PACIOLI 5
Development of farm accountancy data networks

Workshop report

May 1998

Agricultural Economics Research Institute (LEI-DLO)
ABSTRACT

PACIOLI 5; DEVELOPMENT OF FARM ACCOUNTANCY DATA NETWORKS; WORKSHOP REPORT
Beers, G., K.J. Poppe and M.M. van Rijswijk
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The PACIOLI project started as a concerted action for the EC in 1995 and 1996 and actually consisting of four workshops. Because of the succes of PACIOLI, the contributing participants decided to organize a fifth PACIOLI workshop in June 1997 in Uppsala, Sweden. The objective of PACIOLI is to explore the needs for and feasibility of projects on the innovation in farm accounting and its consequences for the data-gathering with Farm Accountancy Data Networks (FADN). The workshop in Sweden concentrated on the preparation of a proposal to adapt the EC's FADN in the form of feasibility study.

Farm Accountancy/Innovation/Typology/Income
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Managers and users of the Farm Accountancy Data Networks do not have many occasions to discuss informally the issues of innovation. The concerted action PACIOLI was started to improve this situation and was in this respect very successful. After the closing of the official AIR-supported concerted action (AIR 3-CT94-2456), the participants decided to keep the network alive.

The Swedish delegation, leaded by prof. Bo Ohlmér (Swedish University of Agricultural Sciences, Uppsala), volunteered to organize the first follow-up workshop, PACIOLI-5. It was held under favourable weather conditions in mediaeval Wick Castle, near Uppsala in June 1997. This book is the workshop report of that meeting.

The workshop was mainly dedicated to discuss innovation the EU’s FADN, as an invitation to tender was recently issued by the Commission. Putting together a coherent proposal turned out to be a difficult task, that could not be completed in the workshop. Participants however can be satisfied that LEI-DLO, Statistics Sweden, Enita de Bordeau and INEA, with the cooperation of many PACIOLI participants, succeeded in completing the proposal after the workshop. And, in competition in a tender procedure, the proposal has been selected by the Commission to be carried out.

With that in mind, there is even more reason to organize PACIOLI 6 than the participants of the workshop in Sweden already stressed in their concluding session.

The Hague, May 1998

L.C. Zachariasse
This workshop report is the result of a workshop held in June 1997 in Sweden. It was the follow-up of four successful workshops of the concerted action PACIOLI. PACIOLI-5 was mainly dedicated to innovation in the Farm Accountancy Data Network (FADN) of the European Commission. The trigger for this theme was an invitation to tender for a feasibility study on the FADNs Farm Return.

In addition to this theme, papers were presented on several topics that relate to FADNs. These topics include:
- the future needs of the Community Farm Typology;
- the impact of CAP-reform and alternative compensation schemes on German agriculture;
- the measurement of total net income in Norwegian farming;
- the improvement of the use of accounting data for public purposes, with special reference to France.

Special discussions were organised on quality management and the introduction of Internet. The discussions on quality management were based on the process models of the FADNs, with reviews of perceived problems by outsiders from other participating countries (peer review).
HOW TO READ THIS BOOK?

This book is the result of the fifth PACIOLI workshop. The workshop was organized around three days of presenting papers, discussing them and discuss related subjects. This book follows the order of the performances in the workshop.

After the introduction to PACIOLI 5 (chapter 1), the tender on farm return was presented (chapter 2). The participating countries were asked to present the progress since PACIOLI 4.

Two detailed papers were presented, one on farm typology (chapter 3) and one on the impact of CAP-reform (chapter 4).

The afternoon of the first day was dedicated to a first working group session on the study for the new farm return (chapter 5). This was followed by two more detailed papers, one on the Norwegian FADN (chapter 6) and one on improvement of accountancy information for public use (chapter 7).

The morning of the second day was dedicated to the session on the study for the new farm return (chapter 8), followed by an excursion to a large scale farm (using data from Global Positioning Systems) in the afternoon.

The results of the last day concerning quality management are represented in chapter 9.

Finally a plenary session was held to discuss the PACIOLI follow up. The report of this discussion is the last chapter of this workshop report.

In the appendices the curricula vitae of the participants of this workshop and the name, and addresses of the participants of all the PACIOLI workshops are presented.
1. PACIOLI 5

1.1 The PACIOLI project

This section gives an introduction and some backgrounds of the fifth workshop in the PACIOLI project. PACIOLI started a concerted action for the EC in collaboration with the RICA/FADN unit. The objective of the concerted action is to explore the needs for and the feasibility of projects on the innovation in farm accounting and its consequences for data-gathering on a European level through Farm Accountancy Data Network (FADN). The long term objective of PACIOLI is to come to an infrastructural network of experts for continuous development of FADNs. More specific, the concerted action is a step in preparation and development of projects in which information models will be developed that support the development of information systems to improve and extend the RICA/FADN network with various types of data in order to support policy making and evaluation at EU as well as member state level.

1.2 Previous workshops

The concerted action has already lead to four workshops:

Workshop 1 (March ‘95, the Netherlands): Introduction and Information Analysis

In the first workshop the concerted action has been introduced and the objectives have been discussed. The need for Strategic Information Management (SIM) in agriculture has been identified and some experiences with this in various member states were presented. A special focus was on the Dutch experiences with the Information Modelling Programme.

Results were published in:

- Workshop Report; ‘Farm accountancy data networks and information analysis’. Mededeling 532.

Workshop 2 (September ’95, the Netherlands): Accounting and managing innovation

In this workshop the process models of the various FADNs have been discussed and compared. With stakeholder analysis the persons and organizations that are relevant for FADNs have been identified and classified. Discussing recent innovations in the various networks revealed the impor-
tance of stakeholders for the PACIOLI project. On the way to innovation the gathering of data on issues like environment and forestry was discussed. In the software field the use of data with a client-server approach using a Windows interface was presented.

Results were published in:
- Workshop Report; 'Accounting and managing innovation'. Mededeling 534.

Workshop 3 (March '96, England): Need for change
In the third workshop ideas for innovation were generated and presented. This process was stimulated by discussions about the effect of new Agricultural Policy, as reflected in e.g. the Fischler paper, on the information requirements of policy makers and thus on the data that should be supplied by FADNs. The rough ideas have been combined and structured, which resulted in 16 project ideas.

Results were published in:
- Workshop Report; 'Need for change'. Mededeling 536.
- Reflection Paper; 'RICA: Reform issues change the agenda'. Mededeling 537.

Workshop 4 (October '96, Italy): Proposals for innovation
In this workshop the project indications of PACIOLI 3 had to be turned into project proposals. A number of problems had to be solved. Based on the discussions in the working groups and the arising consensus, it was decided to split some front office projects, and to cluster some infrastructure projects. As a result the 16 project ideas were brought back to 13 project proposals.

Results were published in:
- Workshop Report; 'Project proposals for innovation'. Mededeling 538.
- Reflection Paper; 'Proposals for innovation of Farm accountancy data networks'. Mededeling 539.

1.3 Issues of the 5th workshop
The issues of the 5th workshop were presented by the workshop leader as follows:
From Parma to Uppsala
- 13 proposals for innovation of FADN and Farm Accountancy
- Presented at RICA-committee
- All proposals: Public Domain!!
- Reflection Paper and summary
The PACIOLI Proposals

New areas:
- High quality food production systems
- Management Rural Development
- Recording Environmental Impact
- Evaluation of Rural Landscape

Improved use:
- Rapid Results
- Micro-Economic Information System
- Micro-Economic data to analyse policy issues

Application FADN-know how:
- Towards RICA for PECO countries
- Simplification and development of farm accounting

Improving FADNs:
- MACE: Managing cost effectiveness
- Typology 2000+
- Quality in harmonization of FADN data
- Standardization of data handling

Objectives PACIOLI

- Professionals in FADN and Farm Accounting:
  Exchange of:
  - Ideas
  - Experiences
  - Plans
  - Knowledge
  For:
  - to do a better job
  - cooperation
  - Interactive!!

