member at his first request. For fixed participation time has to pass (revolving loans) or the membership has to end. See Zwanenberg (1992) for the difficulties in classifying the capital of co-operatives

\*\* sfu (standard farm unit) is a measure for the size of the farm, based on the net value added

\*\*\* (personal) financial securities like stocks, bonds and savings deposits, excluding investments in agriculture

Conventional co-operative theory states that if investments are to be made in co-operatives, these should be in proportion to the member's trade with the co-operative. Otherwise the risk of conflicting interest between product suppliers and capital owners occurs. The analysis above suggests that in practice this relationship between investments and trade is weak, e.g., due to the voluntary regime of some loans by members or to the length of the membership period. Remuneration of the invested capital could make farmers

more willing to provide additional capital.

Capital seems to be the scarcest factor in today's co-operatives. This implies that discussions on financing the co-operative strategies are fundamentally important. Fundamental because members increasingly become suppliers of capital as well as suppliers of raw materials. Fundamental also because the rate of return on these investments becomes increasingly important.

To manage the investments and to show their performance, the new strategies will influence the internal organization of the co-operative, which is characterized by first stage and second stage activities. First stage activities are the traditional ones: buying, selling and processing raw materials into bulk commodities (e.g., unbranded meat, butter and some traditional cheeses). Second stage activities are the proposed new ones such as branded consumer goods, specialties, international activities etc. Separating these two stages (also into subsidiaries) makes the value added and the return on investment of the second stage more clear. Second stage activities can be managed on return on investment. This will make the co-operative management more accountable to the members.

Subsidiaries with second stage activities should be free in buying their raw materials. That keeps them market oriented and makes it possible for them to fulfil their only objective: profit earning. Second stage subsidiaries are able to attract risk-bearing capital more easily through the stock market. Co-operative members do not have to provide all the necessary capital. In this organizational model they retain their influence (as the co-operative is at least a majority shareholder) and the activity and its demand for raw materials (as long as the members' produce has the desired quality) stays in the region. Such a distinction between first and second stage activities demands that an undisputed transfer price be calculated. Although sometimes denied by scholars, this is often possible: the second stage activities are then not the single outlet of the members' produce and market prices are made available for other European regions.



## 2.8 The role of agricultural policy

Is the financial stress that farmers face an argument for policy intervention? There seems to be no agreement on this point nor on the way the intervention should be conducted. The survey by Blogowski et al. (1992) shows that several member states took action to support farms with financial difficulties. Intervention takes the form of support for all farms (e.g., interest subsidies) or for individual farms (e.g., income support or providing security). However, the United Kingdom has always refused to make such interventions.

The disadvantages of a policy that tries to relieve financial stress is that it can easily become counter-productive. General measures like interest subsidies, in particular, lower the cost of capital and provide farmers with incentives to invest and to become too indebted.

Due to the increasing role of capital in agriculture, the first step should be to provide farmers with a stable business environment. This type of support fosters optimal decision making on investments in fixed assets. Clear and long-term monetary and fiscal policies (which determine real interest rates) and agricultural price policies are needed. Uncertainty created by long-lasting discussions on, e.g., the GATT or environmental policies is a seed for stress, be it financial or otherwise.

Although the introduction of quota can provide farmers with an attractive cash flow and a new category of assets, the long-term effect is an increase in capital requirements of the production system. Part of this capital disappears with the transfer of the farm to the next generation. High output prices have the same effect by inflating land prices.

The data of the FADN can be used to calculate the effect of lower output prices (without compensation tied to the land) on land values and financial obligations. Annex 3 contains the results of a theoretical experiment. The calculations suggest that a total liberalization of prices would decrease solvency in arable and drystock farming by 10 to 20 percentage points. In North-Western Europe banks could face a stark increased risk in their portfolio, even if farmers with low incomes were compensated by a personal income transfer. A financial restructuring would lead to lower interest payments and lower land leases, but calculations show that this effect is rather small compared to the effect of lower prices on income or on land values.

Policy makers can influence the capital intensiveness of the production process by other means, as well. The farmer does not necessarily have to own all the assets that are needed for the production process. Land can be rented, quota and machinery can be leased or the work can be shared with a contractor (Reinhard, 1993). Contract production can lessen the need for working capital (Boehlje, 1992). Eastern and Western European countries should realize that the legal system (especially in the land market) should support this sub-contracting. The milk quotas in the EC are an example of increasing state influence: after the UK, Ireland, the Netherlands and Belgium, France is now the fifth country in the EC that has introduced leasing. The same applies to the credit system: the EC should provide possibilities to finance investments in land at medium- or long-term fixed interest rates. The advisory system and education should help farmers make important strategic decisions for which their daily work does not prepare them. Note also that taxes on labour and income raise the opportunity cost of labour and its relative price compared to capital (Chambers et al., 1987). This in turn makes the production process more capital intensive.

If all these conditions are fulfilled and there is still a need to do more for capital intensive farms, interventions based on the individual situation of the farmers are attractive. Such schemes make efficient use of public money. An example from the Netherlands is the Capital Guarantee Fund that acts as a surety, giving security to commercial banks in cases where not enough assets are available (Mulder and Venema, 1992; Dijsselbloem et al., 1993). Another example is the programme for income support introduced in 1989 by the European Community (EC Regulation 768/89 known in French as "PARA"). Member states are allowed to draw up a programme that provides a digressive payment (not tied to prices or the size of the farm) for specific target groups during a period of up to 5 years. The (individual) farmers that receive support should have a total family income per work unit that is lower than 70% of the average national income, measured over a period of more than 1 year. The programme has been put into practice in member states including France (sheep and beef) and the Netherlands (arable farming), but evaluations are not yet available. Farmers with financial difficulties will especially benefit from such a regulation. Note that such programmes can only be evaluated by using data on non-farm income (Brangeon et al., 1992).

Reform is high on the agenda of agricultural politics (Carr, 1992). In the EC payments per hectare replace price support as far as arable production concerns (the "MacSharry decisions"). Traditional arguments for intervention (food security, increased productivity, farmers' living standards, consumer prices, market stability) are being supplemented by new ones, like the management of agricultural landscapes and the preservation of rural communities.

In the long run these new policy objectives do not necessarily need an agricultural policy. Keeping rural communities alive requires just as much a regional policy (along with other policy instruments). The management of agricultural landscapes (if the public does not vote for wilderness as an attractive option) does not justify high premiums per ha or per head that lead to high stocking rates and farm systems that are not sustainable from an environmental point of view. Add "subsidiarity" to this view and it is even unclear why the flow of agricultural payments from Brussels should be so high.

However, with the public choice theory in mind, it seems realistic to expect that these new policy objectives will be embraced by the CAP, to secure its future. In the past academics have argued that wealth (net worth) should be considered in any full assessment of a farmer's economic position<sup>10</sup>. And they showed that the price support benefited large and rich farmers, and especially landowners, more than others. Nevertheless the agricultural price policy and not (only) the income policy is used to improve low farm incomes. Thus, contributions to the discussion will be more fruitful if they direct the current policy instruments towards the new policy objectives rather than trying to dismantle them.

The system recently introduced by the EC in arable farming (featuring payments per hectare and an obligation set aside for large areas) has been met by some criticism (De Veer et al., 1992). Defenders of the payments per hectare consider them to be remuneration for the fixed capital costs, as the market price for the outputs tends to reward only the variable production costs. It is debatable whether capital intensiveness as such is an argument for policy intervention. Considering the new policy objectives, it is also unjustifiable to differentiate the payments to the level of production per hectare. That brings the highest premiums to the regions where the demand for land for other uses (housing, recreation, nature) is highest, and where rural commun-

ities are less threatened. Differentiated payments per ha do not support the required changes in land use. Such payments are only defensible on the grounds of justice and fair play: in the last 25 years farmers have been given strong incentives to invest in land (and quota) at inflated prices and to finance this with interest bearing debts. That cannot be changed immediately without compensation. Current payments per ha are therefore exactly what their official name is: compensation payments.

De Veer et al. (1992) argue that this system will be too expensive, not auditable and therefore unmanageable. In the light of new societal demands, they therefore argue in favour of replacing all agricultural price policies with a payment per ha. They make a plea for more research on such a solution.

All these systems have the disadvantage that land prices will reflect the value of the payments. As everybody in a region receives the same payment, the price that can be paid by a very efficient farmer for the best land will slightly decrease. But it still means that farmers need more capital per labour unit than in a situation without such payments. From the point of view of the farmer this is only a small disadvantage (as it also provides wealth and a collateral for loans) compared to the advantage of getting income support. But it implies that a public discussion on the justification of such premiums and the quest for a better agricultural policy will go on.

## **2.9 Concluding remarks**

European farming is still in a development process. Traditionally, peasants worked on subsistence farms and were only partially engaged in markets, which tended to work with a high degree of imperfection (Ellis, 1988). The modern agricultural entrepreneur is more and more integrated in the economy, including international capital and commodity markets. This development created wealth, and the remaining farmers were able to take their share by integration and specialization. Coinciding with the higher incomes was a rise in labour costs. This induces a shift towards the use of capital, which in itself is not problematic, but it also means a higher amount of capital per labour unit. In the traditional family farm equity easily disappears with the inter-generational transfer of the farm. That is the main problem caused by the

increased use of capital.

Part of the problem can be solved by further specialization: the performance of a farmer does not depend on the ownership of land, quota or machines. Other solutions are found in the way the farm is transferred to the heir (see above). However, it is debatable whether this could save the family farm in all types of farming. Especially in horticulture and perhaps dairy farming, it is now possible to arrive at large production units by making use of new processes and information technology (Zachariasse, 1990). There seems to also be a trend of several farmers (often brothers) joining in one holding. The family's farm is becoming the families' farm (Bauwens et al., 1990). Such a holding can have advantages in attracting equity, from the family and from non-agricultural sources. However, such holdings still have most of the characteristics of a family farm, so the definition of the family farm concept will need adaption (Reinhardt and Barlett, 1989). To quote Boehlje (1992) once again: 'The options and alternatives available to finance and organize farm and agribusiness firms are much broader than traditionally has been perceived. [...] If the dominant concern in the choice of the financial / organizational structure is ownership / control / autonomy, then the available options are severely limited' (see also Fiske et al., 1986).

The performance of farmers is very much dependent on their technical skills. The increased use of capital demands other skills, especially in the field of strategic planning. As farmers go through this process only a few times during their career, external advice in this process of investing and financing is very important. To seek such help farmers need an external orientation and communication skills. Education, accounting and advisory services (public or commercial) are just as important as the need for strategic planning. Accounting offices are especially well placed to provide assistance in financial matters. It is a pity that in most European countries their role in agriculture is limited.

Nevertheless, it is to be expected that not all farmers will be successful in this field. We should not be surprised if the proportion of farmers in financial difficulties will increase in the next years. Policies that create a stable business environment, reduce the amount of capital needed or provide income support for those farmers who run into difficulties are therefore welcome.

Obviously, we, as agricultural economists, also have some work to do.

We should look more closely at the indicators used in financial accounting. This should help us to more fully understand the observed differences between regions and farm types throughout Europe. Some co-operation with colleagues in (tax-) law and sociology could be beneficial in this type of research. Tool box and theory could be applied more often in policy analysis and in the advisory role. For policy analysis the relationship between the farm and the sector level needs more attention. As LaDue (1989) stated: 'For example, what percentage of U.S. farms need to have a positive net cash household income in order to say the condition of agriculture is good?'

As capital becomes even more important, the academic world should study finance in more detail and in closer contact with non-agricultural colleagues. Some examples of fruitful co-operation are: the application of the Capital Asset Pricing Model to investments in land by institutional investors, the influence of taxes on the choice between equity and debts, the application of option theory to (environmental) investments, and the application of the agency theory to the organization and finance of the farm and the co-operative.

Theory combined with the data that are so widely available in agriculture could foster science and support the decision making of farmers and policy makers. The number of farmers will inevitably decline, but the expanded role of capital in the agricultural sector will make additional research and education necessary for this University's next 75 years.

*Annex 1***Classification of regional farm types according to the financial situation of the average farm in the farm type per region, FADN 1986***4 clusters with 15 a-typical cases*

## Farm types:

- \* Northern European horticulture:
- \* Vineyards in Champagne and Bourgogne and intensive livestock in Italy
- \* Beef farms in Northern Ireland
- \* Danish farms and Dutch intensive livestock farms

## Characteristics:

- \* High FFI per family worker and very high gross income per ECU net worth
- \* Very high FFI per family worker and high gross income
- \* Low gross income and assets are very high compared to output
- \* High use of fixed assets per worker and farms are highly indebted

*4 clusters with 127 cases in the north of the EC*

## Farm types:

- \* French vineyards and horticulture, permanent crops in Northern Europe and intensive livestock in the UK, farms in Belgian and Luxembourg'
- \* Farms in Northern Germany and in the Paris basin, arable and dairy farms in the UK and the Netherlands
- \* Farms in Southern Germany, dry stock farm in Southern France, French arable farms, intensive livestock in Greece
- \* Drystock farms in the UK and farms in Ireland

**Characteristics:**

- \* A low % of net value added is paid out as interest and intermediate costs are small compared to output (margins are high), or a high percentage of net value is paid out as interest, low margins and:
- \* FFI per family worker is high, or FFI per family worker is low and:
- \* Assets are high compared to output
- \* Assets are low compared to output

*5 clusters with 141 cases in the south of the EC*

**Farm types:**

- \* Dairy and drystock farms in Italy and arable farms in Italy and Spain
- \* Farms in the Southern Portugal
- \* Permanent crops in Italy and Greece, farms in the Northern of Portugal
- \* Farms in the Southern Portugal
- \* Horticulture in Italy, vineyards in Lombardia, arable, dairy and drystock farms in Greece
- \* Farms in northwest, central and southeast of Spain, dairy and livestock farms in the north and central Spain

**Characteristics:**

- \* High use of fixed assets per worker and high FFI per family worker, or low use of fixed assets per worker, high FFI per family worker and:
- \* Assets are high compared to output and a low % of net value added is paid out as interest, or assets are low compared to output and a high % of net value added is paid out as interest and:
- \* Investments are high, or low investments and:
- \* Low use of capital in relation to gross value added
- \* High use of capital in relation to gross value added

Source: Hullot and Loyat, 1990



*Annex 2***A cross section analysis on the relationship between land values and family farm income**

Figure A shows the value of a ha of land (including the value of the permanent crops) divided by the family farm income per ha, both as measured by RICA in 1989. It shows that land values are relatively low in Southern Europe and Ireland. Land values in those regions are equivalent to less than 10 years of income. Land values seem to be extremely high in the centre of the EC, especially in France and southwest Germany as well as in Scotland. This result could however be due to the fact that only the data of one year are used. In addition, a large part of the land in France is rented (and thus excluded from these land values) so the land values can contain a relatively high proportion of land with permanent crops.

