

K.J. Poppe  
G. Beers  
H.C. Pruis

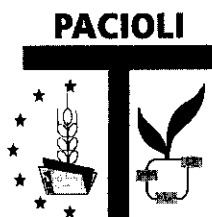
Mededeling 537

## PACIOLI 3

RICA: Reform Issues Change the Agenda

Reflection paper

Juli 1996



SIGN: L27-537  
EX. NO: B  
MLV:

Agricultural Economics Research Institute (LEI-DLO)

## **ABSTRACT**

### **PACIOLI 3; RICA: REFORM ISSUES CHANGE THE AGENDA; REFLECTION PAPER**

Poppe, K.J., G. Beers and H.C. Pruis

The Hague, Agricultural Economics Research Institute (LEI-DLO)

Mededeling 537

ISBN 90-5242-362-8

38 p., tab., fig., annexes

This is the third of four reflection papers to provide suggestions for the decision making on the further development of the RICA. The reflection papers are submitted to the management committee of the RICA by the concerted action PACIOLI. The concerted action aims to improve the quality of agricultural accountancy and Farm Accountancy Data Networks (FADNs).

The focus of this reflection paper is on proposals for innovation. The content of this reflection paper is based on the papers presented and the discussions held during the third PACIOLI workshop. A lot of ideas for innovating the FADNs were presented during this workshop. These ideas are worked out into project indications. This reflection paper gives a suggestion on how to manage these proposed innovations in the RICA environment.

**Accountancy/Innovation/FADN/Monitoring system/CAP-reform**

---

The contents of this report may be quoted or reproduced without further permission. Due acknowledgement is requested.

# CONTENTS

	Page
<b>SUMMARY</b>	<b>7</b>
<b>1. INTRODUCTION OF PACIOLI</b>	<b>9</b>
<b>2. STRATEGIC MANAGEMENT</b>	<b>10</b>
2.1 Problematic governance	10
2.2 Supporting the process	11
2.3 The effects on RICA of the Fischler paper	12
<b>3. PROPOSALS FOR REFORM</b>	<b>18</b>
<b>4. RICAs REFORM - TOWARDS A PROGRAMME</b>	<b>35</b>
4.1 The need for a Programme	35
4.2 Towards a FADN network	35
<b>REFERENCES</b>	<b>37</b>

***'Nothing is permanent but change'***

***Heraclitus (500 B.C.)***

# SUMMARY

This is the third of four reflection papers to provide suggestions for the decision making on the further development of the RICA Farm Accountancy Data Network (FADN). The reflection papers are submitted to the management committee of the RICA by the concerted action PACIOLI. The concerted action aims to improve the quality of agricultural accountancy and FADNs. The focus of this paper is on proposals for innovation. It contains specific project indications to determine action for this improvement.

The management of Farm Accountancy Data Networks (FADNs) has never been easy, examples of this are available in many countries. From the point of view of the FADNs, these examples can be interpreted as unsuccessful strategic management and insufficient involvement of important stakeholders, e.g. the financiers. Interviews held by PACIOLI participants with their stakeholders revealed interesting observations about this. Another important remark is that the Commission nor other Member States play any significant role in the strategic management of the national FADN at Member State level.

Policy makers in a ministry usually hamper in articulating their need for data in the future, which means that strategic planning for a FADN is not easy. The idea is proposed that policy makers should provide, e.g. once a year, the policy documents and topics they expect to be on the agenda between today and for instance five years from now. It is clear that the content of such 'policy products' can not be forecasted very precisely. However, it is often not impossible to predict (at least some of) the topics. Knowledge about the 'policy products' in which FADN data will be used, helps significantly in development of the data set and consequently the FADN as an instrument.

The third PACIOLI workshop also tried to identify some consequences of the three scenario's presented in the so-called 'Fischler paper' for RICA. The 'status quo-scenario' would have several consequences for the RICA, whereas the position of the RICA is not easy to predict under the 'radical reform-scenario'. The 'developing the 1992 approach-scenario' is thought to be the most realistic scenario. It has three important aspects, of which the consequences have been discussed in more detail: towards higher competitiveness, towards an integrated rural policy and simplification.

In this paper sixteen 'project indications' are presented. They are the outcome of papers presented and discussions held during the third PACIOLI workshop. Presented in a common format, they highlight the objectives and the results of the project indications. Looking at the individual proposals it must be realized that the projects are interrelated very much. The projects should therefore be clustered in one programme.

At first glance it might be an option that the programme management will be performed by the RICA unit, supported by the RICA committee. As most

of the proposals show, there is however a tendency in FADN management towards a more flexible, network based way of working. A more informal network with a mixture of people from various organisations close to the 'working floor' with high 'memberstate involvement', might be a good instrument to coordinate innovative actions in the reform of RICA.

The current PACIOLI group, extended with all the other (future) EU memberstates, might be an effective platform for future FADN management. Maybe the concerted action PACIOLI can be transformed into something like the 'PACIOLI programme'.

# 1. INTRODUCTION OF PACIOLI

This reflection paper 1) is one of the deliverables of the concerted action in the EUs AIR-Programme, called PACIOLI (Panel in ACcounting for Innovation, Offering a Lead-up to the use of Information modelling). PACIOLI brings together scientists from several member states, who are interested in farm accountancy, farm information systems and agricultural policy. The objectives of the concerted action are:

- improvement of the quality of accountancy and FADN data;
- stimulation of the use of accountancy and FADN data;
- improvement of information management in FADNs;
- improvement of cost effectiveness;
- assess the need for and feasibility of projects for innovation of accountancy and Farm Accountancy Data Networks (FADN).

In the concerted action four workshops will be organised, respectively on:

- a) information analysis;
- b) accounting and managing innovation;
- c) need for change;
- d) suggestions for continuation.

The papers presented in the three workshops are published (see Beers et al., 1995a, Beers et al., 1996a and Beers et al., 1996c) as they contain interesting information for scientists, accountancy organisations and software developers in the member states. The papers are also summarized in summaries that contains the conclusions and the highlights of the extended report (Beers et al., 1995b, Beers et al., 1996b and Beers et al., 1996d).

In addition to these papers the results of each workshop in the concerted action are used to provide the RICA community with a so-called 'reflection paper' that deals with a special issue (see Poppe et al., 1995 and Poppe et al. 1996). The purpose of these papers is to provide suggestions for decision making on the further development of the FADN, based on sufficient background from the workshop papers. The reflection papers are submitted to the management committee of the RICA. The issues of the four reflection papers are determined by the coordinator of PACIOLI and the head of the RICA unit DG VI A/3.

More information on PACIOLI can be found in Beers et al., 1995a.

- 
- 1) The paper is written by Krijn J. Poppe and George Beers. The authors work at the Agricultural Economics Research Institute (LEI-DLO) in the Hague. George Beers is project leader of the concerted action PACIOLI. Krijn J. Poppe heads the Dutch delegation in this concerted action and represents the Netherlands in the management committee of the EUs FADN (RICA). The paper benefited from discussions in and after the third PACIOLI workshop.

## 2. STRATEGIC MANAGEMENT

### 2.1 Problematic governance

The guidance of Farm Accountancy Data Networks has never been easy, as there is a long period between decision making and publishing the results of implemented changes. In these times of governmental budget cuts and reforms in agricultural policies, this often leads to confusion and frustration.

Examples of this are available in many countries. In recent years the Irish FADN nearly disappeared in the process of slimming the public sector. In the RICA unit in DG VI complaints and frustrations were heard that money was dedicated to new topics like Central and Eastern Europe in stead of informatics specialists who could deliver the much requested RICA data on CAP reform. In the UK large budget cuts have been proposed by the Ministry of Agriculture (MAFF) and in the Netherlands the Ministry of Agriculture (LNV) is also actively looking to options to decrease their share of the financial burden of the FADN.

From the point of view of the FADNs, these examples can be interpreted as unsuccessful strategic management and not enough involvement of important stakeholders (persons who have an interest in one way or another in the FADN). Compared with the total agricultural budget in the EU (in regions, member states and the EU) the costs of the FADN are small. So, from the point of view of the stakeholders the diminishing support can be interpreted as a lack of innovation by the FADN to support the relevant stakeholders in their work.