Specific Objectives PACIOLI 5

- Exchange what happened/is going to happen after PACIOLI 4
- Tender on New Farm Return for RICA
- Quality Programme
Provisional programme

Monday:
1. Set the Agenda:
   - Tour de table on ‘what has been done with the proposals’
   - Presentation
2. Start development proposal for New Farm Return tender
3. Presentations:
   - Tiainen
   - Kleinhanß
   - Frank
   - Del'Homme

Tuesday:
- Development of tender proposal New Farm Return
- Social Programme
  - Farm visit
  - Wick Castle

Wednesday:
- Finishing the Proposal
- Quality Programme
- PACIOLI 6

At the end of Tuesday morning it was decided to change the Wednesday programme. Background was the unsatisfactory progress on the proposal for the tender (it was not easily to work it out with a large group) and the fact that not everybody was interested in carrying out the study. It was decided that LEI-DLO, Enita de Bordeaux, INEA and Statistics Sweden should take the lead in working on the invitation to tender and to change the Wednesday programme into:

09.00 Start
09.15 Workgroup session 4 'Quality Projects'
10.30 Plenary Report
12.00 FADN in the Internet
12.30 Lunch
14.00 Workgroup session 5 'PACIOLI 6'
14.45 Plenary Report
15.30 Closure
2. INTRODUCTION WORKSHOP

2.1 Present situation of project proposals and setting objectives of the workshop

The fourth workshop has lead to 13 project proposals, which are distributed over four subjects:

**New areas:**
- High-quality food production systems
- Management Rural Development
- Recording Environment Impact
- Evaluation of Rural Landscape

**Improved use:**
- Rapid Results
- Micro-Economic Information System
- Micro-Economic data to analyse policy issues

**Application FADN-know how:**
- Towards RICA for PECO-countries
- Simplification and development of farm accounting

**Improving FADNs**
- MACE: Managing Cost Effectiveness
- Typology 2000 +
- Quality in harmonization of FADN data
- Standardization of data handling

**Progress report**

A tour the table showed that until now not much had been done with the project proposals as developed in PACIOLI-4.

The INEA (mr. G. Bonati) had used some of the suggestions in a proposal for a concerted action in the FAIR-programme on rural information systems.

The LEI-DLO (mr. K.J. Poppe) reported three different roads of follow-up:
- CREAM (Cap-Reform: an Economic impact Analysis with Microdata) had been formulated by LEI-DLO, FAL Braunschweig, Carlos III University in
Madrid, INRA and SCEES as a project proposal in the FAIR programme. The proposal was based on a Dutch publication on the competitive position of Dutch agriculture, and on PACIOLI-4 proposal G (using micro-economic data to analyse policy issues). However it turned out that this proposal had not been successful in the tender procedure;

- SPARK, a project proposal on multi-media for training by the University of Edinburgh developed for the Telematics for Research programme. The LEI-DLO was asked to participated and suggested to include some of the PACIOLI-ideas on Internet;

- Accounting 2000, the innovation project of the Dutch FADN.

Other member states also reported the use of PACIOLI ideas in their own innovation work. This included Belgium, Finland and Switzerland, all undertaking considerable innovations with respect to information technology in their FADN.

2.2 The tender for a new FADN farm return, as issued by the EC

1. The EU-FADN farm return: the need for revision

This study is part of an overall modernization of the EU-FADN as an information system. Several member states are also in the process of modernizing micro-economic information management and analysis for policy of research purposes. A revision of the EU-FADN farm return is appropriate at a time when the data handling environment on the Commission site is being renewed.

The EU-FADN is the primary instrument of micro-economics analysis in the European Union. The data required are collected from farm accounts by member states in national farm account networks. They are converted and transmitted to the Commission according to the data definitions are structure of the EU farm return.

The need for revision comes from the answers to the following questions concerning the current farm return:

- does it satisfy the contemporary information needs?
- is it well documented?
- is it possible to enable data to be much more rapidly available?
- is it possible to simplify data utilization?
- is it sufficiently flexible to respond to changes in the data and changing user requirements?

2. The EU-FADN farm return: first steps

In order to answer the questions in point 1, the pre-study should review:

- the current needs of potential users. At the outset the primary objective of FADN was to estimate the level and changes in farm incomes by type of farming. Now the uses of micro-economic data are multiple. Many
potential users exist outside the Commission services including, amongst others, national administrations, researchers and producer organizations; an exhaustive review of micro-economic information needs, data availability and data collection and use in each Member State, and, if relevant, in the regions. At least the following areas should be reviewed:

- definition of a farm and the field of survey;
- economic indicators (including treatment of public transfers);
- forecasts;
- costs of production;
- labour force;
- statistical applications;
- environmental indicators;
- non-agricultural income;
- ensuring internal compatibility of the data.

3. The EU-FADN farm return: Questions to be answered

3.1 For both data currently collected and new data foreseen, are farm accounts or the farm accounts networks the most efficient means of collecting the data? What other means exist? Could these means be used for the whole EU?

3.2 What should be the new FADN/RICA objectives?

3.3 Is it necessary to change significantly the current farm return?

The pre-study should analyse the advantages and drawbacks of a new farm return, as compared to no change or to minor modifications only. In particular, special attention should be made to the time lag between a decision to change (taken by the Community Committee or by the unit VI.A.3) and the availability of correct data - ready for onward sending to the Commission services - in all member states. Administrative constraints at EU, national and local levels should be considered.

3.4 What form should a new farm return take?

If the answer to the previous question is yes, different possibilities of data collection should be considered according to the criteria:

- obligatory or voluntary;
- periodicity (annual or occasional);
- speed: rapid or 'normal' availability;
- organization: a single return or separate surveys.

Different options can be looked at according to, for example, the figure below:
The following criteria should be taken into consideration when assessing these options:

- More rapid availability of data (clean data within six months of the end of the accounting year?). Application of technical changes made in information collection, management and exchange which allow quicker disposal and better utilization of data collected, and can reduce the costs of EU-FADN;
- a level of flexibility that enables rapid availability of new data after decisions to change data collection requirements (in response to changes in information needs or data available);
- encouragement of common definition and unique collection of data;
- easier documentation and utilization of the data available;
- integration of different data sources;
- reduction in resources (cash expenditure and/or staff) used for the collection and verification of farm data, both in member states and within the Commission services.

4. **The end product of the study**

Considering the answers given to the questions made in point 3, the end product of the pre-study will be a call for tender for the follow-up project 'Implementation of the new EU-FADN farm return'. This call for tender will cover:

- feasibility and structure of information required. How, in practice, can this be provided along standard definitions and in a way so as to be of use for EU analysis? Should part or all of any additional information required be in a separate sample or sub-sample of the FADN sample?
- easy and rapid modification to enable inclusion of new data;
feasibility of insertion of the EU farm return(s) in member states and in the Commission services. Both technical and administrative aspects of the following points should be covered:
- collection of new data in member states;
- adaption conversion programmes, where they are still necessary;
- adapting the EU control programme, so that it can be run as close as possible to the data source;
- interface between the EU data base and data consultation system;
- documentation on the quality and content of the data base;
- continuity of the data base and production of results.

The call for tender presented will be treated as a working document in the final preparation of a further call for tender for the implementation of the new EU farm return.

The following tasks are not covered in detail (although they are to be taken account where they have a bearing on the farm return) in this study:
- rewriting of control and typology programmes;
- rewriting of conversion programmes;
- study and improvement of the farm sample selection of holdings for the EU-FADN.

They will be the subject of separate projects.

A plan for the implementation of a new EU farm return. The plan should include:
- resource needs: cost and staff (internal and external) requirements and their timing;
- a timetable for implementation that covers all member states and the Commission services. The problem of different timetables of adoption in different member states and the possibility of implementation in 2 stages should be considered. Necessary revision of legislation and procedures in all member states should be taken into consideration;
- a system of standardization of definitions of farm data collected in the EU farm return.