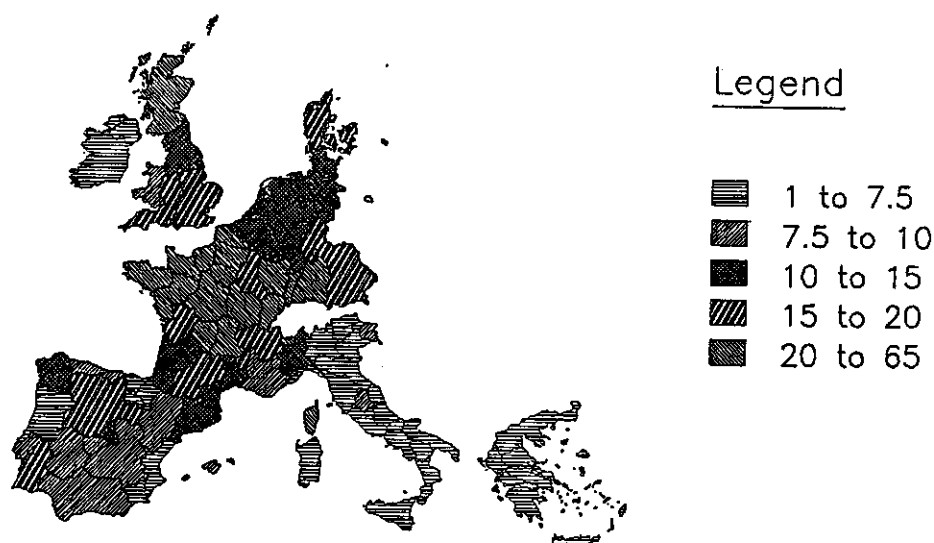


Figure A: Landvalues compared to FFI, 1989

The data were used to perform a simple regression analysis between the land value per ha (LV in ECU, dependent variable) and the family farm income per ha (FFIHA in ECU, independent variable) for four types of farming on all cases where the FFIHA was positive. This produced the following results (T-values between brackets):

*dairy farms (type 411), n = 67*

$$\text{LV} = 5.99 + 12.84 \text{ FFIHA} \quad R^2 = 0.50$$

(0.0)     (8.0)

*beef farms (type 422), n = 17*

$$\text{LV} = -9913 + 27.68 \text{ FFIHA} \quad R^2 = 0.78$$

(1.19)     (7.33)

*cereal farms (type 111), n = 57*

$$\text{LV} = 3455 + 1.29 \text{ FFIHA} \quad R^2 = 0.02$$

(5.89)     (0.9)

*gen. cropping farms (type 121), n = 17*

$$\text{LV} = 4205 + 0.73 \text{ FFIHA} \quad R^2 = 0.33$$

(6.07)     (2.69)

*Annex 3***The effect of lower prices on net worth and solvency**

The FADN data can be used to calculate the effect of lower prices on land values and financial obligations. This annex shows the results of a theoretical experiment. The direct effect (that is without production reactions by farmers and without financial compensations) of substantially lower prices on income<sup>11</sup> is dramatic and often leaves the average farmer with a negative income (table A3.1). What is of interest here, is the effect on land values. A survey of the literature (Luijt, 1988) shows that a decrease in output prices of 1% leads to prices of land and lease prices that are 0.85 to 1.7% lower. If an elasticity of 1 (1% decrease in output price = 1% drop of land values) is assumed, table A3.2 shows the effect on net worth and solvency. The decrease in net worth and solvency is especially important for farm types that are dependent on land. Drystock farms are more hurt than dairy farms because cattle and buildings are more important for the latter. Regions with a high share of leased land (like western France) pass the decrease on to the landowners. In regions where farmers own the land (like Ireland and Denmark), the effect on net worth and solvency is greater. These farmers are already more indebted too. The calculations suggest that a total liberalization of prices would decrease solvency in arable and drystock farming by 10 to 20 percentage points. In regions where indebtedness is low (like southern Europe) such a change does not have many consequences, but in Northwestern Europe banks could face a stark increased risk in their portfolio, even if farmers with low incomes were compensated by a personal income transfer. After a financial restructuring or after a transfer to the next generation, the ratio between equity and debts could be rebalanced towards the current situation. That would lead to lower priced interest payments and lower land leases. Calculations show that this effect is rather small compared to the effect of lower prices on income or on land values. This is due to the large ratio between land values and income.

Table A 3.1: The negative effect in 1000 ECU of a sharp price decrease<sup>11</sup> on family farm income per member state and type of farming

Type of farming *)	1100	1200	2000	4100	4200	4300	4400	5000	all
Belgium		32.3	16.4	17.8	29.3	22.6		26.5	21.9
Denmark	7.8	15.7	30.7	22.9				42.5	19.0
Germany	13.5	24.4	16.5	15.2	17.2	16.9		20.9	17.0
Greece	4.2	3.0	3.9	3.8	4.8		3.6	11.9	3.1
Spain	7.6	8.0	4.5	3.6	5.5	4.1	4.6	10.7	5.4
France	25.7	24.3	13.3	13.3	14.6	17.3	11.2	24.1	16.8
Ireland	15.4	18.3		11.4	5.0	10.5	5.7		9.0
Italy	7.2	6.0	6.1	10.6	12.3	12.5	7.1	40.0	6.0
Luxembourg				20.7		23.7			19.5
Netherlands		23.5	34.1	28.3	15.6			31.4	27.8
Portugal	8.1	2.7	2.0	3.4	2.2	3.1	2.1	8.6	2.2
U.K.	42.9	56.8	42.6	27.4	11.2	38.5	17.7	47.6	33.4

\*) 1100 = cereals; 1200 = general cropping; 2000 = horticulture; 4100 = specialist dairy farms; 4200 = specialist beef farms; 4300 = dairy and beef; 4400 = sheep and goats; 5000 = specialist intensive livestock; all farms include permanent crops and mixed farms

Source: Poppe and Koole (1991), calculated on basis of RICA, 1988/89

Table A 3.2: The negative effect of a decrease of land values on net worth and solvency per member state and type of farming

Type of farming *)	1100	1200	2000	4100	4200	4300	4400	5000	all
Effect on net worth in 1000 ECU									
Belgium		31.3	3.7	16.1	18.8	14.0		4.6	13.9
Denmark	12.4	17.6	2.7	8.5				8.8	11.0
Germany	38.4	54.5	5.5	20.2	28.8	24.4		12.6	24.3
Greece	16.2	8.4	8.5	5.0	4.4		3.6	1.7	10.3
Spain	26.7	23.5	5.1	6.4	8.0	6.2	4.1	1.7	15.5
France	22.7	17.4	6.5	7.5	15.4	8.7	12.7	3.7	13.1
Ireland	62.1	65.3		30.5	38.9	40.0	35.2		33.5
Italy	34.1	25.1	9.0	16.5	12.1	21.1	15.0	16.8	18.5
Luxembourg				14.3		19.6			15.6
Netherlands		54.8	20.1	49.3	12.9			11.7	36.5
Portugal	7.4	5.1	3.9	4.4	4.2	4.5	6.6	1.3	5.7
U.K.	152.1	128.4	23.7	48.5	48.4	75.2	69.1	20.5	73.0
Effect as % of total assets									
Belgium		15	3	9	7	7		3	8
Denmark	9	9	1	3				2	5
Germany	16	16	3	8	12	10		5	10
Greece	25	18	15	9	10		11	2	20
Spain	22	20	7	9	11	9	7	2	16
France	13	10	5	5	8	5	9	2	8
Ireland	25	23		16	30	21	26		20
Italy	21	19	9	7	11	8	10	4	14
Luxembourg				5		6			6
Netherlands		13	5	9	4			3	8
Portugal	13	13	9	7	11	9	13	2	13
U.K.	22	16	7	12	19	15	21	6	15

\*) see table A3.1

Source: Poppe and Koole (1991), calculated on basis of RICA, 1988/89

## Notes

1. This is of course a crude estimate, as this income is first of all needed to support the farm family (taxes and consumption). If, for example 10% of the family farm income is saved and available to pay of the loans, it will take 10 times as much as suggested in the text to replace liabilities by equity. In addition the analysis is based on the data of only one year, where as incomes fluctuate between years. The method is only applied here to allow for some comparison between regions.
2. These figures have been calculated on the basis of the aggregated data from the FADN. The FADN represents "only" 95% of the production and 90% of the agricultural area. The agricultural structure differs between member states, and member states with many small holdings tend to include them in RICA, where others leave them out. That influences the figures, but not the conclusion.
3. The paper by M. Mulder in this seminar provides more methodological clues on this point, especially from the point of view of the agency theory (Mulder, 1993). The paper by M. Boehlje (1992) discusses effects of control, risk and legal choices regarding finance.
4. These figures have been calculated on the basis of the aggregated data from the FADN. As the FADN represents "only" 95% of the production and 90% of the agricultural area, and non-represented farms are smaller and probably less indebted, the real situation is even more unbalanced.
5. The value of the land includes those of permanent crops. The family farm income is not necessarily equivalent to the marginal production value of land; if other production factors (as labour, management or quota) are (quasi-)fixed, part of the rent will be attached to those factors.
6. Price bubbles refer to a situation in which changes in (expected) income from land lead to changes in (the same and) future years (the plural and the lagging are essential). In that case the land price in a certain year is a more complicated function of incomes in previous years.
7. The data in table 2 are not based on a constant sample, as a high number of small farms disappeared, and others became less specialized. It is also possible that farmers own a larger part of the land now than they did in 1983/84. These points, however, do not distort the increased value of quota.
8. Business risk is defined as risk inherent in the farm, independent of the way it is financed and as reflected in the variability in the cash flow from operations. Financial risk is the risk of being unable to meet prior claims with cash generated by the farm (Mulder, 1993).
9. This section is heavily based on Van Dijk en Poppe, 1992 and a forthcoming paper (in English) by these authors.
10. Hill (1989) discusses the relevant literature.
11. We assumed 40% lower prices for arable products (sugar: -50%), -20% for horticulture and fruits (olives: -40%), -25% for milk, -50% for beef and sheep, -35% for intensive livestock and corresponding decreases for agricultural inputs. The budget would then be available for personal income support. More details are given (in Dutch) in Poppe and Koole, 1991.