Interviews held by PACIOLI participants with their stakeholders revealed interesting observations about this process of strategic management. Discussions in Finland showed that increasing data needs, more rapid results and lower data collection costs are important issues (Siren, 1996). A survey in Spain (Astorquiza, 1996) showed huge differences between regions and a clear need for innovation.

From the Netherlands a lack of strategic management was reported too (Beers and Poppe, 1996). The analysis showed that the changes in the guidance of agricultural research and the stronger emphasis on output-finance have not (yet) led to a clear governance by the Ministry of Agriculture of the FADN. This seems to lead to negotiations on finance only, in stead of on content and finance.

Strategic planning for the RICA at EU level is - at least for involved observers outside DG VI - not very formalised. The process model (Poppe and Beers, 1996) lists some activities but they are mostly quite passive ('Study ...') without a clear involvement of important stakeholders. The regulations that installed RICA demand a kind of progress report to be delivered to the CSA (Comité Spécial Agricole) and the Council every 10 years. It is remarkable that the man-



agement committee of the RICA had in the past some meetings with users of the data ('user-forums') but not with stakeholders in DG VI. One of the interviewed policy makers in the Netherlands remarked that he missed discussions on the RICA in the working group on statistics of the Council (where it could be problematic that discussions are not always value-free but have a policy-impact) or in EUROSTATs committee for agricultural statistics (Beers & Poppe, 1996).

The contribution by B. Hill (1996) to PACIOLI 3 also showed that strategic management of the FADN is not easy: most of the recommendations in his 1991 report on the development of the FADN have not been implemented but are still regarded as valid.

Another interesting remark is the fact that (with the noticeable exception of Portugal) the Commission nor other member states play any role in the strategic management of the FADN at member state level. The network-function of the RICA could be stressed by inviting persons from the EU and from a few other member states for discussions on the development of the national FADNs. In such a way expertise would become available quite cheap, and some coordination would take place in an informal but nevertheless effective way.

## 2.2 Supporting the process

Policy makers in a Ministry usually hamper in articulating their need for data in the future, which means that strategic planning for a FADN is not easy. Examples were provided by Finland (Himanen, 1996) and the Netherlands (Beers and Poppe, 1996).

To support the process of strategic planning, Beers and Poppe (1996) propose to use the following table, an agenda which is successfully used by the Dutch Ministry for the Environment in the planning proces of their own research institutes:

Policy products *)	Policy questions	Research questions	Models needed	Indicators and data needed
.....	.....	.....	.....	.....
.....	.....	.....	.....	.....

\*) e.g. yearly report on situation in agriculture, price proposals, white paper on .... et-cetera. Products ordered on a time scale.

In this table the policy makers provide, e.g. once a year, the policy documents and topics that they expect to be on the agenda between today and for instance 5 years from now. It is clear that the *content* of such 'policy products' can not be forecasted very precisely. However, it is often not impossible to predict (most of) the topics. Yearly price negotiations are a clear example, but also e.g. the end of the current market regulation of sugar in 2001.

The policy documents deal with policy issues and questions. Some of these questions can be translated in (or are) scientific questions to be answered by statistics or research. From this point on the expertise of the statisticians and researchers can be used to translate policy questions into research problems, to be solved by certain types of models and from databases.

Filling in such a table in a negotiation between policy makers (stakeholders) and FADN managers can create awareness for the guidance of a FADN and can support its finance. The table cannot only be used in a yearly routine, but also on moments of drastic policy changes. For instance the appointment of a new Minister or Commissioner, or the publication of an important policy document can be a trigger for the FADN management to meet with stakeholders and brainstorm on the effects for the agenda. The next section reports such an exercise based on the EUs recent Agricultural Strategy Paper (Fischler, 1995).

Managing a FADN in the way as described, with data gathering derived from the policy agenda, requires a mature level on 'policy management'. The policy makers have to be explicit about the products and the moment they have to deliver them to the society. In the case of the Dutch Ministry of Agriculture, there is a tendency to develop a 'concern control system' for the management of the Ministry itself. This involves a formal description of the workflow of the policy makers introducing annual cycles to coordinate and control the large scale of the policy making process. It is obvious that a 'FADN management table' as presented above, fits very well in such a professionally managed environment. Nevertheless a lot of disturbance of the planned policy process will always occur. Planning the data need at every moment is based on the available knowledge. Therefore it is important to interpret the agenda as a 'working agenda' that might change as circumstances for the stakeholders change.

Of course the availability of such an agenda should not push aside two other important aspects of a FADN database. The first one is to have a database available for a lot of actual (short term) policy questions that are not always directly linked to the policy documents on the agenda. The other one is the availability of a public data infrastructure that is also available for the extension service, farmers and other participants in the democratic debate. Himanen (1996) for instance stresses this point for Finland. If necessary, these two aspects could be added to the proposed agenda.

### **2.3 The effects on RICA of the Fischler paper**

In his 'Study on alternative strategies for the development of relations in the field of agriculture between the EU and the associated countries with a view to future accession of these countries' the European Commissioner for Agriculture mr. Fischler (1995) describes several possible scenarios for the future of the CAP. This Agricultural Strategy Paper (as it is shortly referred to) calls them:

- Status quo.
- Radical reform.
- Developing the 1992 approach.

The third PACIOLI workshop tried to identify what the consequences of these three scenarios would be for RICA. As the last one has been indicated by the Commission as the most attractive and realistic one, this scenario has been discussed in more detail. One might also consult the paper to PACIOLI 3 by Persson (1996), who reaches similar conclusions with somewhat different scenario's.

### *Status quo*

The title of this scenario is clear: no policy changes in a situation of EU enlargement ('Central and East European farmers are entering the community, not the other way around'). This scenario is not seen as realistic in the longer run as it would lead to financial problems of the CAP.

For the RICA this scenario would have a number of consequences. First of all it would be necessary to provide policy makers in the EU with data on the projection of yields, data on quota and set aside as well as cost prices of products. All these data would be needed in a situation with saturated markets, overproduction and an increasing financial burden of the CAP. As the CAP (and DG VI) is organised into market/product divisions, cost prices and results per product are more important than results at farm (-type) level.

Other important effects of this scenario are at management level. The enlargement would make it necessary to enlarge the RICA to (associated) Central and East European countries. Secondly the financial problems of the CAP would lead to budget cuts and a stronger need for cost effectiveness. A risk is identified that resources will be reduced, leading to reduced quality of data and problems of having data available in time.

### *Radical reform*

Under the Radical reform scenario, a new CAP would be created, in which support prices, quota and other supply management measures would be (nearly) abolished. Compensatory payments are decoupled from production and reduced over time. Direct income support payments could be given (including payments for environmental services) on a national basis, with or without Community co-financing.

It is not easy to picture the position of the RICA in such a world. The first reaction seems to be that the RICA could be abolished under such a scenario too. The experience of Sweden shows that the FADN was reduced to a smaller sample with fewer data variables at the moment that a large part of the Swedish agricultural policy was abolished. Partly the Swedish FADN survived with an eye to a future EU entry of the country.

However, it was also argued that a FADN could be very useful in a radically reformed world. First of all data on direct payments and data to be able

to set the direct payments, would be needed. If member states would be allowed to fix direct income support, an instrument at EU level would be needed to monitor the hand outs by national or regional governments. Member states would like to be sure that these payments would really be decoupled from agricultural production and not distort trade (implying that such payments could be put in 'the green box' in GATT terminology). The RICA could provide this information, at relatively low cost as it is based on a sample; asking all farmers that receive payments for proof how they change their production plan after receiving payments would be much more expensive. Second, it could be that data on other issues (like environmental data, data on regional development) would be needed. However it is not clear if an FADN like exercise, turning the FADN in a 'Rural Area Monitor' (see below), would be the most efficient way to collect this data.

In addition the transition towards the radical reformed situation would ask for data on cost prices and the assessment of the viability of farms (including non farm income data), in order to estimate the number of farmers that could survive under world market prices.

### *The 1992 approach*

Developing the 1992 approach (which refers to the CAP reform negotiated by Mr. Mac Sharry) is thought to be, and officially adopted as the most realistic scenario. It has three important aspects, of which the consequences for RICA will be discussed in detail: towards higher competitiveness, towards an integrated rural policy and simplification.

#### *Towards higher competitiveness*

Improved competitiveness (which includes product quality, value added through processing, services etcetera) is seen as a key challenge for the future. The ability to export without subsidies will become more important. This means a reduced reliance on price support with direct compensations when necessary, and sometimes linked with environmental and social considerations ('cross compliance').