5. Timetable

Work should be completed within 9 months of the signature of the contract, in the following phases:
- three months after signature: report on the need for revision of the EU-FADN farm return, current user needs and member state review (points 1 and 2);
- six months after signature: answers to the questions in point 3;
- nine months after signature: presentation of the call for tender.
6. **Other points**

- The contractor must be able to interview on site in all member states. Preference will be given to an international offer;
- the study reports are to be written in English.
3. SOME NOTES OF THE FUTURE NEEDS WITH COMMUNITY FARM TYPOLOGY

Simo Tiainen

3.1 History and principles of the Community typology

The creation of Common Agricultural Policy in the 60's with certain objectives brought also a need for information on the situation in agriculture. The first survey on the structure of agricultural holdings carried out by Statistical Office of the EC took place in 1966/67. About the same time the Community FADN was created and the DG VI started to carry the annual survey to collect information of the farmers income.

In order to facilitate the interpretation of the results and the comparison there was a need to classify the holdings into homogeneous groups. There was need to specify different types of farms and also there was a need to measure the size of holdings. In many countries the farms have traditionally been classified according their physical criterias. However, the technical development, specialization in agriculture, expansion of indoor production and different natural conditions in different member states insist that the physical characteristics could not be the only base for classification. Therefore within the Community agricultural statistics the economic criteria was taken into use for assessing the size of holding.

This was the background to develop the Community typology for agricultural holdings (later called 'typology'). The aim of the typology is to achieve the uniform classification of farms in the Community based on the type of farming and on the economic size of the holding. From 1978 onwards the typology has had a legal base; Commission Desicion 78/463/EEC of 7 April 1978. This classification system was used in four Farm Structure Surveys between 1975-1983. The present system of classification of holdings is based on Commission Decision 85/377/EEC of 7 June 1985 (has been amended in by Commission Decision 94/376/EEC of 30 May 1994). This typology has been applied as from the 1985 survey.

The cornerstone of the typology is the term Standard Gross Margin (SGM), which is used as a classification factor. A gross margin of an agricultural characteristic is the value of the output of the agricultural characteristic (one hectare or one animal) minus value of the certain specific costs required to produce that output. because it is not possible to make gross margin calculation for every single holding therefore the Standard Gross Margin is used. The SGM is calculated for agricultural characteristics applied in Farm Structure Survey. They are determined using average basic data over a reference period of

three years. The officials in the member states calculate (or update) the SGM's every two years.

The type of farming of a holding is determined by the relative contribution of different enterprises to the total standard gross margin of the holding. The types of farming can be separated in four hierarchical levels:

- general types of farming (9);
- principal types of farming (17);
- particular types of farming (50);
- subdivisions of certain particular types (32).

The economic size of a holding is determined on the basis of the total standard gross margin of the holding. It is expressed in terms European Size Units (ESU) by dividing the total number of SGM's (in ecu) by a coefficient. This coefficient is adjusted over the time in order to avoid the effect of inflation to the economic size. The coefficient for converting the SGM's to ESU is adjusted on the basis of gross value added price index for agriculture. At present 1 ESU equals 1,200 ecu.

Since early start the typology has been common to the FADN and FSS. The FADN is the sample survey which is collecting information on the certain farm sample of the Community. The selection of the holdings in member states is based on the typology. The field of observation is formulated for holdings having or exceeding a minimum economic size. The FADN results are extrapolated to its field of observation, which in the Community level is known only via the Farm Structure Surveys led by Eurostat.

The typology is administrated by Eurostats unit F-1. For consultation with member states there is an Expert Working Group "Typology of Agricultural Holdings' having a meeting once or twice a year. For doing (legal) amendments to typology there is a need to have the opinion of both Standing Committee for Agricultural Statistics and Community Committee for the Farm Accountancy Data Network.

3.2 The areas where the weakness can be found in the present system

3.2.1 Measuring the economic size - equation with too many variables

As described above the system of defining the economic size of the holding is to divide the total number of SGM in ecu by a coefficient. The target for that method is to avoid the affection of inflation of the size of the average European agricultural holding. There is one pan-European coefficient which is the same for all member states and all products.

The typology aims to compare the situation of the holdings between member states. However, the present system arise a problem with that; the SGM's are calculated in national currencies and converted then to ecu. When the exchange rates for ecu in member states not reflect the rate of inflation the comparability between member states in suffering. About this item there was
3.2.2 Dilemma between the aim of simplifying the typology and in the same time increasing demand of more detailed information

In a typology expert group there have been discussed that in the future one important thing is to simplify the present typology. According the opinion of DG VI there can be in the future less SGM’s, less types of farming and less regions. However, at the same time there is also a need to get more information. For example the organic farming could be an example of the areas where more detailed information is needed. (The number of organic farms are still very low on the average in the EU, but the increase has been very rapid in recent years. In Austria e.g. the share of organic cultivated farms already exceed 10% of the total number of farms). To be able to reach that via typology there should be another set of SGM’s for organic production.

To simplify the typology has its danger. If there is less SGM’s it means in practice that one SGM represents several products or a 'basket of products'. That means that more information will be loosed. One essential thing in the typology is to maintain the comparability of the historical data series. Every basic change will reduce the comparability. To solve the dilemma raised - like everyone else related to typology - there should be a common understanding of future needs and goals between the member states, Eurostat and DG VI.

3.2.3 Difficulties and unharmony with subsidies

At the time when typology was created the farmers income was coming basically from sales of products. Since that many changes has taken place in CAP. Today the situation is that the share of different kind of subsidies in farmers income is nowadays considerable (and the prognose is that the share will rise in the future). Specially that is the case in Finland where during the 5 years transitional period the share of subsidies (CAP-payments, LFA, Agri-Environment, Nordic support, degressive support during transitional period) of the total income is extremely high. In some regions the amount of subsidies exceeds the incomes coming from market. For the payments of the support Finland is divided into nine areas, which are not the same as the NUTS-breakdown which is the base for SGM regions. This leads to the situation that for example in the region of Southern-Finland there are five different support areas where amount of payments can various significantly. In the typology only one SGM - of course - for region Southern-Finland is used. The SGM’s are - like they should - weighted averages of gross margins of enterprises for the different support zones in this region. When classifying a single holding this means that the

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1) Coefficients for comparing the economic sizes of agricultural holdings in the various member states of the European Union, CLASSEX 284, SOEC.

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SGM's used can be very 'theoretical' and they won't describe the actual situation of that farm. That leads to the problems with interpretation of typology results. A solution for that problem is to use (at least at national level) the different SGM's for different support regions which is again against the aim of simplifying the typology.

According the instructions of calculating the SGM's (85/377/EEC) the gross production should include the subsidies linked to products, to area and/or livestock. The system of payment for some subsidies e.g. the compensation for less favourite areas (LFA) can be so that the allocation between certain enterprises cannot be done. One of the future needs in typology is to find the harmonized solution between member countries of the treatment subsidies.

3.2.4 Treatment of forestry

In recent years the question of taking account the forestry in typology has been raised both by DG VI and Eurostat (documents RI/CC 1157/1, RI/CC 1185, CLASSEX 271). In more generally this question be asked in other words; what is the definition of agricultural holding? At the moment the definitions of the farms in EU-FADN and in FSS are as follows:

**EU-FADN:**
- a single production unit producing products, known as the farm business. Other products and services may be provided by the farm business. Farms are selected from a pre-defined part (field of observation) of the population of agricultural holdings, the farm structure survey. Inclusion in the survey is defined only in terms of the agricultural area and livestock numbers on holdings.
- The majority of incomes and assets are directly connected to the production of agricultural products;
- farm data should cover all production, costs and assets of the farm business. Activity other than production of agricultural products will be recorded in less detail (RI/CC 1185).

**Eurostat FSS**
- agricultural holding have or exceed a minimum agricultural area or a minimum level of economic activity. The threshold various between member states.

If including forestry to the typology both above mentioned surveys should still include holdings whose main activity is agricultural. It is not the task of these agricultural surveys to cover business where e.g. 50% of the average income (or labour input) is coming from forestry. Also if including the forestry in typology, it should be done simultaneously to both surveys.