## References

- Altman, E.I., 'Financial ratios, discriminant analysis and the prediction of corporate bankruptcy', *Journal of finance* 23(1968)4 p. 589-609.
- Bauwens, A.L.G.M., M.N. de Groot and K.J. Poppe, *Agrarisch Bestaan*, Assen, 1990.
- Blogowski, A, F. Colson and Y. Léon, Les difficultés financières des agriculteurs européens, in: *Cahiers d'économie et sociologie rurales*, (1992)24/25, p. 42-70.
- Boehlje, M., Planning the financial/organizational structure of farm and agribusiness firms: a primer, St. Paul, Un. of Minnesota, 1992 (Staff Paper P92-24).
- Boehlje, M.D. and V.R. Eidman, *Farm management*, New York, 1984.
- Brangeon, J.L and G. Jégouzo, L'estimation du revenu des ménages agricoles: approches microéconomiques, in: *Cahiers d'économie et sociologie rurales*, (1992)23, p. 36-57.
- Broeks, A.G.M., K.J. Poppe and P.C.M. van Beek, Omzet en aanwas: het einde?, Den Haag, 1991.
- Bruchem, C. van, and G.F. Tamminga, *Landbouw-Economisch Bericht* 1989, The Hague, 1989.
- Butault, J.P., Un réseau d'informations et de chercheurs en agriculture, in: *Courier des Statistiques* 53, March 1990, p. 49-55.
- Carr, E., Grotesque - a survey of agriculture, *The Economist*, December 12th, 1992.
- CEG (Commission of the European Communities), *Farm accountancy data network: an A to Z of methodology*, Luxembourg, 1989.
- Chambers, R.G. and R.E. Lopez, Tax policies and the financially constrained household, *American Journal of Agricultural Economics*, 1987.
- Colson, F., E. Chia, A. Blogowski and B. Dechambre, Les agriculteurs en difficulté - methodes d'analyse et principales caracteristiques, in: EAAE, 1990.
- Currie, J.M., *The economic theory of agricultural land tenure*, Cambridge, 1981
- Daouli, J. and M.P. Demoussis, Rents, interest rates and real agricultural land prices: an application to a Greek province, *European review of agricultural economics*, 19(1992)4.
- Dijk, G. van, and K.J. Poppe, *Participatie in coöperatie*, The Hague, LEI-DLO, 1992.
- Dijsselbloem, J., J. Peerboom and A. Zwanenberg, Financiering in Ierse zuivelcoöperaties gezien vanuit Nederland, Wageningen, 1992.
- Dijsselbloem, J.R.V.A. and F.H. de Haan, The Dutch Agricultural Guarantee Fund: past and future developments, Wageningen, this seminar, 1993.
- EAAE, European agriculture in search of new strategies - theme I - what is the future of family farms, The Hague, 1990.
- Ellis, F., *Peasant economics: farm households and agrarian development*, Cambridge, 1988.
- Fiske, J.R., M.T. Batte and W.F. Lee, Nonfarm equity in agriculture: past, present, and future, in: *American Journal of Agricultural Economics*, dec. 1986.
- Frengley, G.A.G. and W.E. Johnston, Financial stress and consumption expectations among farm households: New Zealand's experience with economic liberalisation, *Journal of Agricultural Economics*, 1992-1, p. 14-27.
- Hayami, Y and V.W. Ruttan, *Agricultural development: an international perspective*, Baltimore, 1985 (2nd rev. ed.).
- Hill, B., *Farm incomes, wealth and agricultural policy*, Aldershot, 1989.
- Hill, B., The calculation of economic indicators - making use of RICA (FADN) accountancy data, Luxembourg, 1991.
- Hill, B., Farm incomes in the 1980's (unpublished working document for the FADN), Brussels, 1992.

- Hoek, J.M. van den, and C.J.M. Spierings, Van samenwerking naar bedrijfsoverdracht, The Hague, 1992.
- Hulot, J.F. and J. Loyat, Une application de l'analyse financière aux entreprises agricoles de la CEE, in: EAAE, 1990.
- LaDue, E.L., 'The role of credit evaluation in agricultural finance: discussion', *American Journal of Agricultural Economics*, dec. 1989.
- LaDue, E.L., 'Moral hazard in federal farm lending', *American Journal of Agricultural Economics*, aug. 1990.
- Lewis, R.W. and W.D. Jones, 'Current cost accounting and farming business', *Journal of Agricultural Economics*, January 1980.
- Luijt, J., 'Grondmarkteffecten van een vrije pacht en lagere afzetprijzen', *Tijdschrift voor Sociaalwetenschappelijk onderzoek van de landbouw*, 3(1988)4, p. 295-320.
- Luijt, J. and J.H.A. Hillebrand, 'Fixed factors, family farm income and the continuity of Dutch dairy farms', *European Review of Agricultural Economics* 19(1992)3 p. 265-282.
- Mulder, M., Financiële analyse en continuïteitsvoorspelling, The Hague, 1991.
- Mulder, M., Agency theory and finance in horticulture (paper for this EAAE-seminar), The Hague, 1993.
- Mulder, M. and G.S. Venema, Behoeftte aan borgstelling op land- en tuinbouwbedrijven in de periode 1991-2000, The Hague, 1992.
- Peters, R.G., Entwicklung eines Verfahrens zur Beurteilung der Existenzgefährdung landwirtschaftlicher Unternehmen auf der Grundlage der Bilanzrechnung, Gießen, 1981.
- Poppe, K.J., Economic indicators: a comment and some recommendations (unpublished working document for the FADN), The Hague, LEI-DLO, 1992.
- Poppe, K.J. and B. Koole, *Een rekenmodel op bedrijfsniveau voor de EG-landbouw*, Den Haag, LEI, 1991, Onderzoeksverslag 89.
- Ploeg, J.D. van der, S. Miedema, D. Roep. R. van Broekhuizen and R. de Bruin, *Boer bliuwe, blinder*, Wageningen, 1992.
- Reinhard, A.J., Use of machinery in European agriculture, Wageningen, this seminar, 1993.
- Reinhardt, N. and P. Barlett, The persistence of family farms in the United States, in: *Sociologia ruralis* 29(1989) p. 203-225.
- Schmitt, G.H., 'Warum ist Landwirtschaft eigentlich überwiegend "bauerliche Familienwirtschaft"?' , *Berichte über Landwirtschaft*, 67(1989) p. 161-219.
- Tamminga, G.F., H. von Meyer, D. Strijker and F.E. Godeschalk, Agriculture in the less favoured areas of the EC-10, The Hague, 1991.
- Veer, J. de, S.L. Mansholt, G. van Dijk en C.P. Veerman, 'Naar een vaste grondslag in het Europese landbouwbeleid', *Spil* (1992)3 p. 18-22.
- Veerman, C.P., *Grond en grondprijs*, Wageningen, 1983.
- Warren, M.F., *Financial management for farmers*, London, 1982.
- Winkler, W., 'Das landwirtschaftliche Erbrecht in westlichen Europa', *Berichte über Landwirtschaft* 69(1991) 517-542.
- Zachariasse, L.C., 'Trends in bedrijfsgrootte en gezinsbedrijf in verschillende sectoren van de Nederlandse land- en tuinbouw', *Tijdschrift voor Sociaalwetenschappelijk onderzoek van de Landbouw* 5(1990)3.
- Zeddies, J., Viability of farms, Luxembourg, 1991.
- Zilahi-Szabo, M.G., PC-gestütztes Kennzahlensystem als Grundlage zur Ermittlung der Existenzgefährdung, in: *HMD* (132), 1986.
- Zwanenberg, A., Various aspects of financing dairy cooperatives, Paper for a COGECA workshop, Brussels, 1992.



## **Reform of the Farm Tenancy System: How the Netherlands Fits into the European Scene**

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### **3.1 Introduction**

In the eighteenth century, land was a very important factor in European society; many political and other rights were attached to it. About 25% of national income went to landowners, who formed a small and wealthy group. This created various problems. People objected to (a) the lack of equity or the uneven distribution of income, (b) the easy way landowners became rich, (c) how they used their income for conspicuous consumption instead of investments for economic growth, and (d) the uneven distribution of economic and political power that resulted.

Each European country reacted differently and introduced various policies to solve these problems. There were social revolutions (as in France), land reform, heavy taxation of land and of inheritances (in the UK), distribution of land to farm families (e.g., the Homestead Act in the USA), the price for land was pegged, and restrictive land tenure regulations were introduced.

The Netherlands was certainly no forerunner in any of these fields. The French Revolution resulted in only some seigneurial rights being eliminated in nearby Holland. Traditionally, taxation on land has been very moderate; only since the beginning of the Second World War has there been a policy limiting the maximum price for land, and a strict regulation of the land tenure system. These policies and the general changes in Dutch society have completely changed the position of landowners and the problems they created. As a consequence of the price-capping and rent-capping policies for farms and land, the share of the land factor in agricultural income changed from the pre-war level of about 30% to 5% after the war, and has been maintained at that level ever since. The share of land in national income is now very small; less than 1%.

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In the European context the Netherlands has rather strict and rigid legislation as is also the case in France, Belgium, Italy, Spain and Portugal. This contrasts with the more liberal legislation in Great Britain, Luxemburg, Norway, Sweden and Switzerland and the rather special systems found in Denmark, Finland and Ireland where landownership by farmers is openly preferred.

### **3.2 Financing agriculture**

The economic aspect of landownership, therefore, has changed dramatically from a large and increasing share in national income to a small and decreasing one. Many laws now regulate the use of land, and landowners have to accept restrictions on their use and ownership. Even the last remnants of old rights have disappeared and the landowners have no special political position. They are no longer an élite, just as the tenant farmer is no longer submissive and poor. But, although the old problems have disappeared, the old sentiments remain. The problems today are not part of the struggle against feudal lords or against inequality; they are not large social problems but are technical challenges and political struggles to finance agriculture. Landowners provide Dutch agriculture with capital. About 24% of total assets are financed by landowners. The main function of landowners today is to be a source of capital, as are banks, suppliers of machinery, co-operatives and farmers' relatives. One source of credit is perhaps more sympathetic or cheaper than another. The question is whether the tenancy system in the Netherlands can provide prospective farmers with land and buildings. Another problem is that the total area rented decreased from 1.2 million hectares in 1957 (53% of the total agricultural area) to 0.7 million hectares in 1983 (35% of the total agricultural area). In that period, the number of tenant farmers decreased by about 2% annually.

### **3.3 Functions of tenancy**

Tenancy has at least four important functions: (1) able farmers can be helped to farm, even when they have inadequate capital for a family farm or a

commercial enterprise; (2) tenancy increases the stability of the land market; (3) the system attracts capital for land improvement, buildings, and even for new land; and (4) a good farm structure is more likely under tenancy, because there are fewer reasons for splitting up holdings than for splitting up owner-operated farms.

The capital or credit function of tenancy is still important but is decreasing systematically at an annual rate of about 2%. This is a new development. The Netherlands has never before had so little rented land and buildings. In neighbouring countries this quantity is either stable or increasing. It is said that the main cause of the downward trend is the low level of rent and therefore the low rate of return for investments in land and buildings.

In fact, the official maximum rent has lagged behind the general price level of goods and buildings. The rent is also out of step with the financial results of farming. The maintenance costs, insurance, interest rates and the costs of drainage have increased considerably and therefore net rent per hectare has decreased in real terms. Since 1941 the Dutch government has had a conservative rent policy, but this does not mean that the rate of return of tenancy was too low in the past by comparison with other investments. Table 1 shows that this rate was high enough in the period of the decline of tenancy.

Some landowners may object to such calculations because they only think in terms of the low returns (rents) and the high payments (for maintenance, drainage and insurance). That equation is indeed disappointing, but from an economic point of view the capital gain also counts, and in fact is considerable, leaving landowners with an attractive investment but perhaps with some liquidity problems. These net total benefits are on paper only. If a farmer wanted to enjoy and spend them, he would have to sell the farm! This is a difficult point. Many landowners are attached to their holdings and do not consider them as simple investments, like shares in a multinational. They also hate to speculate with land prices in order to obtain the maximum capital gain. Nevertheless, some do well and reap financial rewards.

### 3.4 Tenancy in decline

This selling process is the main cause of the decline in tenancy in the Netherlands. Rented farms put up for sale are bought by farmers who themselves wish to farm and do not intend to rent out. Dutch law states that when a rented farm is put up for sale the tenant has a 'priority right' to buy the farm if he is willing to pay its normal market value. If he does not want to buy it the law indicates that he can stay on the farm for six more years even if the new owner wants to occupy and use his newly acquired property. A farm without a tenant (vacant possession) therefore has a premium, which is about 35% of the market value, see table 2. If a holding becomes vacant, its value will increase by more than 50%. This is a very attractive additional profit. So owners try to sell the farm to farmers instead of to prospective lessors.

Many tenant farmers use their right of priority and buy the farm themselves at the low value (V-P) even if they do not want to farm anymore. They can make a nice profit by selling their farm to prospective farmers. A farmer who wants to quit farming will not rent his farm to colleagues, because by so doing he will lose about 35% capital. Instead he will sell his farm. Nowadays it is even more difficult to rent a farm from a relative. If a father leases his farm to only one of his sons, he benefits that son out of all proportion. More farmers are therefore using other legal means to set up a farm with or for a son. In 1959 the area rented out by parents to their children was 223,000 hectares: compared to only 98,000 hectares in 1983.

Table 1: Rate of return on investments in arable farms in marine clay areas in the Netherlands

	1970/71	1974/75	1978/79	1980/81	1982
Gross rent per hectare (guilders)	300	391	576	550	805
Net rent per hectare (guilders)	150	196	288	330	400
Rate of return (%)	1.9	1.8	1.1	1.6	2.2
Capital gain (%)	5.0	8.3	14.1	9.5	8.4
Rate of return on state bonds (%)	6.9	8.5	6.7	7.1	7.9
Premium for vacant possession (%)	15	38	39	42	35
Additional capital gain in the case of vacant possession (%)	17	61	64	72	54

Source: P.C. van den Noort, 1982. 'Pachtnormen, pachtseruiut en de teruggang van de pacht in Nederland', *Economisch-Statistische Berichten*, 29 september 1982

The trend towards fewer rented farms and few (if any) new private lessors will continue. There are two categories of lessors that behave somewhat differently — the state and insurance companies. The area of agricultural land leased by the state has remained constant (about 190,000 hectares). There is a tendency to sell a number of farms each year in order to obtain money to buy land for nature reserves, but the state may not sell land simply for profit. Insurance companies have always invested in land, and this policy continues. This investment has a good rate of return and, unlike some private owners, these companies do not need the cash so urgently. So they can wait for the premium (P), and have in total an even higher average rate of return than indicated in table 1. To avoid paying the corporate tax of 48% on the resulting capital gain, however, the insurance companies reinvest this capital in the land.