The effects of this line on the RICA are partly the same as under the radical reform scenario: costs of production and cost prices, a sample representative for production instead of farms, input-output relationships and data on direct compensations will be important issues. Under such a scenario it is important to have methodologies that are comparable with those in the main competing countries (PECO, USA, CAIRNS group) in order to be able to compare costs of production. The data gathering should be extended to variables that provide more product information (quality, services, value added by processing in the chain) and information on marketing (on farm processing, small cooperatives, local brands). Such data would be useful to stimulate (small and medium sized) enterprises (SME) and to support trade negotiations. It could also mean an extension of the sample to include e.g. SME in the agro food sector, a recommendation put forward earlier in the FAST-Programme (FAST, 1988). The analysis

of the data should be improved to meet the needs of users, as they are not always able to interpret all the data themselves.

### *Towards integrated rural policy*

During the last ten years the EU has not only undertaken a series of adjustments of its agricultural market policy, but we have also seen a reform of the structural policy (stressing rural development aspects) and an introduction of a relatively ambitious agri-environmental action program. The different measures partly overlap, and a review of the present arrangements is thought to be useful. This would seek to strike a more sustainable balance between agricultural activity, other forms of rural development and the conservation of natural resources. The multi-functional role of the farmer can transform him into a rural entrepreneur. The diversification of activities in rural areas, with a more balanced geographical spread of activities, will be a key issue.

For the RICA this aspect has several implications. There will be more demand for regional data, which calls for a better regional sample quality. New specific tasks may be identified for the RICA: the identification of 'weak' regions and the transmission of knowledge from one region to another: the FADN as an extension tool to transfer improvements in 'weak' regions. There will be new users of the data, outside the agricultural domain: rural planners, regional authorities etcetera. Data on the multi-functional role of the farmers will be needed: agri-tourisme, state of natural resources, contribution to the landscape, use of labour, environmental data. This widened data scope will probably demand integration with other data sources (e.g. transport, population, regional policy). The FADN is not necessarily the only element of a Rural Area Data Network, but *might* be a solid basic structure for it. Such a rural area data network would include data on pollution points (non-aggregated data-gathering methods of the FADN could be of use here), income in rural areas and indicators for rural development. The rural area data network should monitor indicators for the viability of the rural environment in regions.

### *Simplification*

Taking into account the complexity of the CAP and bearing in mind the considerable diversity in local situations, the Agricultural Strategy Paper sees a strong case for a radical simplification. This includes a clearer distinction between market policy and income support, and probably implies subsidiarity in implementation. A switch from the yearly price negotiations to a five years framework (compare the US Farm Bill) is also mentioned as a tool.

Simplification is an idea that several administrators in the RICA would prefer. The INEA reported that there is pressure in Italy to make the RICA more representative in the regions and to simplify the data requirements on Mac Sharry payments. Himanen (1996) reports that the amount of paper work for farmers has increased to such an extent by joining the EU, that this could even influence the response to the FADN in a negative way. Other member states

also report difficulties with collecting the detailed information on quota and compensation payments.

However, the policy aspect of simplification is unlikely to lead to simplification for the RICA. If simplification means subsidiarity and regionalisation, it involves 'complexification' for the RICA. More information on regional grants and subsidies (with a need for more standardisation of this data) will be needed. This includes a better regional sample.

### *No regrets*

Each scenario has specific effects on the future of RICA. Adopting measures to support such an effect has therefore the risk that the scenario will not become true. However, some changes in the RICA would be useful under all scenarios and could therefore be implemented without much risk. Table 2.1 lists the actions for RICA and shows under which scenario they would lead to

*Table 2.1 Actions to improve the performance of the RICA under different scenarios from the Fischler paper*

RICA actions	Scenario in Agricultural Strategy Paper				
	status quo	radical reform	develop the 1992 approach		
			higher compet.	rural policy	simplification
<i>Gather data on:</i>					
PECO a)	+	+	+		
Cost prices	+	+	+		
Non-farm income		+		+	
Farm viability		+	+	+	
Environment		+		+	
Trends in yields	+				
Quota, set aside	+				
Subsidies	+	+	+		
Product quality			+		
Multi-functional role of farm				+	
Regional development		+		+	+
<i>Management issues:</i>					
Lower budget	+	+			
Standardisation with non-EU			+		
Regional sample quality				+	+
Links to other data				+	
Speed up data	+	+	+		

a) PECO is the (French) abbreviation for Central and East European countries.

an improved performance of the RICA. One action, speeding up the delivery of data, was mentioned several times in the PACIOLI workshop and has been added as beneficial under all scenario's.

Besides speeding up the data delivery process, three other actions will not be regretted in the future, as they are beneficial under all identified scenario's: the development of a RICA network in Central and East European (PECO) countries, data on costs of production and cost prices and data on subsidies. Other types of data (like those on the environment and non-farm income) are more tied to one or two views of the future. Two data items (analyse trends in yields and details on quota / set aside) are heavily correlated with the status quo. This type of data (of which details on quota and set aside were introduced in the RICA only recently) could become less needed in the future.

Table 2.1 also shows that it makes sense for the RICA management to invest in trying to predict the future and its consequences, e.g. by building close relationships with users in DG VI: most potential actions are tied to one or two scenario's and are not a clear 'budget-winner' in others. Interesting is the fact that improving the regional sample quality is an issue under all three aspects of the scenario 'develop the 1992 approach'.

### 3. PROPOSALS FOR REFORM

This chapter describes 16 'project indications' which contain proposals for reform that resulted from brainstormings at the third PACIOLI workshop. These 16 indications were based on papers presented at the workshop and the discussions between the participants. They are presented in a common format, that highlights the objective and the results of the project. The format is followed by comments on the content, and on the links of the project with the actions mentioned in the previous chapter. This also refers to the papers presented in the workshop. Relationships between the project indications are identified too.

<i>Title:</i>	<b>Estimation of data needs</b>
<i>Aim:</i>	Establish information requirements of different stakeholders by reviewing literature and by surveys
<i>Products:</i>	improved response of the RICA to requirements, better priority setting and measurability of policy needs.

Strategic management has always been difficult within the RICA network. It is thought useful to improve this process by a more explicit estimation of data needs. Such a project would not only carry out an initial estimation, but could also deliver procedures for future assessments. This could help the RICA (and other policy information systems) to gear their activities to the actual need of the policy process.

Such a project could also be useful for some of the other proposed projects. For instance it could gear the development of a new farm return or indicators on landscape and product quality.

In the PACIOLI workshop some fine examples of more involvement with stakeholders were presented. Besides the issue of strategic management (see previous chapter), some questionnaires have been organized.

Astorquiza (1996) carried out a survey of agricultural advisors and regional governments on the functioning of accounting, the RICA (or the Spanish RECAN) and potential innovations. This led to the identification of a large number of potential innovations. It also revealed strong and weak points of the RECAN, and especially its regional base. For France Del'Homme and Steffe (1996) contacted stakeholders. French farmers and advisory centers see the RICA not as a system of collecting data (by the government) but of money (by themselves). They are paid to deliver the data but don't use the feedback because it is too late. Nevertheless there is an interest in European comparisons. The low (emotional) involvement of these stakeholders means that the RICA management does not see many chances to introduce innovations. It would like to stay as close as possible with the current accountancy data that advisory



centers gather anyway and as an official statistical institute, one is afraid to take risks by anticipating social or political evolution. In the discussions in the workshop an important stakeholder from the UK's National Farmers Union remarked that in the future the monitoring role of the FADN should be stressed more clearly. At the moment there is not much monitoring and reporting on trends, and too much data gathering (for the Commission).

*Title:* **Manage cost effectiveness**

*Aim:* Establish procedures (like tendering) that would install methods to control costs in relation to benefits

*Products:* reduced political and financial constraints, management control system, cost reduction program

Compared to the total costs of the agricultural budget, the costs of the RICA are very low. But it is striking that costs are not clearly reported. A few years ago there has been an estimation by the RICA team, but results were hard to interpret. Most of the costs are paid by member states, and in some cases the costs (especially of computers and staff) are part of the total government budget. This means that the introduction of a so called Balanced Scorecard (Gouillart and Kelly, 1995) with indicators for RICA on costs and returns, user satisfaction, process control and innovation could be useful.