The main arguments for inclusion forestry is to get better information for the total income situation in agricultural holdings. The arguments against including forestry is once again the need of simplifying (-not complicating), problems of comparability and practical problems to include very various types of forest to uniform typology.
4. IMPACT OF CAP REFORM AND OF ALTERNATIVE COMPENSATION SCHEMES ON GERMAN AGRICULTURE

Werner Kleinhanß

Scenarios of future CAP: Farm level assessment for Germany

1. Requirements and proposals of future CAP

2. Scenarios and models
   - general frame conditions
   - specification of scenarios
   - characteristics of the representative farm model

3. Impacts on land use, production and income
   - base scenarios (maintaining CAP'92)
   - simplified area based compensations
   - de-coupled compensations

4. Recommendations

Criticism with regard to CAP-reform '92

- Reform is restricted to the sector of grandes cultures and beef/sheep
- Compensation payments are dependent from production
- Negative allocation effects of obligatory set-aside
- Restricting farmers' decisions by command and control measures

Requirements for a future modification of CAP

- De-coupling of compensation payments (Green-Box)
- World-market orientation
- Re-orientation of CAP towards environmental objectives

Scenarios

- Maintenance of existing CAP (base scenario)
- Simplified compensation schemes
  - equal premiums based on arable land
  - equal premiums based on used agricultural land
- De-coupled payments
Characteristics of the farm model

- Optimization model based on linear programming
- Specification of input and output coefficients on the base of farm accounting data and other sources
- Extrapolation of input and output coefficients with regard to scenario conditions of 2005
- Mixed-integer specification of CAP instruments (e.g. small-producer scheme, premiums for beef or fodder maize, differentiation by livestock density)
- Farmers' decision on the base of variable costs, opportunity costs of land and labour (→ short term adaptation strategies)
- Aggregation of results after optimization of individual farms

Software used

- Model specification on the base of EXCEL spreadsheets
- Optimization with spreadsheet-connecting LP (XA) within EXCEL macros (running time on PC Pentium for 940 farms: 25 minutes)
- Selection of farm samples, aggregation and processing of results by SAS and EXCEL

Farm individual Data

- Farm accounting data from data bank of the Land-Data (about 45,000 farms, 200 variables per farm)
- 3-year averages in identical farms (92/93,...,94/95) to reduce yield and price changes
- Randomly selection of farm samples referring to projections of farm size for the year 2005 by farm type, size and location

Impacts of set-aside and recommendations

Obligatory set-aside

- Instrument for supply control
  - not effective in regions with a high share of small farms due to their application of the small producer scheme
- Negative allocation of land use will be induced
  - scarcity of land will increase (→ higher land prices)
Voluntary set-aside under scenario conditions of simplified compensation schemes

- Significantly lower set-aside compared to obligatory set-aside
- High additional premiums for set-aside are required to reduce cereal production (GATT restrictions)
- Positive impacts on allocation of production

Impact of simplified compensation schemes on land use and supply (unified land based premiums)

Competitive relationship between crops are equal to those of the small producer scheme

- Reduction of cropping areas for those formerly favoured by high compensation payments (oilseeds, protein crops, hemp, flax, set-aside)
- Released land will mainly be used for cereal production, therefore it will become more difficult to reach GATT restrictions for cereal exports

Variation of farm adaptations by farm size

- Small farms: no significant adaptations due to the application of the small producer scheme in the base situation
- Large farms: significant changes of land use (partial substitution of set-aside and oilseeds by cereals)

No significant differences between area based premiums for arable land respectively total area on crop production

Reduction of area based premiums will induce higher share of set-aside

Impacts on farm income and income distribution

Equal premiums for arable land or UAA

- Major frequency of income changes within the range of ± 5%
- Shift of income distribution from cropping farms in favour of beef and dairy farms
- Premiums based on the total of land induces greater income changes than those far arable land
- Income effects are depending on the level of premiums and their differentiation by regions, arable and grassland

Total de-coupling of compensation payments

- Greatest positive impacts on allocation of production
- Income transfers based on the following principles
- **social criteria**
- **functionality (efficiency, competitiveness, environment)**

Income transfers based on labour input induce drastically changes of income distribution and a shift of transfer payments from large farms in favour of small farms.

Income transfers based on compensation payments of a base period either per farm or per hectare induce only small impacts on income distribution.

Options to differentiate area based payments with regard to environmental objectives.
Structure of land use on the average of all 940 farms

Source: Own calculations based on the representation farm model

KLEINHANSS (1997)
Share of set-aside by farm type and size

Scenario 'high' WM-prices

Scenario 'low' WM-prices

Source: Own calculations based on the representative farm model

KLEINHANSS (1997)
Development of cereals and oilseeds (food) production

Scenario 'high' WM-prices

Scenario 'low' WM-prices

Source: Own calculations based on the representative farm model

FAL-BW
KLEINHANSS (1997)
Change in distribution of gross margins compared to base scenarios

Scenario 'high' WM-prices

Scenario 'low' WM-prices

Source: Own calculations based on the representation farm model

KLEINHANSS (1997)
Development of gross margins

Scenario 'high' WM-prices

Scenario 'low' WM-prices

Source: Own calculations based on the representation farm model

EAL-BW
KLEINHANSS (1997)
Impacts of different compensation schemes on distribution of gross margins within the scenario de-coupling

Source: Own calculations based on the representation farm model

FAL-BW
KLEINHANSS (1997)
Impacts of different compensation schemes by farm type and size

Source: Own calculations based on the representation farm model

FAL-BW
KLEINHANSS (1997)
5. WORKGROUP SESSION I 'ELEMENTS OF THE STUDY'

5.1 Introduction and procedure

In the first working group session the participants were asked to study the tender on New Farm Return to check and improve the matrix (reproduced in section 5.2). The matrix is divided in areas and questions. The participants had to verify whether the tender was covered by the areas as well as the questions.

For this session the participants were split up in four working groups (section 5.3). At the end of the session a plenary feedback took place.

5.2 Matrix

Figure 5.1 presents the matrix used.

5.3 Group arrangement

During the first session the participants were divided in the following four groups:

Group 1  Frank
          Ohlmer
          Kleinhanß
          Taragola
          Selenius

Group 3  Meier
          Persson
          Rantala
          van Lierde

Group 2  Panholtzer
          Larsson
          Namdarian
          Sanna

Group 4  Linden
          Tiainen
          Wilkinson
          Poppe
<table>
<thead>
<tr>
<th>Farm definition</th>
<th>Economic indicators</th>
<th>Forecast</th>
<th>Costs of production</th>
<th>Labour force</th>
<th>Statistical application</th>
<th>Environmental indicators</th>
<th>Non agricultural income</th>
<th>Internal compatibility of data</th>
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<tr>
<td>FADN/PA farm accounts alternatives whole EU (§ 3.1)</td>
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<td>New objectives FADN/PRCA (§ 3.2)</td>
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<td>Change of current return Lead time data avail. National level EU level Local level (§ 3.3)</td>
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<td>Data characteristics Obligatory/voluntary Periodicity Rapid/normal/avall. Single return Separate survey (§ 3.4a)</td>
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<td>Criteria Rapidness Flexibility Common definitions Usability of data Integration data sources (§ 3.4b)</td>
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<td>Figuur 5.1 Areas to be reviewed</td>
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<td>Product systems (organic)</td>
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<td>Regional breakdown (LFA)</td>
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<td>Food quality</td>
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</tbody>
</table>

- current needs potential user
- review micro economic info needs
- data availability
- data collection/use

- new objectives FADN/RICA
- new users
- products

(F§ 3.2) 2

FADN efficient y/n accounts alternatives usable in whole EU

(F§ 3.1) 3

Change necessary lead time data avail.
Constraints:
National
EU level
Local level

(F§ 3.3) 4

Data collection
Obligatory/voluntary
periodicity
Rapid/normal available
Single return/separate

(F§ 3.4a) 5
**Figuur 5.1 Areas to be reviewed**

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Rapidness flexibility
Common definitions
Usability of data
Integration data sources
(§ 3.4b) 6

Potential of IT effects on management 7
5.4 Results

Group 1

Products of the study

Proposal for a FEASIBILITY study Wik, June 1997

FEASIBILITY study 9 months October 1997-July 1998

- Interviews
- Surveys
- Analysis
- Write report March 1998
- Write draft call for tender June 1998