Table 2: Estimates of the premium for vacant possession (guilders per hectare)

	Symbol	1970/71	1974/75	1978/79	1982
Market value of farms	V	8890	17810	41720	26700
Interest rate	i	5%	8%	9%	10%
Interest costs	$V_i$	444.5	1424.8	3754.8	2670
Net rent	N	150	196	288	400
Net costs	$V_i = N$	294.5	1229.3	3466.8	2270
Net costs discounted six years =	$c(V - N) = P$	1496	5679	15566	9897
Premium for vacant possession					
Relative premium, estimated	PV	16%	32%	37%	37%
Relative premium, measured		15%	38%	39%	35%
Additon. capital gain, estimated	$P/(V - P)$	17%	61%	64%	54%

Source: P.C. van den Noort, 1982. 'Pachtnormen, pachtservituut en de teruggang van de pacht in Nederland', *Economisch-Statistische Berichten*, 29 september 1982

The premium for vacant possession, rather than the low level of rents, is the main cause of the decline in tenancy in the Netherlands. Even if the rents could be increased the premium would still be considerable, (up to 25%; see table 3), whereas the rents would reach a high and unacceptable level. The cause of the decline therefore lies in the strict regulations governing tenancy, which were originally set up to protect the socially weak tenants. This, ironically, is now working to destroy the system of tenancy in the country. Young prospective farmers can no longer become tenants unless they can take

over the tenancy from their parents. Farming is increasingly becoming an occupation for the rich and for the well protected tenant families only.

### 3.5 Policy changes

It is time to re-evaluate the factor 'land' and the land tenure policies in the Netherlands. Land is no longer an important political, social and economic factor; neither are the landowners. The landowner nowadays must be considered as a source of credit not in the form of money but in the form of land and buildings. Although everything has changed dramatically, the old sentiments and stereotypes about landowners have unfortunately survived and have prevented much needed changes, not only in the level of rents but also in the laws. The rents are too low to maintain buildings, to improve the drainage system or to consolidate farms. (The latter is essential for modern agriculture). Low rents also result in delays in maintenance and cause problems of liquidity for some private landowners, forcing them to sell farms.

Table 3: The premium for vacant possession in relative terms (P/V) as a function of waiting period and level of maximum rent, 1978/79 (%)

Rent per hectare	Waiting period					
	6 years	5 years	4 years	3 years	2 years	1 year
Present level 570 gld	37	32	26	21	15	8
2 x that level	31	26	22	18	12	6
3 x that level	25	21	18	14	10	5

Source: P.C. van den Noort, 1982. 'Pachtnormen, pachtservituut en de teruggang van de pacht in Nederland', *Economisch-Statistische Berichten*, 29 september 1982

The regulations governing the security of tenants have become excessive or overprotective. The six-year waiting period after a rented farm has been bought should be reduced to two or three years (see Table 3). Unless these changes are implemented, tenancy decline will continue to dominate other trends. It is difficult to increase rents because the tenant farmers, especially the tenants of state-owned farms, oppose any increase and have formed a political coalition with the owner-farmers to protect their interests. The

landowners who lease land have very little political clout in the Netherlands. The tenant farmers are thus pursuing policies that, ironically, will lead to a sharp contraction in the tenancy system in the Netherlands. These policies have always been seen as necessary to regulate the social conflict between the owner and the user of land. In fact, the youngest generation of prospective farmers has been forgotten and this is a weak point in the policies. To help the young generation the law was changed in 1984, removing the right of 65-year olds to stay on as tenants. It was believed that this would improve the chances for younger tenant farmers. But, ironically, this legislation enables the owner to get 'vacant possession' much earlier, and therefore to make a profit earlier by selling the property instead of renting it to young farmers.

Conservative rent policies prevent new investments and improvements or even simple upkeep, and this will hurt the tenant in the long run, even though it may seem like a good policy in the short run.

The decline of the system could also be stopped by lowering the market price of land or farms. The policy of capping land prices, which was in operation until 1963, could be reinstated; the legal wherewithal exists. But it is unlikely that this will be realized. The measure would not be very effective in saving tenancy, and in any case it could not be implemented without breaking the coalition of farmers, because the landowning farmers would oppose the lower land prices!

### **3.6 Conclusion**

This outline of the tenancy system in the Netherlands shows that tenants are not the submissive, poor farmers of former days. On the contrary, many of them can even afford to buy farms (costing over one million guilders) and they have a strong social, legal and political position. Old sentiments have misled policy makers, resulting in policies that will contract the system. Farm tenancy legislation in Belgium and Germany is in fact more relaxed in the sense that it doesn't create a two-price system; hence there is no difficulty with the premium for vacant possession. In Germany this derives from the fact that the owner can regain control of his land again after the end of a certain period of time agreed upon in the contract with the tenant. In Belgium a new

tenant has to pay a certain amount of money, the so-called 'chapeau' in order to be able to farm the land as tenant. This chapeau is equal to the premium for vacant possession. It is remarkable that in these two countries the tenancy system is not declining, as it is in Great Britain and the Netherlands (where we have an uncompensated premium for vacant possession). Unless policies change in the Netherlands, the tenancy system will continue to decline until it reaches a level comparable with that in the rest of Europe, where a large majority (80%) of farmers own their farms. This would indeed drastically change the country's agricultural tradition.



## **Investment Priorities in Central and Eastern European Agriculture**

*C. Csáki*<sup>1</sup>

### **4.1 Introduction**

Central-Eastern Europe and the former USSR are undergoing a fundamental economic and political transformation. Far-reaching changes, surpassing the reforms of earlier years, characterize the economy of Central-Eastern Europe, where the creation of a new economic structure based on private ownership, and a market economy has begun. The former USSR is also striving to overcome serious economic difficulties with comprehensive economic and political reforms. This process has not yet been completed in any of the countries concerned: many details have yet to be clarified, especially in the former USSR, and there is much uncertainty regarding future developments. All these changes, however, will fundamentally reshape the agricultural economy in the region and set new demands for capital and priorities in investment.

### **4.2 Current situation in agriculture**

The aftermath of decades of socialism is largely similar throughout the region. The food and agriculture of Central-Eastern Europe and the former USSR on the eve of the transformation was characterized by:

- large, inefficient farms and food processing enterprises with high production costs;
- a high level of food consumption relative to market economies of comparable prosperity;
- subsidized food prices;
- excess demand for food at subsidized prices;

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1. The World Bank and the University of Budapest

- macroeconomic imbalance, including budget deficits, inflation, and foreign debt;
- a pervasive monopoly in food processing and distribution.

As far as agricultural production is concerned, the general characteristic of the recent past in most of the countries has been a decline in the growth rate of agricultural output. The explanation for this development is to be sought in the following factors:

- the high degree of obsolescence of the technical basis of agricultural production and food processing;
- the low yields and outdated conditions of animal farming, the acute lack of capital;
- the unfavourable effects of the first steps taken in the direction of a market economy; and
- the political tension and uncertainty caused by forthcoming changes.

#### *Central and Eastern European Agriculture*

The decline of economic activities has started already in the first half of the eighties in most of the Central and Eastern European Countries (CEECs); the shortcomings of the centrally planned economic system became apparent long ago. The collapse of the Soviet Union and the recession in the West have exacerbated Central and Eastern Europe's already poor prospects for political harmony and economic recovery in 1993. The divide between Central Europe (Poland, Czechoslovakia, and Hungary) and the Balkans (Romania, Bulgaria, Yugoslavia, and Albania) is deepening. Only the CE countries can be regarded by the EC as latter-day Greeces, Spains and Portugals, struggling to come to terms with political pluralism in a European context.

The Central European economies have suffered further from a severe recession throughout 1993. The sharp deflationary effects of the macroeconomic stabilization programs that are required to counter the threat of hyperinflation are aggravated by the accelerated collapse of the former Soviet economic space. The Balkan economies' prospects are far dimmer. Industrial production declined both in 1991 and 1992, and inflation has reached double or triple digit percentages. The republics of former Yugoslavia are preoccupied by warfare. Only the mini-economy of Slovenia has shown any sign of recovery.

Central and Eastern European agriculture underwent dramatic change during the last three years. The introduction of market pricing, open borders, and increased freedom of entry and exit for firms occurred in a setting that lacked the institutional and legal structures that are generally thought to be crucial for a well operating market economy. In agriculture the effect of market reforms has, in many ways, exemplified the positive and negative effects of these tumultuous changes.

On the positive side, many of these countries have experienced shifts in agricultural supply and demand ranging from pre-reform tight supplies or outright shortages to post-reform surpluses. Food availability and diversity has increased dramatically. Food prices have risen dramatically in nominal terms, but generally have lagged behind the overall inflation rate, reducing the relative price of many food items compared to other goods and services in the post reform period.

On the negative side, farm financial performance has been poor, as the terms of trade have turned heavily against agriculture. Food price increases have been slower than the rate of inflation, while farm input prices equal or exceed the inflation rate. Land and asset ownership questions continue to plague the farm sector, leading to uncertainty for planting and production. Overall consumer demand for agricultural products is depressed from the sudden rise in the overall price level, while nominal income growth has been restricted and overall national income has fallen. In addition, the farm sector that once faced apparent unlimited demand for its products, now faces stiff competition from a wider array of consumer products.

The very real problems faced by the agricultural sector, while fully evident in 1991, did not have as large an impact on production in 1991 as some might have expected. Gross agricultural production in the region declined by 4.9 percent compared to 1990. Production levels in 1991 for most grains exceeded their 1986-90 averages, while many livestock and oilseed products fell below their 1986-90 levels, but remained at about their 1981-85 levels. The main problem appeared to be over-production rather than under-production in most of the countries. Declining domestic demand caused by a combination of relative price movements and falling real income, and disruption and stiff competition in foreign markets meant surpluses were the problem, rather than shortages. These surpluses depressed agricultural prices further and exacerbated farm financial

problems. It is likely that the largest adjustments in domestic demand have already occurred. Production further declined in 1992 and this drop in production was worsened by unfavourable weather conditions.

The Central and Eastern European countries of Bulgaria, the Czech and Slovak Federal Republic (CSFR), Hungary, Poland, Romania, and Yugoslavia produced 102.9 million metric tons (mmt) of grains in 1991 (5.9 percent of world grain production that year). This was a 12 percent increase over 1990 grain production, a year plagued by drought. Favourable weather more than offset the impact of declining input use on yields. Consumption declined for the third consecutive year in 1991 to 96.9 million, so that the CEE became a net grain exporter for the first time since 1984. The decrease in consumption resulted from higher prices, which cut human consumption, and a decrease in animal numbers. Grain production decreased in 1992 by about 15 to 20 percent in the region as a whole. The output was about 20 million metric tons below the 1991 level.

The cattle sector has perhaps been the hardest hit by the changes that have taken place. Because most of the cattle herd in Central and Eastern Europe is dual purpose beef and dairy cattle, beef output is tremendously affected by policy changes in the dairy sector. The sharply higher prices for both meat and milk resulting from price liberalization measures led to a decrease in demand and consumption of both commodities. Falling consumer demand has put downward pressure on the producer price of milk. In response to low milk prices, cattle inventories have been cut dramatically. Because of the increased slaughter, production of beef and veal has declined only slightly so far.

The CEECs are experiencing widely fluctuating hog cycles. Because hog producers are able to respond rapidly to changing prices, all the countries have seen their pork markets swing from distress slaughtering and over supply to tight supplies and rising prices. In all of the Central Eastern European regions, production declined just 1 percent in 1991, following a 2 percent decline in 1990. However, some of the individual countries experienced significant declines. Production declined 5 percent in the CSFR and 8 percent in Hungary. Hog inventories have declined steadily in these countries since 1990, as live hog prices generally failed to keep up with escalating feed prices. In 1992, pig stock further declined in most of the countries.

The poultry industry in the region continued to be plagued by the high cost and/or scarcity of protein feed. In Hungary, poultry production costs increased

by more than the average rate of inflation, and especially more than input costs of protein feed and energy costs. As a result, poultry output fell in all of the Central Eastern European countries. Declines were greatest in Hungary, where producers are cutting back in response to the loss of the Soviet export market, and in Romania and Bulgaria, which suffered serious shortages of protein feed. In Bulgaria, poultry numbers fell by almost 50 percent in 1991, and just as was the case for pork, most of the decline was on the state-owned poultry complexes.

#### *Agricultural situation in the former USSR*

Economic conditions in all of the republics of former Soviet Union (FSU) continue to deteriorate. Large budget deficits, rising inflation rates and erosion of living standards is leading to growing political opposition to reform programs. This trend is most obvious in Russia. But the same concerns continue to stymie reform in the Ukraine and hamper efforts in the Baltics, Central Asia and elsewhere. The decline in production in 1991 averaged 17 percent in all 15 republics. In 1992 output declined by 15-25 percent in most republics. Inflation rates — already high in 1992 — are accelerating. They were around 1,000 percent in 1992.

The agricultural situation in the republics of the FSU was significantly affected by the events of late 1991. Following a relatively poor harvest in 1991, the disintegration of the Union of the Soviet Union set the stage for further decline in agriculture. The results of crop production in 1992 were also not very favourable, although there was an improvement over the poor 1991 results. Many of the usual problems — notably shortages in input supplies — continue to hamper producers. While small private farmers are growing in number, grain and oilseed crop production is likely to remain mostly in the socialized sector. The movement in some new states to put more of the productive agricultural lands into the hands of the small farmers will probably result in an increase in garden-type crops such as fruits, vegetables and berries.

The livestock sector in most republics of the FSU has suffered substantial damage in recent years, with continued stock reductions in most of the republics. Critical shortages of feed and veterinary supplies, combined with the ongoing problems of poor livestock genetics, stock management techniques, etc., have been extraordinarily injurious to the livestock industry. Once the decline in productivity and numbers has been stopped and stabilized, there will likely be a

considerable time lag until animal productivity and performance can be turned around and eventually improved. In 1992 the livestock sector showed few signs of recovery, though animal stocks and meat output continued to fall. Productivity in this sector will lag until a supporting infrastructure is developed — ranging from feed mills to outlets for veterinary needs — and an efficient market for farmers' and ranchers' output exists.