Due to the budget problems of many governments, cost effectiveness is an issue. Some aspects of this issue that could be studied in such a project are proposals to outsource some of the activities, to use a tender system in buying the data, more commercial exploitation of the data and lowering costs by using information technology.

On some of these aspects, the PACIOLI workshop offered ideas and suggestions. Himanen (1996) proposes to link the (Finnish) FADN system not only with on-farm computers (as information and communication technology is highly developed in Finland) but also with the CAPs IACS (integrated administration and control system). Astorquiza (1996) reported that the current tender system in Spain has a clear negative influence on quality.

Hughes and Williams (1996) discuss opportunities and constraints for the commercial exploitation of the English FADN. The authors note that companies purchase market research data from specialist firms that carry out syndicated omnibus surveys. Such data are accurate (+/- 2% would be extreme) and have a quick turn around: the lead time between an event happening and being recorded should be short. The FADN is in general not a suitable vehicle for such data: the turn around time is too long and it threatens the relationship with the farmers. However Hughes and Williams (1996) see a market for data on opinions of farmers in matters like agricultural and rural policy for government, commodity organisations and lobby groups. Farmers might have an interest in such surveys and the quality by the FADN might be better than in a 'cold' telephone survey. In conclusion Hughes and Williams (1996) see only a small market for a more commercial exploitation.

To reform the agricultural statistics, EUROSTAT designed a technical action plan for agricultural statistics (TAPAS). This has been turned into a Council Decision. Tienen (1996) suggests that a comparable process could be useful to reform the RICA. In other words: could it be an improvement to reorganize the role and tasks of the community committee for the FADN ? Reform of the organisation and content of the FADN will however not be easy. Based on an institutional analysis for Spain, Merino (1996) concludes that a reform that offers no immediate patronage possibilities but can increase budgetary costs or the workload will not be popular.

<i>Title:</i>	<b>New Farm Typology</b>
<i>Aim:</i>	Revise the current farm typology to make it more useful by simplification and improved comparability
<i>Products:</i>	New farm typology, improved management

This project indication proposes to revise the current farm typology, as managed by Eurostat together with DG VI A/3 and the member states. There are a number of problems with the current typology, which is a fine example of a European compromise between different national systems. With the exception of Germany, all 12 'old' member states now use the European farm typology in their national statistics, so a revision should be a common project.

The problems with the current typology can be grouped under the headings 'comparability' and 'complex'. Several member states think the two-year update of the standard gross margins and the ESU does not improve the quality of statistics and the FADN sample. Therefore they use national variants of the common typology (e.g. Dutch size units, 1980-*sgm*'s in Belgium etcetera). Some argue that the application of the complex typology system not automatically leads to comparable statistics in Europe, as farm systems differ. In addition changes in agriculture (set aside, subsidies, forestry, more non-farm income etcetera) aggravate this point of view.

The complexity of the current system is already high and taking these points on board could make it even more complex. Simplification could perhaps be found in reducing the number of updates and regions. Van Lierde (1996) suggests to calculate the *sgm*'s yearly on a 7-year moving average. He also proposes to define the RICA universe on 90% of the *sgm* in the total agricultural sector. Another suggestion is to improve international comparability (and understanding by politicians and other non-economists) by classifying on the basis of standard output (like the USDA-ERS does) in stead of standard gross margins.

It is thought unlikely that the current working group on Typology (a cooperation between EUROSTAT and RICA) will be able to come to a decision without a large multi-memberstate study on alternatives.

**Title:** **Rapid results**

**Aim:** Establish an information system that delivers results for key commodities before agricultural year ends

**Products:** forecasts in accounting year, rapid results directly after accounting year (subsample).

Providing results to users within a short time after the end of the accounting year is not a quality mark associated with the current RICA. In the second PACIOLI workshop Van Leeuwen (1996) noticed that large multinationals publish their annual reports within 4 to 5 months after the end of the accounting year, where RICA needs nearly 3 years (calculated from a non harmonized calendar year).

There are a number of ideas that are associated with this project indication: the current Rica Forecasting System (RFS) could be run more as a joint activity/publication by the member states. This improves the quality of the forecasts as more information is available in regions than at EU level. Actions on this front are already taken by DG VI-A/3 and could in the future perhaps lead to an annual outlook conference.

Most to gain however is from making better use of current information technology like EDI and the Internet. Working procedures should be redefined: at the moment the system is very much batch oriented, and data are only transferred as a large number of farm accounts in a region is finished. A visit to Wye College for instance learned that the first accounts of a new accounting year are available in January, where the Ministry of Agriculture (MAFF) sometimes is not ready before June to accept a tape, that carries a large batch of farms. Astorquiza (1996) reports a similar experience in Spain, where the signing of tender contracts leads to delays.

One could even wonder if data still have to be physically transferred: distributed database technology enables somebody in Brussels or Paris to use (and download) data in databases at Wye and Helsinki.

One step further is to look more to cashflow-data which often come available at a monthly or quarterly basis at the level of the farm and the local accounting office. Another suggestion is to split the RICA sample in 20,000 'rapid rica' farms with a very simple farm return, and use the current or a more detailed one for the other 40,000 holdings to enable detailed research. Abitabile (1996) suggests for the Italian case to use double accounting with detailed financial and physical data at enterprise level for 'professional' farms and simple accounting (with automatic coding) for other farms. Bolin (1996) suggests to split the farm return itself in two parts: data that can be delivered quick and supports forecasts and a second part with more details.

There seems to be a relation between such ideas and the project indication on cost effectiveness: it could be beneficial to use the current RICA payments (at EU and national level) to improve the performance. Payments are now only provided to farms that are accepted by the Commission as error-free. Why not differentiate this to the usefulness (timeliness, amount of detail) ?

**Title:** New EU farm return

**Aim:** Establish a new farm return ('fiche') and documentation base

**Products:** New EU farm return with data structure to ensure comparability, consistency, flexibility, clarity, and rapidity

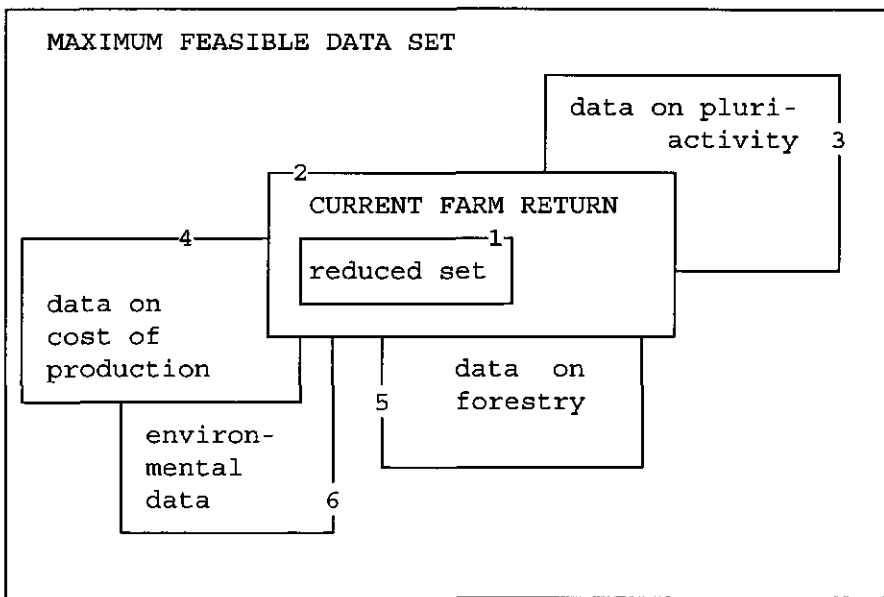
The current farm return, the punch form oriented document used by RICA to define the required data, is more than 20 years old. In those 20 years information technology, farm accounting, agriculture and agricultural policy changed heavily. In addition the EU has been enlarged several times. Although some of the recent changes in policy (especially CAP-Reform) have lead to modifications in the farm return, there is much room for improvement.