Study implementation of new farm return

Group 2

1. The product?
   - report
   - network
   - increased expertise

2. Outline of the report
   1. Introduction
   2. The microeconomic data needs in CAP
      - describing the current situation
      - needs
      - lack of information
   3. Current information available
      - situation in the member state (including all information)
      - quality possibilities to use
   4. New areas to be covered/ changes take place in member states
   5. Opinions of the member states
      - obligatory versus voluntary
      - periodicity etcetera
   6. Conclusions and proposals
3. **Major activities**
   - Happenings inside DG VI
     - in the study the "common understanding" of the commission has to be described
     - Opinions of the Member States (The only way of doing this is doing it by interviews)
     - Writing the report

**GROUP 3**

1. **Products**
   - Besides the report new projects could be proposed
     - For example: environmental indicators

2. **Outline of the report**
   1. Results of the questionnaires need for a new farm return?
      - What should be changed?
      - What are the new objectives?
   2. Definition farm/ field of survey
   3. Technical aspects
      3.1 Data collection, data processing.......  
      3.2 Information model  
      3.3 Process model
   4. Output (data dictionary, definitions, results, indicators,....)
   5. Management of the new RICA organization
   6. Resources
      - time schedule
      - costs

**Group 4**

1. **End products**
   - Report with answers to the questions in point 3
     - 3 months, 6 months, final
   - Decision on report-recommendations?
   - Draft: Call for tender 'implementation of the new farm return'
     - information to be included in farm return & structure (subsamples, occasional)
     - method for easy rapid modification
     - feasibility for adoption (inclusive MS)
     - adaption conversation software
     - adapting control programme
     - interface with SAS- consultation system
- documentation
- quality system
- conversion plan
- Plan for implementation
  - costs
  - time table
  - system of standardization? (maintenance)

2. **Outline of report**
   1. Review current situation EU's RICA (strength, weaknesses)
   2. Future design of EU's RICA (opportunities, threads)
      - user needs
      - integration
      - objective RICA
      - costs, willingness, etcetera
      - effects on other elements of the system (software, M.S. level)
      - IT, quality management
   3. Proposal for new farm return per area reviewed
      3.1 Farm definition
      3.2 Economic indicators
   4. Proposal for form of farm return and criteria a new form should support:
      - flexibility
      - different timetables
      - quality
      - documentation
6. TOTAL NET INCOME ON FAMILY FARMS IN THE NORWEGIAN FADN

(Synnøve Kjos Frank)

**Account Statistics of Agriculture:**

Is one of the main tasks for our department. The work distributed between the headquarters and our four regional offices. Tax account worked out by accountant or farmer.

+ Information about use of farm land, yields and labour input

= Management Account worked out by NILF

**The purpose of the Account Statistic of Agriculture:**

- To show the development, generally and for different regions, types and sizes of farming, what concerns production, economical result and input of means of production
- To found a basis for advisory service and research about agricultural economics
- To give data for the agricultural marketing agreement

**1,000 Farms**

- Voluntary to participate

- Distributed to regions, different types of farming and farm size according to the *Census of Agriculture and Forestry, Central Bureau of Statistics*

- Chosen among 55,000 part time or full time farms
  - Part time farm: labour input 400-1,875 hours
  - Full time farm > 1,875 hours (= 1 man-year labour)

**1,000-55,000 ... 2%:**

- Yearly replacement of about 50 farms

The Ministry of Agriculture has a central register of all farms applying for subsidies. New farms chosen from this register.
The chart of accounts management accounting:

Income:
- Crop products
  - barley
  - potatoes etcetera
- Livestock products
  - milk
  - living animals etcetera
- Subsidies
- Other income
  - farm car used privately etcetera

Cost:
- Variable costs
- Fixed cost
  Similar distribution of income and cost for forestry and other business

Income:

\[ \begin{align*}
\text{Net income, agriculture} \\
+ \text{Net income, forestry} \\
+ \text{Net income other occupation: farm activities + off-farm activities} \\
+ \text{Family labour on investments} \\
+ \text{Wage income} \\
+ \text{Pensions} \\
+ \text{Interest income} \\
- \text{Debt interest} \\
\end{align*} \]

= Total net income

+ Extraordinary income - inheritance etcetera
- Losses
- Taxes
- Private consumption
= Savings

Data Bank - account statistics

All farms (1,000): 610 variables
Farm forestry statistics (250): 685 variables

Groups of variables:
- Identification
- Use of farm land
- Yields, farm land and livestock production
- Labour input
Account Statistic of Agriculture

Today:

<table>
<thead>
<tr>
<th>Region</th>
<th>Holdings</th>
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<tr>
<td>Eastern Norway</td>
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<td>Southern Norway</td>
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<td>180</td>
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<tr>
<td>Central Norway</td>
<td>160</td>
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<tr>
<td>Northern Norway</td>
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1,000 holdings

Of which 250 also for Farm Forestry Statistics

Historic:

<table>
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<tr>
<th>Year</th>
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<tbody>
<tr>
<td>1912</td>
<td>First issue for the period 1911-04-01 - 1912-03-31, 30 holdings</td>
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<tr>
<td>1915-1940</td>
<td>100-300 holdings</td>
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<tr>
<td>1947</td>
<td>Decided to increase to 1,000 holdings</td>
</tr>
<tr>
<td>1950</td>
<td>1,000 holdings</td>
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<tr>
<td>1966</td>
<td>Farm forestry statistic 200-250 holdings</td>
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Main types of farming:

- Combined dairy and beef farming
- Combined dairy and pig farming
- Combined dairy and sheep farming
- Cereal production
- Combined cereal and pig farming
- Combined cereal production, dairy and beef farming
- Sheep farming
- Production of goat’s milk
Vestlandet
Western Norway

Nord-Norge
North Norway

Trøndelag
Central Norway

Agder
og Rogaland
Southern Norway

Østlandet
Eastern Norway

Flatbygder, Østlandet
Southeastern Lowlands

Jæren

Flatbygder, Trøndelag
Lowland region, Trøndelag
7. IMPROVEMENT OF ACCOUNTING INFORMATION FOR COLLECTIVE USE

Bernard Del’Homme

A. RICA’S characteristics
- micro economic data for a macro economic use
- network of networks
- a set of tables which have been adapted
- based on national FADN, it is not a chart of account on EU level (conversion of national data)

"RICA did not intend to harmonize national accounting methodology" (Poppe, PACIOLI 1, 1995)

B. Who needs collective data?
- farmers organizations
- policy makers (European, national, local)
- agro industries
- researchers and teachers
- stakeholders
- management
- policy making
- forecasts

C. What are collective data?
References: standard and normative

D. Improvements
Take into account:
- new data needs (environmental, analytic, ....)
- policy needs and management needs
- an IS approach
- preserve micro economic IS

Standard reference

Aim : to present a phenomenon
Needs : representative
Depends : choice of sample

statistical calculation rules
CONCEPTUAL PART

* Definition
* Sense
* Idea, semantic content

MATERIAL PART

* Words, codes, symbols
* Structure
* Size, format
* Stocking system
REFERENCE

DATA
DATA
DATA
DATA

CHOICE OF A SAMPLE

CALCULATION RULES

REFERENCE

CONCEPTUAL PART

MATERIAL PART

VALUE

43rd EAAE - seminar - 18 - 20 October 1996
Normative reference

Aim : to provide an assessment
Needs : representativity
        relevance
Depends : choice of sample
          statistical calculation rules
          management decision model
assessment for "financial health"  
(debt level in %)

STANDARD  
statistical average  
=  
50 %

NORMATIVE  
statistical average  
+  
65 %

<25 % = good  
25 - 65 % = normal  
> 65 % = bad
QUESTIONS ABOUT THE RICA/FADN

- RICA/FADN provides macro-economics standard references

- micro-economics standard references ?

- micro-economic normative references ?
A new stage for the software market?