Total grain production is one of the most frequently cited performance indicators within the agricultural sector in the FSU. It is also common practice to compare one year's achievement to that of the preceding year. In this fashion, 1991 was pegged by many as a "bad year". Weather related problems were to blame for most of the decreases in production. However, difficulties beyond the farm gate also affected agricultural performance. Total net grain output in 1991 in the 15 FSU republics slightly exceeded 160 million tons. As mentioned above, comparing 1991 to the previous year, the apparent 26 percent plunge in the harvest indicates a relatively poor showing. While 1991 should not be considered anything other than an unsatisfactory crop year, it is not entirely accurate to measure 1991 vis-a-vis 1990. Knowing that 1990 grain production was a near-record high explains some of the 26 percent gap between 1990 and 1991 crops. Overall 1992 grain output in the 15 FSU republics was up about 15 percent from the 1991 level, but remained well below the exceptional output of 1990. Total grain production was about 175 million metric tons. As a result, grain imports are expected to be lower than in the previous season.

### *Investment*

Investment in food and agriculture had already declined in the second half of eighties. The ongoing transition and the disintegration of the former agricultural structure have resulted in a further decrease in investment in agriculture. In most of the countries investments in agriculture were minimal or almost non-existent zero during 1991 and 1992. Furthermore, the use of chemicals, fertilizer and other inputs has also decreased to 50-30 percent of levels reached in the eighties. Agriculture has been using up its existing resources in most of the countries. Machinery is aging, replacements are postponed, and spare parts are difficult to obtain. Existing technology — with the exception of Poland — is to a large extent tuned to the needs of large-scale farming.

Most agroprocessing plants are old or were designed for the specific needs of the command economy. Most of these plants have a large portion of completely depreciated equipment and are not able to operate with profit under market conditions. The outdated, highly monopolized food processing industry is one of the major bottle-necks of the recovery of agriculture in the region.

### **4.3 The main aspects of transformation in agriculture**

Investment needs in agriculture of the region are rather closely related to the results of the ongoing transition process in agriculture. The main direction of the transformation of the region's economies is shaped by the legacy of the command economy. In each country, the objective is to develop an economic agricultural structure based on a market economy, which leads to private initiatives and an economy based on private ownership. The most important components in developing a market-oriented and competitive food and agricultural structure are:

- privatization and the creation of marketable landed property;
- enterprise reform;
- a governmental attitude that encourages and supports the emerging private ventures and fosters the transformation of the co-operative sector;
- a real market that guarantees the conditions for fair competition through its overall rules, physical conditions, and institutions; and
- a fundamental change in the role of government, including the reassessment of the agricultural sector within the macroeconomic framework.

Apart from the similarity of the objectives, there are substantial differences among the countries regarding transition strategies and the speed of implementation. In the countries of Central Eastern Europe and the Baltics, where the political transition has been completed to a large extent, comprehensive and major agricultural reforms have been implemented, while in the FSU agricultural reform moves rather slowly and with great difficulty. There are also substantial differences in the overall economic stability and openness of the economies concerned. Developed trade and political relations with the West and especially with the EEC provide a substantial contribution to the success of the reform process, while the collapse of trade relations within the FSU and the underdevel-

oped trade relations with the developed world together with hyperinflation and the lack of a financial system make changes in the FSU more difficult.

Investment priorities can be derived for the short- and medium-term tasks faced by most countries of the region during the process of transforming agriculture. The major short-term tasks in agriculture and the food sector faced by most of the countries can be listed as follows:

- dismantling remaining elements of the command economy, such as the system of state orders for food procurement, trade restrictions, etc., together with creating a new macroeconomic environment for agriculture;
- providing the minimum legal, institutional, and physical conditions of a market for agricultural products and inputs;
- accelerating the structural transformation of agriculture, food production, distribution, and marketing;
- ensuring the satisfactory supply of basic food stuffs to the domestic market in most countries except Central Europe.

Over the medium-term the transition strategy recommended for the food and agriculture of the region should serve the following objectives:

- expedite and possibly complete the transition to a market-based system for food production, processing, and marketing, including privatization;
- improve the efficiency of production, processing, and distribution of food and agricultural products;
- exploit comparative advantage in agriculture, improving the competitiveness of agricultural products in international markets.

The completion of the major tasks of transition to a market based food and agricultural system requires, among other things:

- a. full scale land reform with the legal rights of full private ownership of land, and restructuring of state and collective farms based on the decision of members;
- b. explicit policies on a range of supporting services — including production imports, agricultural research and extension and market information — that is needed to support an agricultural production system based on private ownership;



- c. more explicit land and water use policies that give appropriate attention to the needs of the food production sector and the need for environmentally sound management of the natural resource base;
- d. the privatization of most processing, wholesale and retail trade in food and related transport activities;
- e. creation of a strong and flexible agricultural credit system;
- f. liberal international trade policies to facilitate trade with FSU republics and other countries;
- g. radical adjustment of the government's activities and management structure from the ministerial level down to local, regional and municipal levels.

Completion of the agricultural reform program — namely land reform, state and collective farm and enterprise restructuring, and privatization — is an important precondition for the improvement of the efficiency of primary production, processing, and distribution of food and agricultural products. Appropriate policies are needed to support investments in new technologies and methods of production. Changes are also required in the structure of production and the regional production patterns. The improvements in production techniques and methods should be reflected through improved crop and livestock yields at a constant level of input, or alternatively the same yields at a lower input level. The natural endowments for food and agriculture provide the potential for several countries in the region to produce more food and agricultural products than are required to meet domestic needs. These countries should try to exploit their potentials as soon as possible. However, competitive and profitable export of their agricultural products will require substantial improvements in product quality as well as in international marketing.

#### **4.4 Major areas of investment**

Considering the current situation and the major tasks of transition, the region's investment priorities can be listed as follows:

- a. development of the physical facilities for a working market for agricultural products and inputs for agriculture;

- b. rehabilitation of production facilities to reach a minimum level of food security in most of the FSU countries;
- c. recapitalization of agriculture according to the emerging new farming structure;
- d. reconstruction and major modernization of support services (such as the seed industry and machinery maintenance);
- e. reconstruction and major modernization of agro-processing;
- f. introduction of environmentally friendly technologies.

*Development agricultural market structure*

The new structure presumes that free markets in the food economy can be developed and implemented. The total market system must supply markets for inputs, domestic food, and international agricultural and livestock products. The tasks required for creation of this system have organizational, institutional, legal, and regulatory aspects.

It is important to create the minimum physical facilities for farmers' markets and a wholesaling network designed for private farming as soon as possible. Currently, the need to simply create a marketing structure for farm products represents a major hurdle, but at a later stage the new market structure should include improved physical facilities, such as auction halls, city markets, regional cooperative packing and grading facilities, and transportation equipment. Market information services for farmers should also be available, i.e., radio and television programs and farm newspapers. The more developed domestic agricultural markets will require a commodity exchange. (Commodity exchanges are already operating in many countries.) More efficient and co-ordinated international marketing for agriculture should be supported by commercial export marketing organizations.

*Rehabilitation of production and recapitalization of agriculture*

All the countries have experienced a decline both in production and demand for food. In several countries, especially in the FSU, food imports have to be increased to maintain even a modest level of supply. Investments, especially in machinery, are needed to stabilize production and save hard currency during the critical first period of transition.

The supply of basic inputs and machinery services is critical to the emerging private sector. Currently, neither the required distribution structure nor critical inputs exist in most of the countries concerned; tractors and other machinery suitable for small-scale farming are also not available in most parts of the region. Because development of a private commercial system is the best way of supplying inputs and machinery services, a network of farm supply shops should be created quickly. For the short-term in many areas, especially the FSU, Bulgaria, and Romania, the new co-operatives can be the major institutions of supply, if they are established soon. Over the long run, private firms, including foreign ones, are likely to be involved. Development of a nationwide commercial network of supply, however, will take several years; therefore, imported tractors and other farm machinery should be offered both to the service enterprises and to private cooperatives and farmers. Credit availability to cover inputs and services should also be organized.

The new political and economic situation followed by land reform legislation created totally new conditions for the farming sector. The transition to a market-based economy raises the question of the future of collective and state farms, which are not suited for efficient operation under market conditions. One of the major issues is what kind of new farming structures that will emerge in the region.

The land reform process has focused attention on the restructuring of collective and state farms, which are the main source of land in all countries of the region, except Poland. Structural and organizational reforms in the collective and state farm sector, however, began independently of land reform legislation almost a decade ago. These changes are taking several different forms:

- a. expansion of individual subsidiary farms within the existing structure of large-scale collective and state farms, and their organization into "small co-operatives" of several neighbouring families;
- b. creation of "lease co-operatives" as comparatively independent profit-oriented subdivisions of existing collective and state farms;
- c. conversion of collective and state farms into joint-stock societies;
- d. separation of individual peasant farms or co-operatives from the existing large-scale farming structure; and
- e. complete dismantling of large-scale farms followed by total privatization of their land and assets.

Although the reorganization began as a spontaneous process, later legislation adopted in 1990-1992 made the restructuring of large-scale farms compulsory in most cases. The legislation provided a general framework for the distribution of land and assets in large-scale farms, but left the responsibility for making the final choice of a new structure with the members. In principle, none of the specific forms of farming structure is imposed by legislation upon the members.

Restructuring of the farm sector is an ongoing process and its final results will vary between countries. In Central and Eastern Europe, this process will radically reshape the farming structure, although the majority of members probably will not opt for fully independent private farming. In the FSU, the latest statistics indicate that a large proportion of collective and state farms are undergoing some form of reorganization and restructuring, but very few large-scale farms have actually dissolved and been broken up into totally independent private farms. Most of them continue to exist as "federated" structures or "associations of producers". One of the factors keeping these individuals together is the developed social infrastructure created and maintained by the collective and state farms. Further economic reorganization of the agricultural sector in the former Soviet republics must find acceptable solutions to the problem of social assets, for instance, by entrusting them to the care of local municipal authorities, supported by sufficient budgets and taxes.

No doubt as a result of the process of farm restructuring and land privatization a large proportion of farm equipment and buildings will become unsuitable for the new structure or will require substantial reconstruction. At this moment it is very difficult to estimate the magnitude of new investment requirement created by the land reform throughout of the region. The investment needed to establish independent family farms is estimated in several countries to be hundreds of million dollars. The restructuring will definitely require a longer period as well as related investment. However, in the near future the early fase of this process will create demand for a wide range of farming equipment and construction material.

#### *Reconstruction of food processing industry*

Food processing is the bottle-neck in the food sector. The relative backwardness of the processing of foods is an extremely serious handicap for the agricultural sector of the region. Not only can the level of processing be seen on regional

export products, but to a large extent it also determines their price and indeed, whether they can be sold at all. It cannot be over-emphasized that the demanding international markets can only be satisfied with food processing at a much more developed level than at present. The development of food processing in a way that is clearly linked to export strategy is an indispensable condition for competitiveness and the improvement of export efficiency. Naturally, more demanding processing is also becoming increasingly important for the region consumers too.

#### *Need for environmentally friendly technologies*

The increased assertion of environment protection requirements means, above all, that:

- greater scope must be given to materials- and energy-sparing technologies;
- protection of the soil and the safeguarding of its quality must become a fundamental criterion for agricultural production;
- the emphasis must be placed on environmentally friendly procedures. The principle goal is the prevention of environmental pollution and the reduction of technological steps and harmful by-products damaging to the environment, but the spread of environmentally friendly packaging materials made from "natural" materials is also desirable;
- the proportion of waste-free or recycling technologies should be increased;
- technologies preserving the original property of the basic material, and foods made with these technologies must be given greater emphasis;
- the reduction and elimination of the use of chemicals is becoming an increasingly important consideration.

#### **4.5 Future perspectives**

There are a host of other problems, but the basic message is by no means one of despair. Most of the countries concerned are not poor. Most can be self-sustaining, credit-worthy and have market access. But we must recognize the complexity of the changes taking place; the social costs; the political strains; the investments needed in nation-building. The point is for us to be realistic about the

task ahead, the problems to be faced, and the time required. In particular, the following points should be emphasized:

- Dedicated people are at work trying to change the system and make the new approaches work. But there is fear of the future.
- This is not a matter of merely revealing a pool of latent entrepreneurial talents. Generations of experience have taught risk avoidance, suspicion and survival techniques.
- The scale of the problem is unprecedented.
- All previous discussions about sequencing have become academic.
- Speed is essential, but also difficult to achieve. Efforts need to be focused on:
  - \* actions which will show quick results (market development, retail privatization);
  - \* actions which will offer opportunity to more people and involve them in the development process.

No one today is in a position to project where Central-Eastern Europe and the former USSR and their agriculture will be at the end of the decade. What we can say with some certainty is that:

- They will not all have evolved in the same way, nor at the same pace.
- Not all transformations which have been started will be completed peacefully.
- Progress will not be linear. There will be setbacks, some major.
- Institutional weaknesses, social structures, attitudinal changes will slow down structural change and economic growth.