Such a project should start with defining a number of objectives of a new farm return. These include:

- improvement of harmonized data gathering, in stead of conversion from national data. If a new farm return would be used also by the member states themselves, risks of unharmonized data would be smaller. Exchanging 'meta-data' on interpretations could also help, as well as focusing on basic data in stead of abstract concepts: a tractor is a tractor, where 'fixed assets' is a less harmonised concept. Implementing General Accepted Accounting Principles (GAAP) as defined by the IASC (Dedman, 1996; Kirton, 1996; Poppe, 1996) might also be useful;
- rapidity: a new farm return should pay attention to the possibilities to speed up data delivery (see above);
- flexibility: in the current system there all data are gathered on all 60,000 farms, from the Algarve to Lapland. In a new farm return it could be attractive to exchange available data (like mineral balances, non-farm income, gross margins on crops) on a subset of the sample, without making this obligatory for all the farms. Ohlmer (1996) stresses the importance of having information on mineral balances and economics in one system. The French delegation (Del'Homme and Steffe, 1996) at the PACIOLI workshop provided the instrument of the 'Sonde': detailed surveys on a special topic (e.g. non-farm income, marketing of products) for a smaller number of farms. If these 'Sondes' are carried out at RICA farms, additional information could become available relatively cheap, and the current resistance to innovation might disappear. A similar proposal was made by Meier (1996) with respect to the Swiss FADN: split the sample in a representative random sample with simple accounts, using tax accounts, and a (probably less representative) sample with detailed data of special interest;
- new data: it should be made clear on which area's the data collection should be expanded. Examples are environmental data, cost of production, forestry, pluri-activity etcetera. Bailey (1996) argues that data on allocations of inputs, input quantities and more details on the beef/dairy complex are necessary for a large kind of research purposes. Paris and Arfini (1996) show how such data (and procedures to correct for missing data) could be used in policy analysis;

- simplification: for a number of farms (e.g. to produce rapid results, or to reduce costs) the current farm return could perhaps be reduced;
- clarity and consistency: the current farm return does not include derived statistics (like farm family income) and quality check points. These are defined elsewhere, but it could be attractive to include them in a new farm return;
- support of IT: a new farm return should be formatted in such a way that it supports not only discussions in the RICA management committee, but that it is also easy to use in the development of software.

This project proposal clearly has relations with many other project indications. Examples are the estimation of data needs, cost effectiveness, rapid results, develop a quality program and develop a reference information model (San Juan, 1996).



Figuur 3.1 Data dictionary / logical data base oriented to a more flexible exchange of data

The project proposal also echoes the suggestions in the first PACIOLI Reflection Paper (Poppe & Beers, 1995) to renew the farm return and make it more flexible (figure 3.1) by using information engineering (see also Gustafson, 1996 on object-oriented development). As a name for the project the acronym RICASTINGS was suggested: RICAs Study To Install a New Generation of Statistics.

<i>Title:</i>	<b>Indicators on environment, landscape and food quality</b>
<i>Aim:</i>	Define indicators for farm management and policy makers to support the management of environment, landscape and food quality
<i>Products:</i>	Measures (methods, tools) and indicators for farmers and policy makers to manage the environment, landscape and food quality

As the management of the environment, landscape and food quality (included value added through processing) become more important at farm level, and is more and more integrated in agricultural policy, farmers and policy makers have a need for information on these aspects. In the PACIOLI project, several examples have been provided, e.g. on mineral balances. Pesticides, use of water and energy balances are also mentioned in this respect. A discussion with policy makers in Brussels indicated a need for data on organic farms and farms that practice 'integrated farming' and 'Good Farming Practice'. Data on using an organic farming system are sometimes available in an FADN to make clear that a zero-use of pesticides is not an accounting mistake. Although not harmonized in definition, data that make clear what an integrated farm looks like, are thought useful. Another important issue is representativity, especially of organic farms. With 1-2% sample rate such farms will not easily enter the sample. It was indicated as very useful to restrict the representativity to e.g. 55,000 farms and gather data with the FADN system (to have comparable data as on 'standard farms') on 5,000 organic farms that are not necessarily representative, but at least provide data on such a new development.

Landscape is also thought to be important, although it is difficult to measure and to separate from environment and biodiversity issues. The expectation is that this issue will become more important in WTO discussions (as the North Americans do not accept subsidies to farmers on such issues) and as PECO countries have a comparative advantage in the 'production' of landscape.

A need is identified to exchange know how on the development and definition of indicators to support farmers in their management. A standardization of these indicators could be useful if they are to be compared internationally, e.g. through the RICA. This also implies that this project indication is related to that on the new farm return and to the proposal on farm accounting.

<i>Title:</i>	<b>Indicators on regional development</b>
<i>Aim:</i>	Define indicators that measure regional development and the contribution of agricultural households.
<i>Products:</i>	Measures (methods, tools) and indicators for policy makers to manage regional development

Structural policy and the current emphasis on rural policy makes the regional aspect even more important (see chapter 2). One big advantage of the micro-economic panel of RICA is that it can easily provide information at regional level. This project indication partly elaborates on this asset.

For an integrated rural policy (and monitoring its effects) indicators are necessary that measure regional development and the contribution in it of agriculture and agricultural policy. These indicators could be different for different parts of the EU: e.g. special Mediterranean or Nordic rural indicators are thinkable. After a definition of these indicators, a system to gather the information has to be developed. Partly it could be the RICA, for instance by adding data on e.g. agri-tourisme, non-farm income, pollution and agricultural processing. However it is also possible that RICA is not the most attractive tool for a Rural Data Network.

An additional point of research in this project would be the improvement of the regional RICA sample in certain member states (like Spain and Italy). In some regions the use of the RICA could also be stimulated, as this could lead to better cost effectiveness and improved data quality. Astorquiza (1996) reports that in Spain several regions think that the representativity for their region could be improved.

On the IT site it could be noted that this project proposal could include research on the use of Geographical Information Systems (GIS) for RICA and other regional data. By putting such a tool on the internet, regional authorities would be stimulated to compare their own region with others.

<i>Title:</i>	<b>Development of a PECO-RICA</b>
<i>Aim:</i>	Develop a farm accountancy data network in Central and East European countries to support their agriculture and to make comparisons with the EU possible
<i>Products:</i>	FADNs in several CEECs. Yearly report with a comparison of EU and CEEC data at farm level

Micro-economic information on agriculture in Central and East European countries (CEEC) is scarce, both locally and in the EU. In several Central and East European countries steps have been taken to promote private farming and to introduce farm accounting, for instance as an extension tool. This introduction is not easy due to a lack of knowledge on commercial accounting, the distrust of government statistics and the attitude to be reluctant to an exchange of commercial data (see for instance on the first experiences in Hungary: Poppe & Tängl, 1992)

The Agricultural Strategy Paper (Fischler, 1995) explicitly recommends the support to farm accountancy and farm management (extension services) as an action for technical financial assistance to CEEC countries. Currently there is no coordination between CEEC countries and the RICA on the exchange of experiences in setting up monitoring systems. For several reasons such a coordination could be useful:

- experiences and software from EU countries could be made available more easy and cheaper than under current arrangements;
- countries could learn from each other what works and what not. In EUROSTAT this process has already started by giving CEEC countries an observer status in work group meetings. For diplomatic / political reasons

this seems not yet possible in management committees like RICA, although the same coordination problem exists. A special coordination effort is therefore useful;

- harmonisation of data between countries would be on the agenda. At the moment some CEEC countries probably use the data definitions of RICA, where others do not. If data definitions are used, there is no support provided on interpretation and there is no check on how RICA definitions should be adapted to typical CEEC circumstances (e.g. privatised cooperatives where indicators like family farm income are probably non-sense);
- it would fill a gap, as there is no effort to exchange micro-economic data and to compare e.g. costs of production between CEEC countries themselves and between CEEC countries and the EU. It is curious that some work within the Commission is carried out on macro-data, but not on micro-data where in this case micro-data (e.g. on privatised farms above a certain threshold) could be much more interesting;
- building a RICA network for these countries that provides comparable data now would support the policy analysis and the negotiations on an eventual integration of CEEC countries in the EU. In the case of Greece, Spain, Portugal, Finland, Austria and Sweden this opportunity was lost: the local monitoring systems were build or harmonised to RICA standards after the association, meaning that data became available years after the accession of these countries. Recent research in Switzerland (Meier, 1996) learns that making networks comparable regarding data definitions and weighting systems, yields interesting and useful results. It would be a pity if CEEC countries build monitoring networks with incomplete (or only American) expertise with the effect that the data can not be used in policy analysis support the integration questions, and that than in a later stage CEEC networks have to be harmonised towards RICA.