THE ACTUAL PHASE

Specific management problems
Development of specific products
- data
- data
- data

THE NEW PHASE

Identification of all farmers' needs
Development of one global product
- data

ENITA Bordeaux - Laboratory «Information System»
The need to implicate the end-user in the conception of the IS

➢ Economic assets

➢ Technical advantages

➢ Sociological advantages
The global Information System

- General accountancy
- Crop management
- Analytic accountancy
- Animal production management
- Environmental data
- Analysis of collective data
- Commercial management
- Internal management of an accountant office
7 stages to implicate each actor in the project

- Preliminary study for each domain
- Detailed description of each domain
- Interviews
- Synthesis of each interview
- Simplified modelling of each domain
- Presentation of results to persons interviewed
- Final and detailed modelling of the global IS
8. WORKGROUP SESSION II 'METHODS OF THE STUDY'

Instruction workgroup session 2

- For each cell:
  - describe end product of the study
  - where to get the information; stakeholders
  - method
  - needed resources:
    - time
    - money
    - qualifications

Each cell in the matrix represents a question on an area. A study is needed to give the answers. We will describe the study, not the answer.

Workgroup session 2a

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<tr>
<td><strong>Group 2</strong></td>
<td>5, 6, 11</td>
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<tr>
<td>Ölmér</td>
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<td>Panholzer</td>
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<td>Meier (report)</td>
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<td>Lindén</td>
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<td><strong>Group 3</strong></td>
<td>8, 9, 12</td>
</tr>
<tr>
<td>Frank</td>
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<tr>
<td>Sanna</td>
<td></td>
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<td>Taragola</td>
<td></td>
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<td>Tiainen (report)</td>
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<tr>
<td><strong>Group 4</strong></td>
<td>1, 7, 10</td>
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<tr>
<td>Selenius</td>
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<tr>
<td>Namdarian</td>
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<td>Persson</td>
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<td>Poppe (report)</td>
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## Workgroup session 2B

<table>
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<tr>
<th>Group A (= 2)</th>
<th>Names</th>
<th>Columns</th>
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<td>Ölmér</td>
<td>2, 3, 4, 13</td>
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<td>Lindén</td>
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<td></td>
<td>Kleinhanß</td>
<td></td>
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<tr>
<td>Group B (= 3)</td>
<td>Frank</td>
<td>5, 6, 11</td>
</tr>
<tr>
<td></td>
<td>Sanna</td>
<td></td>
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<tr>
<td></td>
<td>Taragola</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Meier</td>
<td></td>
</tr>
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<td>Group C (= 4)</td>
<td>Selenius</td>
<td>8, 9, 12</td>
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<td>Persson</td>
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<tr>
<td></td>
<td>Tiainen</td>
<td></td>
</tr>
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<td>Group D (= 1)</td>
<td>Larsson</td>
<td>1, 7, 10</td>
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<td></td>
<td>Rantala</td>
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<td>Wilkinson</td>
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<td>Van Lierde</td>
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<td></td>
<td>Poppe</td>
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<td></td>
<td>Del’Homme</td>
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### Group 1

**AREA 2: ECONOMIC INDICATORS**

<table>
<thead>
<tr>
<th>Stakeholders</th>
<th>Method</th>
</tr>
</thead>
</table>
| **Objectives 1 + 2** | - policy makers  
- MS/ EU  
- international/ national level, DG VI, FADN, OECD/FAO |
| | - surveys (FADN/national level)  
- interviews with stakeholders |
| **Objective 3** | Inventories at national level (realised by national FADNs and extension services)  
- data availability  
- confidentiality  
- possibilities to link with different data sources (statistical offices) |
| **Objectives 4-7** | Technical studies to be done by working groups (EU level)  
- farm accountancy  
- computing / IT (new methods)  
- integration of other sources |
### Group 1

**AREA 3: COSTS OF PRODUCTION**

<table>
<thead>
<tr>
<th>Stakeholders</th>
<th>Method</th>
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</thead>
<tbody>
<tr>
<td><strong>Objectives 1 + 2</strong></td>
<td>- surveys (FADN/national level) - interviews with stakeholders</td>
</tr>
<tr>
<td>- MS/ EU/ - international/national level, DG VI, FADN, OECD/FAO - policy makers - extension services</td>
<td></td>
</tr>
<tr>
<td><strong>Objective 3</strong></td>
<td>inventories at national level (realised by national FADNs and extension services)</td>
</tr>
<tr>
<td>- data availability - confidentiality - possibilities to link with different data sources (statistical offices)</td>
<td></td>
</tr>
<tr>
<td><strong>Objectives 4 - 7</strong></td>
<td>Technical studies to be done by working groups (EU level)</td>
</tr>
<tr>
<td>- farm accountancy - computing / IT (new methods) - integration of other sources</td>
<td></td>
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</tbody>
</table>
# Group 1

## AREA 4: ENVIRONMENTAL INDICATORS

<table>
<thead>
<tr>
<th>Stakeholders</th>
<th>Method</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Objectives 1 + 2</strong></td>
<td>- surveys (FADN/national level)</td>
</tr>
<tr>
<td>- Dito end product</td>
<td>- interviews with stakeholders</td>
</tr>
<tr>
<td>- environmental interest groups</td>
<td></td>
</tr>
<tr>
<td>- water authorities</td>
<td></td>
</tr>
<tr>
<td><strong>Objective 3</strong></td>
<td>Inventories at national level (realised by</td>
</tr>
<tr>
<td></td>
<td>national FADNs and extension services)</td>
</tr>
<tr>
<td></td>
<td>- data availability</td>
</tr>
<tr>
<td></td>
<td>- confidentiality</td>
</tr>
<tr>
<td></td>
<td>- possibilities to link with different data</td>
</tr>
<tr>
<td></td>
<td>sources (statistical offices)</td>
</tr>
<tr>
<td><strong>Objectives 4 - 7</strong></td>
<td>Technical studies to be done by working</td>
</tr>
<tr>
<td></td>
<td>groups (EU level)</td>
</tr>
<tr>
<td></td>
<td>- farm accountancy</td>
</tr>
<tr>
<td></td>
<td>- computing / IT (new methods)</td>
</tr>
<tr>
<td></td>
<td>- integration of other sources</td>
</tr>
</tbody>
</table>
**Group 1**

**AREA 13: FOOD QUALITY**

<table>
<thead>
<tr>
<th>Stakeholders</th>
<th>Method</th>
</tr>
</thead>
</table>
| **Objectives 1 + 2** | - consumers  
- Ministry of health  
- Ministry of environment  
- surveys (FADN/national level)  
- interviews with stakeholders |
| **Objective 3** | Inventories at national level (realised by national FADNs and extension services)  
- data availability  
- confidentiality  
- possibilities to link with different data sources (statistical offices) |
| **Objectives 4 - 7** | Technical studies to be done by working groups (EU level)  
- farm accountancy  
- computing / IT (new methods)  
- integration of other sources |
Group 2: Cost/collect

Potential users/information needs/data availability and use

1st step  Identify interview partners
  - EU commission
  - national FADNs
    perspectives: - policy (CAP)
    - farmers
    - research (long run interest)

2nd step  Interviews/ questionnaires
  Questions derived from user objectives (that we already know)

Row 1-3  - present use
  - future needs
  - present sources
  - future alternative sources (links between sources)
  - 'costs' for available/ unavailable data

5.  Labour AWU

6.  Non agricultural income:
  - literature
  - level of detail available/ needed
  - definitions
  - interview partners users/providers different

11. Regional breakdown
  - sample size

Form of farm return
  - return content (potential)
  - problems with the present form
    - national FADNs (conversation programmes)
    - EU level

Outline of feasibility study

1.  Introduction
  - problem
  - aim of study
  - methods
2. **Current use & future need**
   2.1 EU-authorities
   2.2 Memberstate 1
   2.3 Memberstate 2
      2.x.1 Institution/collection/who is who
      2 Sample
      3 Definitions; farm/ valuation
      4 Areas of information

<table>
<thead>
<tr>
<th>A1</th>
<th>Data available</th>
<th>National level</th>
<th>EU level</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>XXX</td>
<td>XXX</td>
<td>X</td>
</tr>
<tr>
<td></td>
<td>Data use</td>
<td>X</td>
<td>XXX</td>
</tr>
<tr>
<td></td>
<td>Future needs</td>
<td>X</td>
<td>XXX</td>
</tr>
<tr>
<td></td>
<td>Alternative sources</td>
<td>XXX</td>
<td>X</td>
</tr>
<tr>
<td></td>
<td>Costs</td>
<td>X</td>
<td></td>
</tr>
</tbody>
</table>