In order not to be disappointed, it is best to be realistic at the outset. The early euphoria envisioned a quick transformation, followed by an equally quick supply response. But developments thus far, and the experience of both Eastern Europe and East Germany, suggest otherwise. Gradually, the perception is growing that the process will be slower than anticipated and that, consequently, the social and political strains on these very fragile systems will be greater. However, one also has to believe that the whole task is not impossible. The region has all the natural, economic and human resources necessary to become a fully integrated and prosperous part of the developed world with developed and productive agriculture in the foreseeable future.

## Bibliography

- Braverman A. and J.L. Guasch, 1990, 'Agricultural Reform in Developing Countries: Reflections for Eastern Europe', *American Journal of Agricultural Economics*, 72(5): 1743-1751.
- Braverman A., Karen M. Brooks, and Csaba Csáki, 1993, 'The Agricultural Transition in Central and Eastern Europe and the Former U.S.S.R.', The World Bank.
- Brooks K. 1991. Decollectivization and the Agricultural Transition in Eastern and Central Europe. Policy, Research, and External Affairs Working Papers WPS 793, Washington, D.C.: The World Bank.
- Brooks K., J.L. Guasch, A. Braverman and C. Csáki. 1991. 'Agriculture and the Transition to the Market', *Journal of Economic Perspectives*, 5(4): 149-161.
- Csáki C. 1990, 'Agricultural Change in Eastern Europe at the Beginning of the 1990s', *American Journal of Agricultural Economics*, 72(5): 1733-1742.
- Csáki C. 1991, 'Agriculture and Agricultural Policy in Eastern Europe', in: K. Burger et al (eds), *Agricultural Economics and Policy: International Challenges for the Nineties*, Elsevier, Amsterdam.
- Csáki C. and Z. Lerman, 1992, 'Land Reform and the Future Role of Cooperatives in the Former Socialist Countries of Europe', in: *Agricultural Cooperatives in Transition*, Westview (forthcoming).
- USDA. 1992. 'Agricultural Policies and Performance in Central and Eastern Europe 1988-1992', Washington, D.C.
- USDA, 1992. 'Economies in Transition: Agricultural Update', USDA, September/October 1992, Washington, D.C.
- Wädekin K.E. and J.L. Brada (eds.), 1988, *Socialist Agriculture in Transition*, Westview, Boulder, Co.: Westview.
- World Bank, 1992, 'Food and Agricultural Policy Reforms in the Former USSR: An Agenda for the Transition', Studies in Economics of Transformation, Paper Number 1, The World Bank, Washington, D.C..

## *Chapter 5*

# **The PHARE Programme and Agriculture: Context and Operation**

*M. Franco<sup>1</sup>*

## **5.1 Introduction**

This paper is structured in two parts. Firstly, I will give an overview of what has been happening in Central and Eastern Europe (CEE) over the last three years and draw some conclusions from this description. Secondly, I will address what the European Community (EC) is presently doing, concentrating on the PHARE programme, but putting PHARE in the more general context of other initiatives and activities.

## **5.2 Accomplishments in Central and Eastern Europe**

In discussions about agriculture or other sectors of the economy Central and Eastern Europeans tend to be very pessimistic. One commonly hears that 'things are too slow, that this landlaw cannot go through Parliament, that this privatization operation is not advancing very quickly enough'. While this is certainly true, we very often forget that the transformation process is only three years old. Three years during which the accomplishments have been impressive, not only in CEE but also in the former Soviet Union. The scale of reforms undertaken have probably never been attempted anywhere else in the world. And the results are not that negative. Of course, if one looks at the macro-economic level, the picture is different in each country.

To begin with, you have CEE on the one hand and the former Soviet Union on the other, to which you can not apply the same conclusions. Within CEE, you also have different situations: the Visegrad countries (Poland, the Czech and Slovak Republics and Hungary) are clearly more advanced than the

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others (Romania, Bulgaria, Albania and the Baltics). Nevertheless, and particularly for CEE, the macro-economic indicators over the last year have been relatively positive. There are still decreases in GDP and high inflation rates, but both these indicators are improving. The hyper-inflation rates of a few years ago have disappeared, and in some cases one can see positive growth rates.

*Agriculture* can be taken as an example of a sector in growth. While the production in 1992 was not particularly good, as in the case of Poland, we must not forget that CEE has suffered one of the most severe droughts that has ever hit the northern part of Europe. Moreover, in spite of this natural phenomenon, agricultural production has increased. This can partly be explained by a shift in the production pattern; in many countries, small farms are replacing very big farms. This change in the structure of farms has led to a shift in production from crops typically grown on large farms, such as sugar beet or wheat, to small farm products like vegetables or small animal breeding.

*Trade* is picking up, particularly in agricultural. The tremendous fall in the flow of goods within the COMECON has been replaced by an increase in trade with the EC, which is more or less in balance. There has been a slighter increase of outputs from the EC to CEE, which can be estimated at 20% over the last three years. The CEE countries have increased their exports to the EC by 15-17%. I will come back to this in the light of the agreements between the EC and these countries.

Still, the region faces great difficulties. The *unemployment* problem has yet to be solved. In this respect, agriculture can play a determinant role by limiting the damage and thus helping to maintain unemployment at a decent level. Lack of capital is another problem. This is probably less severe in agriculture than in other sectors such as energy, industrial investment, and infrastructure, where the needs are great and no solutions have been found.

While several problems remain, this negative trend will probably improve and if the right conditions are met, a certain increase in productivity and a stabilization of the situation can be expected. This macro-economic phenomenon is in harmony with the changes that have been accomplished in the legal and privatization areas. All these countries have established and implemented *legal frameworks*, though some have not completed them yet.

*Privatization* efforts vary according to the type of enterprise. Fast privatizations have occurred for small businesses such as shops, cafés, restaurants, small ateliers, and in the service sector. These have been auctioned and new business initiatives have been created. Warsaw is a good example of a city where in just three years time, small businesses have appeared everywhere. - The transformation of co-operative farms into individual farms, which concerns 70 to 80 % of the land ownership, has occurred in almost all countries. In contrast, the privatization of large companies is proceeding very slowly in some countries, and has not even begun in others. This is a much more difficult process as it requires state intervention. Something has to be done with those large companies that cannot be left vulnerable to market forces. To begin with, they have to be reorganized in some way. The same is true for the state farms. In most of the countries, state farms have not been privatized and are posing difficulties, especially with problems in the industrial activities connected to agriculture, both upstream and downstream. Those that have not been privatized do not create the adequate stimuli or signals to agriculture, be it in terms of the supply of inputs or in the purchase and the transformation of outputs. At this point I would like to stress that agriculture is by and large privatized (70 or 80%), but that it is now waiting for the right signals from the agro-industrial sector.

Another problem the CEE is facing is the *lack of financial mechanisms*. No financing or banking sector exists that can transfer funds from savers to investors, or that can assist a farmer with the purchasing of equipment on a credit basis. Some banks are now appearing, whereas in the past there were only money windows where an individual would get instructions from the Ministry of Planning to supply money to another person without knowing if this operation was economical or whether risks were involved. This system has now disappeared, but the banking system on which people should rely still does not function well. Of course, this development has been stymied by a complicating factor: high interest rates make it very unattractive for people to borrow money.

Privatization and macro-economic stabilization are two aspects that depend on each other: you cannot have macro-economic stabilization without an economy that functions on a private basis. If the old system continues to exist, the process of stabilization will be quickly undercut, because there will

again be a credit boom (for instance due to intercompany credit systems). On the other hand, privatization is almost impossible without stability, because no one will invest in a company if the political and macro-economic situation is unstable.

To conclude, I would like to say that one can be optimistic about what has been accomplished and about the prospects for the future. Credit for these accomplishments, I have to stress, is solely due to the governments of the countries concerned. The international community (financial institutions, bilateral donors and the European Community) has contributed to the process, but it is thanks to the efforts of the people of these countries that it has been made possible.

### **5.3 The relationship between the European Community and Central Eastern Europe**

To what extent has the European Community provided the necessary support for this transformation process to happen? I will describe first the political and the commercial efforts, then the financial and technical areas of co-operation. These are the four forms of assistance that have to be offered to these countries to make it possible for their, current efforts to really bear fruit.

#### *Political and commercial co-operation*

With respect to political and commercial co-operation, there has been some quick action from the European Community. In 1989 and early 1990 there were only 'general trade and economic co-operation agreements', between these countries and the EC. These agreements were quickly outdated and replaced by the Europe Agreements that have been made with Poland, Hungary, the Czech and Slovak Republics, Bulgaria and Romania. These agreements are a first step in the long process of integrating these economies into the EC. In the agreements these countries made a unilateral declaration of intention to become members of the EC. At the Edinburgh Summit of December 1992 no timeable was agreed upon, for obvious political reasons, but it was stated that the goal of eventual membership in the European Union for countries of CEE

is a common objective of those countries and of the governments of the Community.

With respect to the trade issue, the goal is to create a free trade area with a reciprocal but non-symmetrical reduction down of trade barriers. Some obvious problems exist where free trade does not apply, as in agriculture, textiles and steel. These problems need to be addressed as they still limit the possibilities for countries of Central Eastern Europe to export their best products. I'm not sure how close we can come to meeting the goal of a free trade area, considering the current crisis in European agriculture, and the unfavourable general economic conditions. But I am sure that progress will be made. This problem cannot be isolated and must be seen in the context of the reform of the Common Agricultural Policy, of European agriculture's place within the European economy and, of course, also in the context of the GATT negotiations. Nevertheless, the results are not so bad. As mentioned above, there has been a tremendous growth in trade. Between 1989 and 1992 exports from CEE countries to the EC rose 16% and exports from the Community to those countries rose about 20%. The Community has in fact taken over the place of the former COMECON countries, and the trade with the rest of the world, in particular the United States, has remained more or less at the same level. Whether it has been due to the Europe Agreements or some other cause, trade has certainly intensified and it is clear that a positive effect is being seen.

#### *Financial and technical co-operation*

The second facet in the relationship between the Community and Central Eastern Europe is the financial and technical co-operation. In this respect the EC has to help the countries of Central Eastern Europe face three types of problems: stabilization, transformation, and development.

*Stabilization* is necessary to improve the macro-economic situation, for example, by keeping the monetary and credit system under control, keeping the budget deficit under control, stabilizing the currency. This is typically an IMF intervention field with some World Bank support. However, some bilateral donors have been giving or lending money. The Community supplied approximately 2.5 billion ECU of stabilization loans to countries of Central Eastern Europe, normally attached to IMF stand-by type of agreements. This

money was added to what the IMF has made available to these countries with the typical policy conditions and conditionality. Stabilization is not really the area where PHARE and TACIS (a program for the former Soviet Union) are active. We have contributed a little through balance of payments support programmes for specific sectors, but it was certainly not the main activity of PHARE.

*Transformation* aims at transforming the mechanisms of a planned economy into those of a market economy, i.e., the way the economy is organized, the legislation that has been written, the institutions that exist. Transformation aims at transforming the institutions into something that can help private initiative exist and develop. This has been the area of activity, the explicitly stated aim of PHARE and TACIS. Over three years PHARE has committed 2.3 billion ECU in this area, TACIS a little less, as it is a more recent programme (800 million ECU). The total figures for this year, which have not yet been committed, but are already earmarked in the budget, come to 3.3 billion for PHARE and 1.3 billion for TACIS. I will come back to the structure of the programmes as related to agriculture at a later stage.

*Development*, the third item that I mentioned, refers to new investments, to renovate the industrial capacities of these countries, to develop or make a more productive agriculture, to modernize road systems, etc. This is not really the main area of activity for PHARE and TACIS. This is the responsibility of international banks such as the European Investment Bank (EIB), the World Bank or the European Bank for Reconstruction and Development. They have to provide this type of financing, because this is a commercial undertaking. This is also an area where commercial banks or private investors should be active. But they have not been very eager to get involved, because of the economic, the macro-economic and political instability that still exists. Nevertheless, investment in all the countries of Central Eastern Europe over the last three years is estimated to be 10 to 12 billion dollars, with Hungary as the leading recipient, with 30 - 40% of the total. In this activity of development, the European institutions have also been active. The European Investment Bank, which basically has a Community mandate, has received the authorization to finance or co-finance some of these investments in CEE under the Community budget guarantee of up to 1.7 billion Ecu. Half of this money has now been spent.

## **5.4 PHARE and the transformation of agriculture**

### *General*

For PHARE the percentage of the total amount spent on agriculture in CEE is around 12% or 300 million ECU. For TACIS this is also roughly between 10 and 15% or approximately 120 million ECU over the last two years.

PHARE, and to a lesser extent TACIS, are decentralized programmes. In other words, we do not sit in Brussels and decide exactly what will happen with the money. Rather we define a general framework in which the money should be spent, and make a distribution of funds between the various countries. Within this general outline, defined by the Council of Ministers, and taking into account the amount of money which is put at the disposal of the country, an indicative programme is formulated on the basis of the proposals of the recipient country. Each country defines its own priorities. It will request more for privatization and less for agriculture, or more for infrastructure and less for telecommunications. An indicative programme is prepared. In each of the sectors, and given the amount that has been allocated to that sector, there are discussions with the technical ministry. A programme is then defined on how the process of transformation can be supported with PHARE or TACIS financing. In a country like Poland, we work with the Ministry of Agriculture, with a particular fund that comes out of the national budget of PHARE, and with an orientation of how to help the process of transformation of the Polish agriculture. This is the main task, in fact, of the Polish government at the moment, to which we can contribute but not take the lead.