In his paper to the third PACIOLI workshop, Florez Robles (1996) made some clear suggestions for such a project. It should start with network development, building partly on projects already carried out in the Phare-ACE program. By organising two 'master classes' a year (workshops that take one week, one in a CEEC country and one in a EU country) experiences and data could be presented, discussed and published.

It would be attractive to agree on a White-book were e.g. the definitions and procedures for 2005 are defined, but giving PECO countries the possibility to use national methods as long as the White-book recommendations cannot be implemented. Progress in adaption can then yearly be reported. Another suggestion is to ask some FADNs in EU countries (especially those involved in building systems in PECO countries) to take responsibility for support on harmonisation: a 'godfather'-role that was also used in some domains for Germany's neue Bundesländer.

This implies that with relatively low resources (e.g. comparable to the PACIOLI project) clear benefits could be realized.



<i>Title:</i>	<b>Development of quality network software</b>
<i>Aim:</i>	Develop software that is able to check the RICA data at different levels of detail
<i>Products:</i>	Software, high quality, rapid RICA data base

Data in the RICA need checking. Currently this is mainly done at the EU level by DG VI A/3, and at memberstate level as the EU distributes its control program. This checking at the end of the pipeline is a main reason for the delay in the delivery of final data. If a mistake (or a question) arises at member state level or in Brussels, the remark has to travel back from Brussels, to the member state, to the regional level and to the accounting office.

Distributing the current control program further down to the regional level and the accounting offices is not possible, as these work mainly with PCs and in national code schemes. The current control program works only on the RICAs Farm Return and is written in Fortran for a mainframe computer.

Several member states develop their own software control programs, without sharing expertise and costs. This project indication aims to improve this situation by developing software or reference information models to audit the data at the point of entry. This implies that the project has several aspects in common with the project indications discussed below and with the project on the new farm return.

<i>Title:</i>	<b>Develop a quality programme in FADN</b>
<i>Aim:</i>	Develop a quality programme for the FADN based on user priorities, taking into account the following steps: quality guidelines, documentation system, annual quality survey, study of customer satisfaction
<i>Products:</i>	A broad quality concept, a standardized documentation system, annual report on quality

One would expect that for an authoritative monitoring system like RICA, quality management would be an important issue. However, RICA does not have a clear total quality programme, and mainly restricts its activities to checking data and looking to representativity.

Quality is not a very clearly defined concept. In relation to accounting systems, Hartog et al. (1992) conclude that the concept of quality is associated with aspects like reliability, client-friendliness, continuity, flexibility, image, delivery times, costs, controllability, certification, and liability. These aspects partly overlap and the list is certainly not intended to be complete. Statistics Sweden (Larsson, 1996) defines quality as 'all aspects of the statistics service which influence the use of statistics and to which users pay attention'. This seems to be a useful definition that could apply to the RICA too, and can be operationalized with some of the aspects mentioned above.

As the RICA is a sample from the Farm Structure Survey, some additional attention should be paid to representativeness and estimation errors, in relation to the farm selection process (see Dijk et al., 1995). The research suggests

that preciseness of estimates could be improved quite easily by making better use of up-to-date expertise on sampling statistics and panel data-econometrics. If users would be happy with the current statistical standard errors, this implies that in some regions and farm types the sample could be reduced, leading to lower costs. Harmonisation of the data also seems to be a quality issue.

In the end it is the consumer that defines quality, in relation to (or: including) the price of the product. This means that a quality programme for the RICA should take user requirements and cost effectiveness into account. This also implies that this project indication has strong relations with other proposals.

There are a number of experiences that could be useful in this project. For Spain Merino Pacheco (1996) notices that the systems of the Northern Spanish regions (management extension services that gather RECAN data) should be extended to other regions in order to improve the quality.

Another experience is the study mentioned above on representativeness and preciseness of estimates (Dijk et al. 1995). In the Dutch FADN probably work will be started on the application of the ISO-9000 methodology. Clients of the Agricultural Economics Research Institute, that runs the Dutch FADN, demand such procedures for the research reports and data that they buy.

An interesting methodology to be used in defining quality with stakeholders that finance the FADN is the 'Balanced Score Card' approach. This method, originally developed by David Norton and Robert Kaplan for strategy implementation, splits the strategy of a business (in this case the RICA) into four types of goals: financial goals (e.g. costs, societal value), customer goals (e.g. client satisfaction, number of complaints, number of academic users, number of sold publications), operational & process goals (e.g. delivery time, standard error of estimate, preciseness of forecasts) and learning & innovation goals (e.g. number of new variables in last 5 years, number of successful responses to new policy areas). The goals can be related to each other and then show how realising targets on the innovation area can lead to improved customer goals and to better financial results. Goals should, like projects, be defined as 'SMART': Specific, Measurable, Attractive, Realistic and Time-specified.

<i>Title:</i>	<b>Develop a reference information model and standards for data-exchange for RICA and farm accounting</b>
<i>Aim:</i>	Develop a reference information model for RICA and develop EDI standards for data-exchange between RICA, member states and regional (accounting) offices
<i>Products:</i>	Handbook with information model, data dictionary (electronic version), specification of EDI messages

The current software as well as the current Farm Return of the RICA are outdated. The implementation of new software (and a new farm return) should be based on up-to-date methodologies for software development. Such methodologies (that are available under different names with often -slightly-different contents) often start with Information Strategy Planning. This activity

links the objectives of the information system under development with those of the organisation(s) themselves. Such an activity would investigate the demands of stakeholders, problems with the old system and a first lay-out for the new systems. Secondly the activity of Information Modelling is carried out: this leads to a description of all the data and activities that the new system contains/supports. On the basis of this model (comparable to a plan drawn by an architect when you build a new house) is the basis of writing software and choosing the technology/hardware.

A large part of the software in the RICA network runs at several locations and platforms (e.g. IBM, VAX, PC). This is even more true for databases. Especially in accounting, part of the data and datadefinitions are implemented in commercial accounting packages used by farmers and farm accounting offices. Taking this fragmented situation into account, it does not make sense to develop software and data definitions at one place (Brussels) and to distribute it through the network. On the other hand it also makes no sense (and leads to confusion on data definitions) if software is written 15 or more times without sharing costs and expertise.

The development of a Reference Information Model that could be used by member states and commercial software companies as a reference for their own software development is an attractive solution to this problem. It could start by providing an information model for the current and the new farm return (including meta data and data checks), as was proposed under the name RICASTINGS in the first PACIOLI Reflection Paper (Poppe et al., 1995). It then could move on to model the total accounting process (for farm accounting and those liaison agencies that carry out the accounting themselves) and to define EDI messages between the different organisations in the RICA-Network. In this way the project would support a new farm return, more rapid results, quality (harmonisation), and cost effectiveness (by sharing costs between member states). It could also help to make data available to users that are at the moment only available at the level of the local accountant (Van Lierde and Taragola, 1996).

Currently the IDA programme supports the development of IT networks between governments of the EU. Perhaps such a project would partly fit in the objectives of IDA.

<i>Title:</i>	<b>Introduce modular flexible information technology in RICA</b>
<i>Aim:</i>	Develop software to access the data in the RICA at different levels of aggregation (EU, region etcetera)
<i>Products:</i>	Software, distributed databases

One step further than the development of a reference information system and EDI messages is the introduction of modular information technology. In this project idea, software would be developed to access the data in the RICA at different levels of aggregation. Currently data are transferred physically from the accounting office to the regional level and then up to the national and the EU level.

With the current technology on distributed databases this is probably not necessary anymore. By creating access to e.g. regional databases for all the partners in the RICA network, one could save the need to physically transfer the data and maintain a database in e.g. Brussels. A query on the EU database would then imply a message to the regional databases. It should be checked if this is feasible, and what it means for checking procedures that are carried out by the RICA unit of DG VI.

**Title:** FADN on the Internet

**Aim:** Develop a (prototype) service for current and new FADN users (academic world, regions, farmers) to get better access to (aggregated) results of the FADN.