3. **How to cover future needs**
   farm return

<table>
<thead>
<tr>
<th>Present situation</th>
<th>Alternatives +/-</th>
</tr>
</thead>
</table>

1. Form
2. Collection of data
3. Rapidity
4. Vol./oblig.
   Completeness/ label of detail

Conclusions/ proposals
1.
2.
3.
4.
   .
## AREA 8: FORECASTS

<table>
<thead>
<tr>
<th>End products</th>
<th>Stakeholders</th>
<th>Method</th>
<th>Resources</th>
</tr>
</thead>
<tbody>
<tr>
<td>summarized results of interview</td>
<td>RICA A-2: 0-1 national FADNs</td>
<td>literature study interview</td>
<td>traveling costs expert work</td>
</tr>
<tr>
<td>result of the interview</td>
<td>RICA national FADNs</td>
<td>interview</td>
<td>traveling costs</td>
</tr>
<tr>
<td>summary</td>
<td>national FADNs</td>
<td>interview</td>
<td>traveling costs</td>
</tr>
<tr>
<td>summary</td>
<td>national FADNs farmer unions</td>
<td>depends of needs</td>
<td></td>
</tr>
<tr>
<td>proposal for objectives</td>
<td>statistical offices RICA</td>
<td></td>
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</tbody>
</table>

### Products

<table>
<thead>
<tr>
<th>FADN efficient y/n accounts</th>
<th>summary</th>
<th>national FADNs and other data</th>
<th></th>
</tr>
</thead>
</table>

### Alternatives usable in whole EU

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
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</tr>
</thead>
</table>

### Change necessary

<table>
<thead>
<tr>
<th>result of interview</th>
<th>users of forecasts</th>
<th>interview of users</th>
<th></th>
</tr>
</thead>
</table>

### Data collection

<table>
<thead>
<tr>
<th>result interview</th>
<th>national FADN accounting offices</th>
<th>interview</th>
<th></th>
</tr>
</thead>
</table>

### Rapid/normal available

<table>
<thead>
<tr>
<th>result interview</th>
<th>users</th>
<th></th>
</tr>
</thead>
</table>

### Obligatory/ voluntary

<table>
<thead>
<tr>
<th>result</th>
<th>RICA national FADN</th>
<th>interview</th>
<th></th>
</tr>
</thead>
</table>

### Rapidness flexibility

<table>
<thead>
<tr>
<th></th>
<th>data collecting Institutions</th>
<th>inventory of existing information</th>
<th></th>
</tr>
</thead>
</table>

### Integration data sources

<table>
<thead>
<tr>
<th>result study</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
</table>

---

Stakeholders:

- RICA A-2: national FADNs
- National FADNs
- Farmer unions
- Statistical offices
- National FADNs and other data
- Users of forecasts
- Users of FADNs accounting offices
- Users
**Group 3**

**AREA 9: INTERNAL COMPATABILITY OF DATA**

<table>
<thead>
<tr>
<th>End products</th>
<th>Stakeholders</th>
<th>Methods</th>
<th>Resources</th>
</tr>
</thead>
<tbody>
<tr>
<td>summary report of the current data available and current needs in commission</td>
<td>DG VI: RICA, A-2, mr. Ahner, Eurostat</td>
<td>interview meetings</td>
<td>expert work travelling</td>
</tr>
</tbody>
</table>
### Group 4

**AREA 1: FARM DEFINITION/ FIELDSURVEY**

<table>
<thead>
<tr>
<th>End product</th>
<th>Stakeholders</th>
<th>Method</th>
</tr>
</thead>
</table>
| Clear view of different definition on farms in use in M.S and the effect of differences between definition and a proposal to adopt = field of survey also | - RICA  
- Stat. office  
- IACS  
- fiscal accountants  
- regional offices  
- agric. Inspection services | - collect definitions  
- analyse differences  
- clarify differences and search common elements  
- discuss effects (lead time, rapidness, common definitions, integration, etc.)  
- suggestion for “new” definition  
- interviews + workshop for consensus + proposal for RICA/CSA for role (below) |

A. Design questions at EU level, cases/ examples and standard report-lay out  
4 experts: 2 days = 10 days  

B. 5 interviews/ 1 workshop in national language  
2 days per ms: 30 days  

C. Writing report for ms (ms = member state)  
2 days per ms: 30 days  

D. Writing report at EU level  
4 experts, 2 weeks prep., 2 days = 20 days  

E. Workshop at EU level for consensus  
30 p flight, .....1 ........, 1 report
### AREA 7: STATISTICAL APPLICATIONS

<table>
<thead>
<tr>
<th>End products</th>
<th>Stakeholders</th>
<th>Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>- a proposal for the statistical applications to be used in the RICA in relation to the new farm return</td>
<td>- national FADN-experts (on M.S. situation)</td>
<td>- interview with stakeholders</td>
</tr>
<tr>
<td>- a clear view of the current and desired reliability of FADN</td>
<td>- statistical experts (on methodology) from Statistical office or university</td>
<td>- statistical analyses of current reliability</td>
</tr>
<tr>
<td></td>
<td>- users of FADN products (on new products)</td>
<td>- consensus-building on desired reliability in relation to objectives by workshop (this includes # of farms)</td>
</tr>
<tr>
<td></td>
<td>- DG VI A - users/analists, policy-makers</td>
<td>- advice and decision on use of statistical applications in analysing and presenting (data on new farm return)</td>
</tr>
<tr>
<td></td>
<td>- new users like research, SPEL, national accounts</td>
<td></td>
</tr>
</tbody>
</table>
### AREA 10: PRODUCT SYSTEMS

<table>
<thead>
<tr>
<th>End product</th>
<th>Stakeholders</th>
<th>Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>- a proposal to include or not to include data on (new) production systems (like org. Farming, low-input farming, ISO-certified farm, sustainable farms) in the new farm return</td>
<td>- national FADN experts</td>
<td>Interviews</td>
</tr>
<tr>
<td></td>
<td>- on data available</td>
<td>- on possibilities to gather</td>
</tr>
<tr>
<td></td>
<td>- potential users</td>
<td>- researchers</td>
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<tr>
<td></td>
<td>- researchers</td>
<td>- policy makers</td>
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<td></td>
<td>EU</td>
<td>- organic farmer 2092/92</td>
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<td></td>
<td>- forestry 2081/92</td>
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<tr>
<td></td>
<td></td>
<td>- sustainable 2078/92</td>
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</table>
9. WORKGROUP SESSION 3: QUALITY MANAGEMENT

The discussion on quality management was based on the following method:

Basis was the process model for each country, as developed in earlier PACIOLI-Workshops. The discussions were held in small groups, the quality problems of a country was discussed on the basis of the process model with a few 'visiting experts', colleagues from another country who reviewed the problems, provided suggestions for solutions and presented the case to the plenary session.

EUROSTAT

Improvement: definitions
sample sizes
use of data

Important elements: reliability - selection of farms
- number of farms (publishable data on regional level)
compatibility of data

Lessons learned: rules: not complete data systems, national systems (flexibility?)
definitions
sample sizes
use of data
'look to Sweden'

FINLAND

For process model see figure 9.1

Problem: - no good quality check in national FADN
  → the quality errors "pop up" in Brussels
- the logical checking manual
  → slow, inconsistent
- the buying of the accounts means problems in setting standards
Figure 9.1 The process model of the FADN in Finland

1. Strategic management
   - Analyse changes
   - Set the objectives for the work
   - Make the conversion program

2. Technical management
   - Draw up a selection plan
   - Draw up instructions

3. Operational management
   - Manage personnel
   - Manage financial
   - Draw up implementation report

4. Sample
   - Take the sample from farm register
   - Recruit new participants
   - Draw up implementation report

5. Accounting
   - Do the contract with accounting offices
   - Make the program for accounting offices
   - Gather data
   - Handle the material
   - Draw up farm reports

6. Data
   - Make the data available for users
   - Make the software
   - Provide prediction results
   - Provide yearly publication

7. Application management
Solution:  
- prestudy carried out
- analysing the system
- suggesting solutions
  → will probably lead to a new computerised accountant systems with logical checks