On what items has this money been spent? The following three examples give a broad overview of the types of programmes that are funded. Supply programmes refer to the stabilization aspect, and are a kind of hidden balance of payments support. They include the supply of fertilizers, plant protection chemicals or other types of inputs. Technical assistance focuses on the transformation process. Financial support focuses on the development aspect mentioned before.

### *Supply programmes*

Supply programmes were started in the early transition years, when there were still very severe stabilization problems. At that time it was often difficult to

find the money to import essential inputs and get them to emerging private farms. We have supported programmes in Poland, Bulgaria and Romania, and are still doing so in Albania. However, we do not particularly like them, because we do not think they are the best use of the funds. We can accept that it is an important type of support at a certain stage of the transformation process, but it is something that should be stopped as quickly as possible, as it consolidates state involvement in the distribution of inputs. An emerging private sector should take over, import the inputs and distribute them. Although it is not a preferred option, it is the only option for which the money is very efficiently spent. It is much more difficult to disburse funds for technical assistance programmes, because they have a much longer lifetime and it takes more time to get them into operation. These supply programmes have played an important role and are still playing a role in Albania, but other options should be assessed.

#### *Technical assistance*

We have looked very intensively from the beginning at technical assistance. Technical assistance is primarily policy formulation. We have together with the World Bank, and sometimes with other bilateral or multilateral donors, helped the countries define an agricultural strategy. This was done in Poland in the first year, we have a team at this moment in Romania, and we have begun the process in Bulgaria, where the programme is now the government's responsibility. In Albania, the programme is also in the planning stage. I will be going to Albania, with the World Bank, the Americans, the Italians and all other donors involved in this country, in order to meet with the government and run through the various items of agricultural policy, trying to help them to make a more precise commitment for the implementation of the identified measures.

A second item, essential for privatization, is private land. Land reform, or the implementation of land legislation, is one of the prime objectives of our programmes. It is important because without land reform, there is no land market, and without a land market there is no price for land and one cannot start talking about cost-efficient agriculture. In many of the countries land registration systems disappeared in the early fifties and it was necessary to start them in fact from scratch. We have been supplying technical assistance,

computer equipment, copying equipment etc. in most of the countries in order to make the land reform happen. There again, it is not up to us to write the law, it is up to the government to decide what it wants to do and up to the Parliament to approve the law. But we can help with our experience and with some equipment.

The privatization of upstream and downstream activities has been a sector in which we have been very heavily involved by the means of sectoral studies and audits. As I mentioned before, this is an area where things are not moving very quickly; the governments and the ministries of agriculture are slow to act, for various reasons. In many countries it seems that they want to maintain some kind of control over these institutions.

Rural financial networks, either co-operative banking or other types of institutions, constitute another area where the Commission has been very involved, particularly in Poland. We have been working with European co-operative banks on these issues, we have been paying them to work with their colleagues in Central Eastern Europe, in order to set up a viable system of finance, because as I mentioned before, without finance there will never be rural development. Extension work, in the sense of improving the techniques of agriculture and making agriculture more productive, is another priority area. It cannot be accomplished until the other elements of privatization of the economy have been fulfilled. The farmer will react to the signals when he gets them, and then we can give him the additional technical assistance with which he can start working. Moreover, it is not just a government business, many more actors are involved in this extension service. This is the structure of an average technical assistance programme as we have it in most countries, with various degrees of importance attached to the various elements.

### *Finance*

The last item that PHARE covers is finance. The first activity supported in this area is rural credit guarantee funds. Such a fund is in place in Hungary and is functioning rather well. We are trying to start one in Romania, drawing on the lessons from the Hungarian experience. However, its success is in no way sure, because Romania's financial system is much less developed than Hungary's. This financial system is very important, because for enterprises that do not have collateral, or for banks that are not ready or used to working



with the rural sector, the lack of collateral is a very important impediment in the supply of credits through a loan guarantee fund. As soon as the fund starts functioning, it increases the speed by which agricultural credit is supplied. But there are other factors needed to make the system really effective.

The last example of PHARE's activities that I like to present here is credit lines. Credit lines for investment in agriculture are an absolute disaster. We are not alone in dealing with this disaster, the World Bank and other institutions face the same problem: money is not flowing. These are the most frustrating programmes, because credit lines do not function. The interest rates are too high, the financial retailing mechanism is not there, and investment is not really picking up. It is very difficult to have functioning credit lines; therefore, we have to take a very careful look at this area to see how we can improve performance. Suggestions have been made for risk capital funds, which would make the money available, not as a credit but as a kind of risk capital, an investment next to the private sector's investment. They are not easy to manage, but they would certainly lower the price of capital that an investor has to pay, and therefore facilitate the investment process. But a lot of work still needs to be done in the rural sector to make this happen.

## Chapter 6

# Agriculture in the Market Economy

M. Tracy<sup>1</sup>

### 6.1 Introduction

This will not be a formal paper. I intend rather to pick up some of the points that have been made by previous speakers of this seminar, and which seem to me important, and to add a few points of my own.

We have had excellent papers dealing with issues of capital and finance for agriculture in both Eastern and Western Europe. I shall concentrate on Eastern Europe, though I shall also have something to say about the role of the West. For convenience, I shall use the abbreviation CEECs for Central and Eastern European countries.

### 6.2 Pre-conditions for the establishment of a market economy

On the first morning, we had an excellent contribution by Professor Ellman, who stressed the conditions necessary for transition from a "semi-monetised" to a "monetized" economy. He pointed out the various ways in which the CEECs formerly did *not* have a monetized economy: transactions were often based rather on "reciprocity of favours". So money did not determine the allocation of resources, and the price system was ineffective.

Professor Ellman also made clear what has to happen if a monetized economy is to be created. Enterprises must *pay* for goods received; they must *react* to prices; seize profit opportunities; and if they are unprofitable, ultimately it should be possible for them to be declared bankrupt, rather than to be propped up artificially.

He also emphasized the need for clear ownership rights, clear rules for decision-making, and stable money. I should like to enlarge on this last point. Among the CEECs, some have achieved a reasonable degree of monetary stability. Czechoslovakia, during 1992, had low inflation, and maintained the

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value of the crown against hard currencies. One hopes that this will continue, though — since the division of the country on 1st January this year — the Slovak crown has already depreciated by some 15% against the Czech crown. Hungary too has achieved reasonable stability. Poland appears to have got inflation more or less under control.

On the other hand, Russia — and the other Republics of the former USSR — have lost control of their money supply: prices are rocketing, and the external value of the rouble is falling daily. It must be obvious that in such circumstances the development of an effective credit system is virtually impossible. Maybe the *real* interest rate is low, or even negative, when set against inflation. Nevertheless, if the nominal interest rate is as high as 118% — as it was in Russia in November 1992, according to Ellman's table — there is not much point in trying to explain to a potential borrower that this is really a negative rate because inflation is even higher: it is a brave man who will borrow for investment in such circumstances, for he would be betting on a continuation of hyperinflation and taking an enormous risk.

Such dilemmas illustrate the problem of *sequencing* in the transition to a market economy. So much has to be done, in a situation which is economically and politically confused and conflictual: it is not easy to see where to begin. With hindsight, it is obvious that we got it wrong in Russia — and I say "we" deliberately, for the West bears its share of responsibility. I was myself involved in missions in late 1991 which urged on the authorities (of what was then still the USSR) the importance of price liberalization. This seemed to have become inevitable: it was so widely anticipated that supplies of food and other goods were being held back in the expectation of price increases. But when prices *were* liberalized, in January 1992, supplies still did not increase significantly, and prices shot upwards.

This demonstrates the necessity of creating *structures* of production and marketing appropriate to a market economy. In the paper presented this morning by our Hungarian colleagues Halmai and Balogh, from Gödöllő, reference was made to the "risks of market-oriented transformation without market institutions". That seems to me a very apt phrase, and now I should like to say something on the topic of "institutions".

### 6.3 Institutions relevant to finance for agriculture

First, a word of warning. We must be very careful about giving advice based on Western experience to our colleagues in the CEECs. Institutions that have evolved in a given social and economic context cannot necessarily be transposed into a different context. At the most, we can say: here we have an institution which has worked quite well for us - maybe you will find it useful too. But it is for those responsible in the CEECs themselves to decide what can work in their circumstances.

One example concerns credit co-operatives. Dr. Wijffels of the Rabobank, in his excellent paper at the beginning of this seminar, referred to experience with rural credit co-operatives of the "Raiffeisen" type. (Rabobank, incidentally, stands for Raiffeisen-Boerenbank, just as in Belgium and Luxembourg CERA stands for Crédit Agricole Raiffeisen.) On the face of it, a system of credit co-operatives which has played a vital role in the development of European agriculture since the mid-nineteenth century should be useful in promoting the necessary restructuring of agriculture in the CEECs today: certainly, this is one of the institutions which should be looked at carefully. But it was pointed out to me by one of our CEEC colleagues at this seminar that in their circumstances, people in rural areas have such distrust of farming as an income source that they will be reluctant to put any savings they may have into a rural credit co-operative: they are more likely to look for opportunities elsewhere.

I therefore appreciated very much the contribution by our colleagues from the Netherlands Ministry of Agriculture, Dijsselbloem and De Haan, who explained the usefulness in the Netherlands of the "Guarantee Fund", but then made very clear the conditions under which such an institution can operate successfully. A loan guarantee fund can usefully *support* existing credit institutions; but until such institutions are operating effectively, there is not much it can do.

Another topic relates to the ownership of farmland. For family farms to obtain credit, *collateral* is obviously essential, and hence ownership rights must be clearly established - which is by no means yet the case in several of the CEECs. Establishing ownership rights, however, does not necessarily mean "owner-occupancy". The renting of land may have a role to play, and I

am glad that Van den Noort contributed a paper on tenancy. We have not discussed this subject, which is perhaps a pity: in some circumstances, tenancy can be a particularly effective way of dealing with the problem of farm finance.

Here, however, the difficulty of transposing institutions is particularly evident. Tenancy has evolved in each country in an organic way, subject to socio-economic circumstances. We have only to look at two neighbouring countries, the United Kingdom and the Irish Republic. In the UK, the landlord-tenant system worked well for several centuries, with clearly-established practices as regards the responsibilities for "landlord's capital" and "tenant's capital": this played a major role in the progressive modernization of British agriculture. In Ireland, on the other hand, tenancy was associated with irresponsible exploitation of the peasants by absentee English landlords: to this day, "tenancy" is practically a taboo subject.

Objectively, tenancy has advantages, and though it is unlikely to become widespread in the CEECs, it may be useful for them to enact legislation providing a framework within which individual contracts can be made. The Western experience demonstrates the difficulty in achieving a balance between the interests of landowner and tenant. The country in which I live, Belgium, has a higher share of land under tenancy than any other EC country (68% of the farmland), so it is of interest to look at the situation there. Conflicts constantly arose in landowner-tenant relations, and the legislation was substantially revised in 1988 in an attempt to establish a better balance. (I have included an English summary of this legislation as an Annex to this paper.) This revised Belgian law is probably the most comprehensive and best-balanced legislation available (at least on paper — its implementation remains to be seen). It covers all the essential aspects:

- the duration of leases - a major innovation in 1988 was the introduction of "career leases" (*bails de carrière*);
- the conditions under which the lease can be terminated, especially by the landowner;
- the levels of rent;
- the rights of the tenant if the land is sold;
- compensation for improvements made by the tenant.

However, we must guard against the assumption that the restructuring of agriculture in the CEECs should lead to a "family-farming" pattern such as we know it in the West. Such an assumption did appear in many reactions, in both the West and East, after the collapse of the Communist regimes, and may initially have influenced some of our aid programmes. I hope we have now got beyond that. The paper by our Hungarian colleagues from Debrecen (Karpati, Nabradi and Ujhelyi) is particularly useful because it sets out very clearly the different types of new-style *voluntary* co-operatives which can play a role, including "land-rent co-operatives", "holding co-operatives" and "service co-operatives". Maybe we should add "credit co-operatives": referring back to my previous point, the best chance of establishing rural credit co-operatives may be to build on existing institutions rather than try to create something totally new.

There is of course a very considerable psychological obstacle. Everything connected with the former *forced* collectivisation is now so unpopular that even the word "co-operation" is treated with suspicion. We have to admit also that in the West, although service co-operatives and marketing co-operatives have been very successful in several countries (foremost among them, the Netherlands and Denmark), there are relatively few cases of successful co-operation in *production*.

The nearest we come to producer co-operatives is with the GAEC in France (groupements agricoles d'exploitation en commun). Maybe these have not had enough attention: I was surprised recently to discover that these occupy 11% of the agricultural area, and probably account for a higher percentage of dairy and beef production, since most of them are livestock farms. True, they are mostly small — in fact, in most cases, just two or three members of the same family, although the legal maximum is ten. The point is that here we have a legal formula which can, in appropriate circumstances, provide a basis for contracts between interested individuals. (Maybe also the expression "group farming" provides an acceptable alternative to "co-operation"...).

In France we also find the GFA (groupement foncier agricole), whereby non-farming partners can provide land and share in the profits; and the EARL (entreprise agricole à responsabilité limitée), whereby non-farming partners provide not land but working capital. Again, these are potentially use-

ful legal formulas: particularly, perhaps, in the circumstances in several CEECs where former landowners are recovering possession but do not want to farm themselves.