**Products:** Web service, report on user's needs, report on standard definition for an internet service, report on evaluation of final system, prototype of a network service for the farmers

One of the shortcomings of the current RICA is that this rich source of data is not made available to the public. In the past annual books with data and even micro fiches were distributed. At the moment, due to capacity problems, DG VI has to restrict its service to some tapes to member states, standard tables for those who are able to find the unit and a small contribution to the annual report by the Commission on the State of Agriculture. These activities are supplemented by contributions by member states: for instance in 1994 France published a report with regional results at EU level.

This situation is regrettable. In his report on FADN indicators and its update for the third PACIOLI workshop Hill (1991, 1996) noticed that this should be improved. There seems to be a large discrepancy in many FADNs between the amount of money spend on data gathering and that on publishing and research with the data.

One argument for more publications is based on the idea that access to (expensive) governmental information should be available for the public. More important for the RICA is self interest. More feedback to farmers and especially regions could improve the quality of the data (Astorquiza, 1996). By providing the academic world with data, the EC would get a lot of interesting research reports back, without having to pay for the research (Bailey, 1996). The first feed back on Farm Trends, a new newsletter by one of the members of the RICA unit, is very promising. Reports and experiences are flowing in through the E-mail, making a large network available for the Commission and other RICA partners.

Currently the INEA and LEI-DLO have experience with the Internet, and especially the World Wide Web (WWW), its multi media section. The INEA has made data available at its server from the FADN, especially for the regions (Bonati, 1996). The LEI-DLO put its annual publication with statistics from the FADN on arable and livestock farming on the WWW (<http://www.lei.dlo.nl>).

Like several Ministries of Agriculture (London, Bonn, The Hague) and the European Commission also installed a WWW-server with a lot of information. This project indication proposes to develop a special (home) page for the RICA and to provide aggregated RICA data. It also will provide suggestions how to run the WWW-site in the future: as new RICA data do not come available every week, the interest of the surfing users should be attracted by e.g. providing new analyses and special tables on current policy items.

For the moment there seems to be no problems to disseminate aggregated data: this leads not to privacy problems. Making individual data available (even in a form where the individual would not be recognisable as detailed geographic information is deleted) could be very problematic for some countries like Germany, although it is not uncommon in e.g. the U.K. It could be attractive for academic users to make queries on the individual database, where the output -to solve the privacy problem- is in tables with a minimum number of farms or a regression analysis based on a minimum number of farms. In France the ARISTIDE system provides this option. It is not clear if this would be acceptable for countries with a strict privacy regulation like Germany.

At the moment several programmes provide financial support to such innovations. The EU programme INFO 2000 tries to improve the 'content industry' of IT, and special attention is given to projects that promote the use of public data. The Telematics for Research programme could also be a potential source for funding.

<i>Title:</i>	<b>Modernization of farm management accounting</b>
<i>Aim:</i>	Carry out research to provide guidelines and prototypes for the development of accounting modules in farm management information systems for data-intensive farms in 2005.
<i>Products:</i>	Guidelines and prototype for software developers

This project indication is the first of three that are not restricted to RICA, but deal with farm accounting in general. They are nevertheless related to agricultural policy in one way or another, and could therefore also be of interest for the RICA community.

More and more farms have an on-farm computer for management purposes, sometimes including accounting. These management information systems are also being connected to process computers (e.g. on tractors or in the milking parlour) and to off-farm databases and EDI systems. New developments in agriculture will increase the use of farm management information systems: precision farming, accountability of farmers (environment, product liability, paperwork for subsidies and set aside) and tracibility of products in the product chain are some examples of this trend. Developments in IT (e.g. EDI, Internet, Geographical Information Systems, expert systems and robotics) could have the same effect. This will influence the data gathering activities of FADNs.

In their paper to the third PACIOLI workshop Meeusen & Poppe (1996) argue that farm accounting has to change, as farmers are more and more an

explicit part of the agro-ecological production chain. As part of the Effective Consumer Response (ECR) tracing and tracking of products is an important issue. That involves registration activities by farmers, that need to be auditable. In addition the agri-business needs information (a.o. for brand management) on the environmental impact of all the stages in the production, including at farm level. Life Cycle Assessment (LCA) is an attractive tool for this. Farm accountancy data is an attractive data base for LCA. However data can only be interpreted in relation to a monitoring system that provides authoritative information on e.g. regional averages and the best 20% of the production. Co-operatives, as leading agri-business firms that translate market information towards farm management decisions, also need to monitor the evolution of competitiveness in their agro-ecological production chain. In conclusion: farmers face demands for data that should be solved by integrated farm information systems, in order to keep it simple and auditable.

It is not very clear how farm accounting will and should develop in this environment. Looking to policy goals like higher competitiveness and simplification, it makes sense to promote farm accounting for these farms and to make it as simple as possible, integrated with other parts of the management system. Such an integration leads to less data entry and better use: the farmer has to integrate technical, environmental and financial data in his decisions, so his management information system should support this integrated decision making.

The small and medium sized businesses that currently provide software for farm management information systems do not have many know how in farm accounting and have not much experiences in integrating it in new software development. On the other hand accounting software is in many countries becoming more and more dominated by a few large suppliers. They lack know how of the agricultural sector and often overlook the fact that farm accounting has some special characteristics (e.g. no accounts payable/receivable but nevertheless information on trade partners, complicated partnerships - see Poppe, 1991 for more details).

To overcome this situation, this project indication proposes to develop guidelines and prototypes for software developers on how to include accounting functions in future management information systems for IT advanced farms. These guidelines and prototypes are pre-competitive.

<i>Title:</i>	<b>Taking stock of accounting issues</b>
<i>Aim:</i>	Carry out research to provide information and statistics on current and future issues in agricultural accounting
<i>Products:</i>	Survey of accounting methods including current and future issues

Agricultural accounting is not a very well known activity. This is strange: in many EU member states farmers are obliged to keep books, some EU Regulations on farm modernisation prescribe accounting and policy measures like the current CAP reform have a large influence on the content of accounting. Thus policy makers influence agricultural accounting, farmers pay their accountants

large sums of money and between these two sides is a black box: the rather unknown profession of farm accountants.

There is not much awareness, even in the profession itself, on the current academic and political issues. There is no equivalent in the EU nor (as far as PACIOLI partners know) in one of the member states of the Canadian study on the issues in farm accounting (Canadian Institute of Chartered Accountants, 1986). Although a European Accounting Organisation exists, there seems to be no active forum on agricultural accounting. Discussions between professionals of different member states on e.g. environmental accounting, simplification, auditing and the effects of General Accepted Accounting Principles (GAAP) are limited to PACIOLI, RICA or occasional visits of individual professionals. There is not much cross border cooperation (e.g. professional discussions on standards or environmental accounting) between commercial accounting organisations.

As a result of this situation research and innovation are low. The involvement of European agricultural accountants in international activities as those of the IASC (International Accounting Standard Committee) is not too high and mainly based on the (sometimes not very close) contacts of organisations of certified public accountants with the agricultural sector. This low involvement is not unique for agriculture: it is striking that in November 1995 (COM 95(508)) the European Commission decided to increase the support of the international harmonisation process of the IASC.

European policymakers do not have a clear platform to discuss their policy proposals that effect farm accounting with professionals and thus they are also not able to make use of the expertise of the profession. The fact that national tax laws heavily influence farmer behaviour and influence international trade (Dunlop et al., 1995) often goes unnoticed by policymakers. Also not much is known on the use of accounting by farmers and their attitude towards it.

This project indication proposes to take a first step to improve this situation by carrying out a survey of accounting methods (including current and future issues) and to discuss this with professional organisations, e.g. in a joint conference with policy makers. Such a survey could be more or less comparable with the work carried out in Canada and could also support the EU input in the work of the IASC.

Research with the survey data could provide clues on why and how farmers use accounting and how farmers value current accounting practices and software. Such positive theories (taking farm systems and learning styles into account) would be a welcome addition to the normative engineering research that dominates IT development.

<i>Title:</i>	<b>Farm accounting as a policy instrument</b>
<i>Aim:</i>	Carry out research on the usefulness of accounting as a policy instrument in e.g. extension, structural policy, tax policy and environmental policy
<i>Products:</i>	List of useful incentives for promotion of ag. accounting, suggestions to adapt farm accounting towards a tool for policy compliance, suggestions for simplification of paperwork in agriculture

As noted above: in many EU member states farmers are obliged to keep books, some EU Regulations on farm modernisation prescribes accounting and policy measures like the current CAP reform have a large influence on the content of accounting. Especially the CAP reform has increased the amount of paperwork for farmers (Himanen, 1996). Simplification is now thought necessary (Fischler, 1995).