GERMANY

No process model
The main problems in German FADN as a point of view of a user:
- no access to individual data (legal base)
- physical data is not checked well enough → need for better plausibility checks
- unharmony with definitions (specially during the transformation of new länder)
- problems with new CAP regulations - premiums
- missing data

NORWAY

No process model
1. Data quality
   - missing data (non-farming income)
   - data not included (direct sales)

2. Quality control
   - 500 elements are included in the control programme
     → plausibility checks are improved from time to time

Objective: try to have a good data quality for purposes of the users

3. Initiatives
   N-FADN is realised by NILF and locals
   easy feedback with data registration

Lessons learned:
quality control is a dynamic process
FRANCE (Quality programme & projects)

Process model see figure 9.2

Quarterly meeting in the RICA committee

Processes:
+ Using data → availability
  (direct contact to database)
  (publish more data)

+ Accounting → gather data
  (software to accounting offices)

+ Obtaining resources
  (build up the sample/split up the sample (regional breakdown))

Persons involved:
+ RICA-committee
+ Ministry of agriculture
+ Accounting offices

Lessons learned:
+ Simplification & standardization important
+ Improve dissemination important for use

SWITZERLAND

No process model

Control visits

- Controlling the farm return results
- Discussing problems
- Educating on accounting offices helping the accounting office manager
- Process: control programmes
Figure 9.2 Process model France

1. Strategic management
   1.1 Analyse developments
   1.2 List product wishes
   1.3 Specify new products
   1.4 Evaluate consequences
   1.5 Determine product prices
   1.6 Decide about products

2. Technical management
   2.1 Draw up a farm sample plan
   2.2 Specify setup for periodical reports
   2.3 Maintain participation reports
   2.4 Specify details for new needs
   2.5 Draw up technical instructions
   2.6 Draw up standards
   2.7 Determine quality
   2.8 Define control measures

3. Operational management
   3.1 Define quotas
   3.2 Control progress
   3.3 Manage personnel
   3.4 Manage financial resources
   3.5 Manage Equipment

4. Obtaining resources
   4.1 Obtain structure survey results
   4.2 Select a sample of farms
   4.3 Select advisory centers and farms
   4.4 Draw up a farm sample report

5. Accounting
   5.1 Enter into agreements with suppliers
   5.2 Enter into agreements with participants
   5.3 Gather data
   5.4 Input and encode data
   5.5 Close accounts
   5.6 Draw up individual report
   5.7 Provide reports to participants
   5.8 Manage client data

6. Using data
   6.1 Make accounting data available
   6.2 Draw up farm evaluation plan
   6.3 Provide periodical reports
   6.4 Provide data models and standards
   6.5 Invoice
   6.6 Deal with errors and complaints
   6.7 Manage client data

7. Application management
   7.1 Take stock of system users wishes
   7.2 Determine system requirements
   7.3 Adjust software and instructions
   7.4 Test software and instructions
   7.5 Introduce adjustments
   7.6 Support technical administrators
SWEDEN

Process model see figure 9.3

1. **TQM: Total Quality Management**
   - Processes: account most important receive and control of forms
   - Objective: better, quicker data
   - Most important elements:
     1. renew the forms
     2. renew the control programmes
     3. long-term view: try to get the data directly from the farmers
     
     → electronic form?

   Persons involved: Statistics Sweden; all the staff is involved in renewing the forms

   Lessons Learned: not so easy to fill up the sample from 500 farms to 1,000 farms
   → non response

2. **Change EDP (Electronic Data Processing) system**
   - Process: use of data
   - Objective: make a client-server system
   - Most important elements: build a flexible system
   - Persons involved: Statistics Sweden

THE NETHERLANDS

Process model see figure 9.4

1. **Check FADN data with other sources (compatibility)**
   - nat. statistics, FSS
   - trade figures
   - industry/ banks

   → understand differences
   → publication strategy
   → data collection

2. **Certification ISO 9000**
   - research 1997
   - FADN
Strategic management
- Analyse changes in agric policy
  - Determine objectives with the survey
  - Draw up a production plan
  - Make necessary changes in EDP-systems

Technical management
- Draw up sample plan
  - Draw up a table plan
  - Draw up a production plan
  - Make necessary changes in EDP-systems

Operational management
- Enter into agreements with participants
  - Establish a base register
  - Send out forms
  - Send out instructions
  - Support information provider

Accounting
- Receive and control forms
  - Amend data
  - Receive book-keeping
  - Receive data from other registers

Use of data
- Establish a final register
  - Make preliminary calculations
  - Make ad-hoc extractions
  - Prepare reports and tables

Figuur 9.3 Process model for JEU/FADN Sweden
5.2 Enter into agreements with participants

5.4 Input and encode data

6.5 Close accounts

5.5 Manage personnel

3.3 Justify time expenditure

4.4 Draw up a farm sample report

5.6 Draw up individual report

5.7 Provide reports to participants

6.6 Deal with errors and complaints

6.7 Manage client data

2.3 Maintain participation report

3.4 Control progress

4.3 Canvass for participants

4.4 Draw up a farm sample report

5.3 Gather data

6.1 Make accounting-data available

6.2 Draw up farm evaluation plan

6.3 Provide periodical reports

6.4 Provide data models and standards

7.1 Take stock of system users wishes

7.2 Determine system requirements

7.3 Adjust software and instructions

7.4 Test software and instructions

7.5 Introduce adjustments

7.6 Support technical administrators

Figuur 9.4 Process model The Netherlands
BELGIUM

Process model see figure 9.5

1. Name: Info 2000+

2. Process

3. Objectives: - quicker results
   - more details
   - better control

4. Most important elements: - building a software for all accountant offices
   - speed of transmission
   - data collected
   - control during inputs
   - a single information model → flexibility

5. Persons involved: Dirk alone (problem)

6. Lessons learned: Keep it in your hand!
FADV BELGIUM

1. Strategic management
   1.1 Analyse developments
   1.2 Study new data requirements
   1.3 Determine objectives with the survey

2. Technical management
   2.1 Draft up a farm sample plan
   2.2 Specify setup for periodical reports
   2.3 Specify details for research needs
   2.4 Draft up technical instructions
   2.5 Maintain typology (type of farm)
   2.6 Maintain methodology weighting
   2.7 Maintain definitions key-variables

3. Operational management
   3.1 Draft up a workplan
   3.2 Arrange meetings
   3.3 Keep agendas
   3.4 Control progress of activities
   3.5 Human resource management

4. Obtaining resources
   4.1 Obtain & analyse May Census data
   4.2 Recruit new participants
   4.3 Draft up a farm sample report

5. Accounting
   5.1 Enter into agreement with participants
   5.2 Gather and control data
   5.3 Registerate & encode data
   5.4 Amend data
   5.5 Close accounts
   5.6 Run a control program
   5.7 Draft up individual results
   5.8 Provide reports to participants

6. Using data
   6.1 Transmit data to EC FADV
   6.2 Make a data base
   6.3 Make reviews of the individual results
   6.4 Make periodical reports
   6.5 Compare income parity agric./non-agric. sector
   6.6 Supply data models
   6.7 Make forecasts & compare with definitive results

7. Application management
   7.1 Maintain control software
   7.2 Adjust software and instructions
   7.3 Test software and instructions
   7.4 Support software users (accountants)
   7.5 Introduce adjustments

Fig. 9.5 Process model of the Belgium FADV.
The concluding plenary session discussed the need for a PACIOLI 6. In general terms the participants enjoyed PACIOLI 5. This referred to the location (Wick Castle) as well as to the scientific programme. However, it had been difficult to bring the proposal for the EC tender to a final stage. It was also indicated that for a next workshop participants should send in (more) papers in advance.

Most of the attending persons favoured a PACIOLI 6 workshop in spring 1998, for instance in Bordeaux. Time and topics however, should be in line with progress in the feasibility study on the EC's tender.

Potential topics for PACIOLI 6 could be:
- PECO-countries
- information analysis (data models) for FADNs
- use of micro-economic data in policy analysis and feedback to FADNs.

The workshop management agreed to discuss PACIOLI 6 in more detail in the beginning of 1998.
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