## 6.4 Incentives and subsidies

In this seminar, we have from time to time touched upon the controversial issues relating to price supports and other forms of subsidy for agriculture. Clearly, if necessary investments are to be made in agriculture in the CEECs, some degree of security is needed. At present, as we have been reminded by several speakers, agriculture is suffering from a severe cost-price squeeze, with input prices rising while the drop in consumer purchasing-power has meant a substantial fall in demand for foodstuffs. The temptation exists to introduce price-support measures; some CEECs moreover want to establish or re-establish self-sufficiency in foodstuffs.

We cannot argue against price *stabilization*: we all know about the inherent instability of agricultural markets. But our Western experience does underline the need for caution: the tendency is to set a price floor *above* the point of equilibrium. Although there are currently food shortages in the CEECs, these can be quickly overcome as agriculture is restructured and technological progress re-asserts itself: and before long, they too could find themselves confronted by surpluses.

There is something to be said, in these circumstances, for *input* subsidies. In post-war recovery in Western Europe, subsidies for fertilizers, liming, land improvement and so on played an important role. Input subsidies are somewhat easier than price subsidies to remove when the need for them is gone. We have also touched in our discussions on *interest-rate subsidies*. Csaba Csáki's speech reflected the World Bank's official disapproval of such measures, but perhaps we have to be more flexible. Dr Wijffels was prepared to admit the need for *temporary* interest-rate subsidies. In principle, such subsidies are an element of distortion: but a case can be made for them in circumstances where the use of investment credit needs to be encouraged. All Western European countries subsidise farm investments through interest-rate

subsidies or through capital grants, and investment aids have been an important element in structural policy under the CAP.

## **6.5 The role of the West**

The old issue of "trade versus aid" has surfaced in our discussions. It is noticeable that very little reference has been made to financial aid from the West to the CEECs. Maybe that is just because the issue was not explicitly on our agenda, or maybe there is an implicit recognition that Western money, on its own, is not going to solve the problems. There is, moreover, a risk that Western aid is linked to conditions which prove unrealistic: I have already touched upon the issue of price liberalization, and conditions as to limits on budget deficits, although correct in principle, may take insufficient account of prevailing economic and political circumstances.

Technical assistance does have its role to play, and we shall be hearing from Marc Franco, from the EC Commission, about the activities of PHARE. There has been criticism of the extent of contracts to Western "experts" under such programmes. I have personal knowledge of some contracts given to Western agencies which could perfectly well have been carried out by people from the CEECs themselves, who would have gained useful experience as well as much-needed hard currency in the process.

Opportunities for increased trade, quite obviously, are badly needed by the CEECs. The outcome of the multilateral Uruguay Round remains uncertain. The bilateral "Europe Agreements" which came into force (as "interim" agreements) in 1992 between the EC and Czechoslovakia, Hungary and Poland, and which will soon apply also to Bulgaria and Romania, do not give these countries free access to the EC market for their agricultural produce. Nevertheless, the concessions made to them, in the form of increasing quotas at reduced rates of levy and/or tariff, are perhaps more significant than has been generally recognized. Curiously, the Commission has never made available an analysis of these agreements: they are available in the Official Journal, but one has to be a customs expert to understand them (I have done my best to explain the main features, with the help of the responsible Commission officials, in my recently-published book *Food and Agriculture in a*



*Market Economy*). I hope that we shall soon see some thorough evaluations from experts in the CEECs.

## 6.6 Role of the academic community

My final points relate to the role of the academic community. This has been a very good seminar, with excellent contributions from both East and West. Still, the number of participants from the CEECs has been limited: we have had strong Hungarian participation, largely I believe thanks to a TEMPUS programme, and one participant each from the Czech Republic and from Poland: but that is all, and I understand that colleagues who were expected from Bulgaria and Latvia did not turn up. This underlines a problem which in my view must be squarely faced by conference organizers. We are, to be frank, dealing with a situation where academic salaries in the CEECs, at current exchange rates, may be just a tenth of what we are used to in the West (even less in the case of Russia and the rest of the rouble zone), and where hard currency for travel is in very short supply. In every institute in the CEECs, there are many people who desperately want to get to conferences in the West, but funds are very limited and have to be strictly rationed.

So we are in danger of having excellent conferences in which participants, mostly from the West, discuss intelligently the problems of Central and Eastern Europe, but which make little impact on the countries we are presumably trying to help.

If we want to have more participants from the East, the financial problem has to be overcome: we have to offer the greater part of travel costs as well as accommodation, and this should from the start be included in the pricing of the conference. Maybe conference fees should include a levy on Western participants, to be used for this purpose. Certainly, sponsors should be asked to take this problem into account. Official programmes such as PHARE and TEMPUS must of course be based on careful forward planning (PHARE is moving to multi-annual programming): still, it would be very helpful indeed if such programmes could be flexible enough to respond to this sort of need, at relatively short notice. I am sure this would be very cost-effective.

## *Annex*

### **Revised Belgian Tenancy Law**

#### *Duration of the lease*

Leases cannot be for less than nine years.

#### *Termination by the landowner*

The landowner can terminate the lease at any time in order to use the land according to its end-purpose (*destination finale*) - e.g. in cases where it was designated as building-land already when the lease began. A minimum of three months notice must be given.

At the end of each period, the landowner can terminate the lease if he can show a serious reason (*motif sérieux*) - in particular, if he intends to exploit the land himself, or cede it to a member of his family. Minimum notice is two years, maximum four years.

During each period, but not during the first or second, the landowner can terminate the lease for the above reason. Minimum notice three years, maximum four. Landowner and tenant can also establish a lease for at least 27 years. At the end of this period, the landowner can terminate the lease, again for the same reason.

Landowner and tenant can also establish a "career" lease (*bail de carrière*). This must be for at least 27 years, and runs until the tenant is 65 years old. At the end of the period in question, the land automatically reverts to the landowner.

#### *Termination by the tenant*

Whatever the duration of the lease, the tenant can always terminate it with a minimum notice of one year.

#### *Rents and other charges*

At the end of each three-year period, the landowner and tenant can ask the *juge de paix* to revise the rent, on the basis of profits during the previous three years.

"Profitability" refers to the return which a normal holding could be expected to give to the tenant, taking account of the quality of the land, the price of the products and the costs of production.

The *juge de paix* takes his decision after receiving an opinion from a technical committee composed of three members nominated by the King on a proposal from the Ministry of Agriculture. A revision is granted only if a minimum 10% adjustment, upwards or downwards, is called for.

#### *Use of the rented property*

No restrictions can be placed on the tenant's use of the land nor on his sale of the produce.

The lease may however require him to restitute the property in equivalent condition to that in which he received it (as regards fertility, cleanliness, etc.).

At the end of the tenancy, a tenant who has borne the cost of building or other work is entitled to compensation on the basis of the value added to the property. If the work was carried out with the consent of the owner, this compensation cannot be less than the costs, subject to depreciation fixed at 4% per annum.

#### *Sub-letting*

The tenant cannot sub-let without consent of the landowner.

#### *Death of the tenant*

If the tenant dies during the lease, the lease may pass to his heirs or successors (*ayants-droit*), unless otherwise stipulated in the lease and provided that the tenant leaves no widow or children.

The heirs or successors can terminate the lease, subject to three months' notice; or can decide which of them should continue the lease.

#### *Indemnities due to a leaving tenant*

Besides the indemnity due in respect of buildings, etc., the outgoing tenant must receive from the landowner an indemnity in respect of stocks of straw and fertiliser, and of fertiliser left in the soil; and in respect of improvements to the land as regards its cleanliness.

### *Sale of the property and tenants' rights*

The landowner can sell the land only after giving the tenant the opportunity to buy (*droit de préemption*). If the tenant does not exercise this right, the property cannot be sold to any other party at a lower price.

In the case of sale by public auction, the tenant must be notified of the sale: he has the right to buy at the final price attained.

### *Limits on rents*

Rent Committees (*Commissions des fermages*) are established by royal decree, consisting of three tenants, three landowners and one Ministry of Agriculture official, the latter presiding.

Maximum authorised rents are based on cadastral value adjusted by a co-efficient. Co-efficients are fixed for each region by the Rent Committees, and are adjusted every three years, by reference to the average profitability of farms in the region in question.

The rent established by this procedure may be increased by 18% in the case of 18-year leases; or in the case of leases for 25 years or more, by 50% for the land and 25% for the buildings [other cases are also provided for].

### *Official Commentary*

The new [1988] law is a synthesis of the revisions to the basic law of 1969. Its importance is apparent when one considers that nearly two-thirds of the land in Belgium is under tenancy. Pressure on the land, moreover, is considerable. Further, if a modern tenant wants to maintain a viable holding, he must invest in new technology and expensive equipment: this takes up much capital, which is then not available to buy land.

The new law establishes a balance between landowner and tenant: its main features are, on the one hand, greater security for the tenant, and on the other, increased returns for owners.

Thus: owners consider that land is a form of capital which should give them an acceptable return. To this end, the law enables rents to be adjusted every three years. It also provides for higher rents in the case of leases for 18 years or more.

Long-term leases - 27 years at least - offer a guarantee of intentions and avoid abuses. The owner obtains greater possibilities for recovering his land at the end of such leases; in the case of a bail de carrière, he obtains full re-possession.

Another major feature of the new law is to reinforce the tenant's "right of pre-emption" in case of sale of the property, without detriment to the value of the property.

Loi sur le bail à ferme - Ministère de l'Agriculture, Service Information, Manhattan Center, Office Tower, 13e étage, 1210 Bruxelles. Summarised and translated by Michael Tracy.

## *Annex I*

### **Programme of the 32d EAAE seminar 'Capital and Finance in Western and Eastern European Agriculture'**

Opening of the seminar

H.C. van der Plas (Rector Magnificus, Wageningen)

#### ***PART 1: GENERAL ASPECTS OF CAPITAL AND FINANCE***

Chairman: J. de Hoogh (Wageningen)

H.H.F. Wijffels (Rabobank)

Problems of Capital and Finance in European Agriculture: An Outlook

M.J. Ellman (University of Amsterdam)

Functions of Capital and Finance in Mixed Market Economies:

Problems of the Transformation

#### ***PART 2: CAPITAL NEEDS AND INVESTMENT PRIORITIES***

Chairman: A. Burrell (Wageningen)

C. Csáki (World Bank)

Investment Priorities in Central and Eastern European Agriculture

#### **Paper session 1: Transformation of Agriculture**

Chairman: A. Burrell

- M. Odening and R. Richter (Göttingen)  
Financial Problems of East German farms
- K. Hagedorn and K. Klare (Braunschweig-Völkenrode)  
Policies for Financing Privatisation of Agriculture in Eastern Germany
- L. Kárpáti, A. Nábrádi and M. Ujhelyi (Debrecen)  
Transformation of Hungarian Agriculture and its Financial Aspects

#### **Paper session 2: Theory of Finance**

Chairman: A. Zwanenberg (Wageningen)

- R.H. Fawcett, J. Anderson and P.K. Thornton (Edinburgh)  
Limits to Borrowing
- S. Rasmussen (Frederiksberg)  
Financial Leverage and Risk in Farm Firms
- M. Mulder and N. de Groot (The Hague)  
Agency Theory and Finance in Horticulture

**Paper session 3: Investments in Agriculture: Theory and Empirical Evidence**

Chairman: A.J. Oskam (Wageningen)

- G. Bublot and P. Dackweiler (Louvain-la-Neuve)  
Investments in the Belgian Agriculture 1970-1990
- J.P. Elhorst (Groningen)  
The Estimation of Investment Equations at the Farm Level
- E. Kuiper and G. Thijssen (Rotterdam/Wageningen)  
Determinants of Private Investments in Dutch Agriculture

**PART 3: METHODS OF FINANCING IN AGRICULTURE**

Chairman: J.A. Renkema (Wageningen)

K.J. Poppe (LEI-DLO, The Hague)

Financing in Western European Agriculture: A Comparative Perspective

**Paper session 4: Policy Instruments**

Chairman: J.A. Renkema

- J. Cavailhes and A. Le Hy (Dijon/Paris)  
The Economic and Financial Position of Young Farmers and Installation Aid Policy in Europe
- J.R.V.A. Dijsselbloem and F.H. de Haan (The Hague)  
The Dutch Agricultural Guarantee Fund: Past and Future Developments
- P. Halmai and A. Balogh (Gödöllő)  
Institutional Conditions of the Financing the Transformation of the Agriculture in the Eastern-Central-European Reform Countries - The Hungarian Case

**Paper session 5: The Financing of Dairy Cooperatives in Western Europe**

Chairman:

- A. Zwanenberg (Wageningen)  
Various Aspects of Financing Dairy Cooperatives
- D. Dauchy  
Les Outils Financiers et Institutionnels des Coopératives Laitières: Evolution et Comparaison Européenne
- M. Keane and C. van der Hamsvoort (Cork/The Hague)  
International Milk Payments Comparisons

**Paper session 6: Applied Financing**

Chairman: W.J.M. Heijman (Wageningen)

- S. Reinhard (The Hague)  
Use of Machinery in European Agriculture
- U. Rades and H.H. Sundermeier (Kiel)

Analysis of Capital Structure, Profitability and Rentability of Farms in Schleswig-Holstein

- G. Haxsen (Braunschweig)  
Financing Manure Processing in Germany

***PART 4: INTERNATIONAL INSTITUTIONS AND COOPERATION***

Chairman: P.C. van den Noort (Wageningen)

M. Tracy (Brussels)  
Agriculture in the Market Economy

J. Sonneveld (Member European Parliament)  
How to Support Central and Eastern European Agriculture: Market Access or Capital Support

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Concluding comments



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