Nevertheless: as farmers grow bigger they will more and more be subject to normal instead of special agriculture tax systems (e.g. VAT). In situations with a radically reformed CAP this could more often lead to income support based on real incomes of the family, instead of production related payments. In an analysis of the Spanish FADN data Gomez-Limon and Berbel (1996) conclude that the current Spanish tax system already contains several incentives for farmers to use a normal income tax and VAT system instead of a simplified agricultural regime. To promote accounting these incentives could be made larger, but fiscal fraud and psychological factors are thought to be the main obstacles.

In structural policies (see EEC Council Regulation 797/85 dated 12 April, 1985), a forced adoption of farm accounting is thought to be useful. Environmental policy also could lead to new forms of accounting and paperwork: the Netherlands is making mineral accounting obligatory (Breembroek et al., 1996). These examples show that the promotion of farm accounting as well as its simplification is an important policy issue. The Fischler paper takes the same point of view towards CEEC countries (promotion) and the EU (simplification). The use of accounting as a policy instrument in environmental issues is still underdeveloped, but could be an interesting instrument in Good Farming Practice as well as in cross compliance obligations. The same is true for its use in product traceability systems and production chains (Meeusen & Poppe, 1996).

Such applications of accounting (simplification and promoting adoption) in policy measures require a good understanding of agricultural accounting. This project indication proposes to look into the (im)possibilities of farm accounting as a policy tool for different kind of policies (e.g. income policy, environmental policy, structural policy, compliance) and to make suggestions for simplification.



## 4. RICAs REFORM - TOWARDS A PROGRAMME

In the previous chapter 16 suggestions for projects are described. All discussions in the three PACIOLI workshops have been accumulated in these 16 proposals. Though very serious efforts have been made to involve all types of stakeholders in the process that generated these proposals, we still have to continue to check whether these ideas will have sufficient support by the persons and organizations that have to commit themselves for realization of the projects. In this respect the ideas have to be considered as suggestions that still have to be improved and focused on their needs as much as possible.

### 4.1 The need for a Programme

Looking at the individual proposals it must be realized that the projects will be interrelated very much. For instance Development of a PECO-RICA will interfere with the 'Estimation of data needs', in a more general sense; the 'content' of the data will interfere with the organizational development. For some of the projects their will be a logical order; e.g. elements for a 'Quality Programme' will be a prerequisite for development of 'Cost effectiveness management'. The projects should therefore be clustered in one programme. The programme management in this structure is accountable for the efficient integration of the projects.

In order to make our ideas operational it is necessary to formulate our ideas into projects. The PACIOLI group will generate as its deliverable so-called 'SMART' projects; where SMART is the acronym of proposals that will be:

- Specific.
- Measurable.
- Acceptable.
- Realistic.
- Traceable in Time.

Each project will have its own objective, require its own expertise network and its own stakeholders, financial structure and project management. Of course there will be a significant degree of overlap in these aspects between the projects. Nevertheless it is important that there is a specific task for coordination between the projects; the so-called programme level.

### 4.2 Towards a FADN network

At first glance it might be an option that the programme management will be performed by the RICA unit, supported by the RICA committee. As most

of the proposals show, there is however a tendency in FADN management towards a more flexible, network based way of working. Data and information are valuable properties for all stakeholders and to make optimal use of the value of data it is crucial to be market oriented; EU and memberstate Ministries have to be considered as clients. In future FADN management this will require a level of flexibility and innovative power that can not be obtained by a massive and inert top-down controlled/bottom level blocked organization as the RICA is sometimes perceived to be nowadays. Because all coordination is concentrated in this organization (the RICA unit and its management committee), the official organization with a task on high level prioritization is also burdened with discussion of very much detail on definition of FADN data.

A more informal, dynamic network with a mixture of people from various organisations close to the 'working floor' with high 'memberstate involvement', might be a good instrument to coordinate innovative actions in the reform of RICA. This includes not only actions in the innovation traject but hereafter also in the long term in management of gathering and exploitation of the data. The current PACIOLI group, extended with all the other (future) EU memberstates, might be an effective platform for future FADN management. The RICA unit and its management committee in this option can concentrate on its most important top level tasks; legislation, funding and discussing the needs for data and analysis (micro economic research) for DG VI. To go from the concerted action PACIOLI to the PACIOLI programme (for short: PACIOLI 2), the programme platform can play an important role in coordinating the projects and, most important, can be an intermediary between the projects and the formal circuit like the RICA unit, the RICA committee and the financial resources. In this way the expertise at working floor level and the 'informal energy' available in the individual networks can be used much more effective. This is crucial in making a optimal use of the high potential offered by the FADN instrument.

## REFERENCES

All references are papers published in G. Beers et al. (1996c), unless indicated otherwise below.

- Beers, G., K.J. Poppe, D.F. Spiering and H.C. Pruis (eds.) (1995a)  
*PACIOLI 1 Farm accountancy data networks and information analysis; workshop report; The Hague, LEI-DLO; Mededeling 532*
- Beers, G., D.F. Spiering and H.C. Pruis (1995b)  
*PACIOLI 1 Introduction and information modelling; summary; The Hague, LEI-DLO*
- Beers, G., K.J. Poppe and H.C. Pruis (eds.) (1996a)  
*PACIOLI 2 Accounting and managing innovation; workshop report; The Hague, LEI-DLO; Mededeling 534*
- Beers, G., K.J. Poppe and H.C. Pruis (1996b)  
*PACIOLI 2 Accounting and managing innovation; summary; The Hague, LEI-DLO*
- Beers, G., K.J. Poppe and H.C. Pruis (eds.) (1996c)  
*PACIOLI 3 Need for change; workshop report; The Hague, LEI-DLO; Mededeling 536*
- Beers, G. and H.C. Pruis (1996d)  
*PACIOLI 3 Need for change; summary; The Hague, LEI-DLO*
- Breembroek, J.A., B. Koole, K.J. Poppe and G.A.A. Wossink (1996)  
*Environmental Farm accounting: the case of the Dutch nutrients accounting system; In: Agricultural Systems, 51 (1996) 29-40*
- Canadian Institute of Chartered Accountants (1986)  
*Accounting and Financial Reporting of Agricultural Producers: a research study*
- Dijk, J., J. Schering and K. Lodder (1995)  
*Improvement of the weighting system of the FADN; The Hague, LEI-DLO*

- Dunlop, D.M., G.M. Perry and C.J. Nixon (1995)  
 An examination of the tax subsidies to the dairy sectors in Canada, Germany, New Zealand and the United States; in: *Journal of Agricultural Economics* 46 (3) (1995) 327 - 335
- FAST (1988)  
 The Fast Programme 1984-1987: Results and recommendations, vol. 5 and vol. 6; Brussels
- Fischler, F. (1995)  
*Study on alternative strategies for the development of relations in the field of agriculture between the EU and the associated countries with a view to future accession of these countries (Agricultural Strategy Paper)*; Brussels, December 1995
- Gouillart, F.J. and J.N. Kelly (1995)  
*Transforming the Organization*; New York
- Hartog, P.A., A. Molenkamp and J.H.M. Otten (1992)  
*Kwaliteit van administratieve dienstverlening*; Deventer, Kluwer
- Hill, B. (1991)  
*The calculation of economic indicators - making use of RICA (FADN) accountancy data*; Luxembourg
- Leeuwen, G. van (1996)  
*Policy making and the Farm Accountancy Data Network*; In: G. Beers et al. (1996a); PACIOLI 2; Mededeling 534
- Poppe, K.J. (1991)  
*An international comparison of farm accounting software*; The Hague, LEI-DLO; Mededeling 449
- Poppe, K.J. and A. Tängl (1992)  
*Monitoring the Hungarian private farming sector - a review of the current situation*; The Hague, LEI-DLO; Mededeling 473
- Poppe, K.J. and G. Beers (1995)  
*PACIOLI 1 On data management in farm accountancy data networks*; Reflection paper; The Hague, LEI-DLO; Mededeling 533
- Poppe, K.J. and G. Beers (1996)  
*PACIOLI 2 On innovation management in farm accountancy data networks*; Reflection paper; The Hague, LEI-DLO; Mededeling 535