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**MONITORING THE HUNGARIAN PRIVATE  
FARMING SECTOR  
A REVIEW OF THE CURRENT SITUATION**



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### MONITORING THE HUNGARIAN PRIVATE FARMING SECTOR: A REVIEW OF THE CURRENT SITUATION

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Hungarian policy makers have little insight in the private farming sector. Interviews as well as an analysis of the policy program show that the Ministry of Agriculture needs more and better information. Several systems are under development, including a Farm Accountancy Data Network. These systems are reviewed.

The most important bottleneck is the willingness of farmers to participate in these information systems. Interviews revealed deep rooted reservations. Harmonisation of economic and accounting terminology is lacking. Several recommendations are made to solve the signalled problems.

Hungary/Agricultural policy/Information systems

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## PREFACE

Hungarian agriculture is in a process of transformation. The privatisation process is supported by a project initiated by the Dutch Minister of Agriculture, Nature Management and Fisheries. The project offers a project organisation that functions as an advisory group to the policy makers in Hungary. The project is managed by the N.V. NEHEM.

This study is made on request of N.V. NEHEM. It provides the research for one of the three working groups of the project, that deals with the monitoring of the private farm sector. NEHEM's terms of reference for this working group are given in annex I. The funding for the study was provided by the Dutch Ministry of Agriculture, Nature Management and Fisheries.

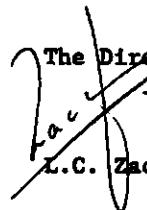
Field work for this report was carried out in Hungary by the authors, in cooperation with N.V. NEHEM, in the period June 22 - July 10.

A lot of persons provided valuable information. Especially the persons interviewed shared many interesting ideas with the authors. They not only spent their valuable time to explain their work and their problems, but also discussed this with an open mind. We hope that the results of the study will help them in their ongoing struggle to understand what is happening in the Hungarian farm sector.

Readers of this report might be interested to know that K.J. Poppe is working in the Agricultural Economic Research Institute in The Hague as a business economist. He is involved in the operation of the EC's Farm Accountancy Data Network (FADN) and represents the Agricultural Economics Research Institute on the management committee of the FADN in Brussels. He published on agricultural policy as well as on information systems. Mrs. A. Tängl teaches farm accounting at the University of Gödöllő. She studied farm accounting in West-Germany for 6 months in 1991 at the University of Gießen with prof. dr. dr.h.c. M.G. Zilahí-Szabo. She visited the LEI-DLO and studied its FADN in the Hague for 6 weeks in 1992.

The study reveals a number of interesting conclusions and contains suggestions for future projects. The Dutch Agricultural Economics Research Institute LEI-DLO as well as the N.V. NEHEM express their interest in further cooperation between Hungary and the Netherlands on these topics.

The Director,



L.C. Zachariasse

The Hague, November 1992

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Mr. D. Mikus, General Director, Privatisation Department Ministry of Agriculture  
Mr. Z. Némethy, Manager National Federation of agricultural cooperators and producers (MOSZ)  
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Mr. J. Szabo, farmer, Kecskemet

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1) The following abbreviations have been used: AKII: Research and information institute for agricultural economics; KSH: Statistical Office

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# EXECUTIVE SUMMARY

## *Introduction*

At the moment Hungarian policy makers have little insight in the private farming sector. The objective of this report, commissioned by N.V. NEHEM on behalf of the Dutch Ministry of Agriculture, is to describe and test which information the Hungarian Ministry of Agriculture needs and how it can be collected. During the field work it became clear that several projects are strongly related to the objective of this study. Therefore the emphasis of the report is on a review of the current situation.

Besides state farms and cooperatives, small holder's private plots contribute significantly to agricultural production. Due to the transformation process, in future private farming will be more important. It is expected (at least by a lot of the interviewed persons) that not only family farms but also privatized production cooperatives will be important.

From the four strategies for the determination of information requirements (asking, deriving, synthesizing and proto-typing) the first three are applied in this study.

## *Information needs*

Interviews with civil servants showed that the current information systems (like the so-called 'balances' of state farms and cooperatives) will very quickly become irrelevant. Most of the persons interviewed stated that information on private farming would be necessary, although it was hard for them to see what and how.

An analysis of the agricultural policy program for the period 1991 - 1994 shows that the Hungarian agricultural policy will have a number of characteristics of the EC's Common Agricultural Policy. A number of items mentioned in the program demands detailed information on private farming.

The main information systems on private farming in the EC are the census and the Farm Accountancy Data Network (FADN). Yield estimations, price statistics and the so called sector income index are additional information sources.

Interviews with the Ministry of Finance and farmers' organisations show that they have an information need that is comparable to that of the Ministry of Agriculture.

## *Available information*

In the past the Statistical Office KSH as well as the Ministry of Agriculture itself produced information. This included information on private farming, especially in the census (held



every five years). All entities questioned were obliged to cooperate in statistical activities. The statistics that had to be provided by state farms and cooperatives (also to control them) were unpopular and in some cases their quality must be questioned.

At the moment the statistical activities are also in transformation. In the future they will be concentrated at the KSH and the Ministry will skip this activity. The Ministry will advise the KSH on its agricultural programme. Individual data will be available (in a form without names and addresses) for research and policy analysis. This situation is comparable to that in Western Europe, but could mean that the Ministry of Agriculture has to organise a database for executing administrative regulations (like subsidies and quota).

Several systems are under development. The PHARE-project 'Farm Accounting System' includes the establishment of an FADN for Hungary. It will be a copy of the Irish FADN. The TAPIR/Farminfo project has developed accounting software that can be used by farmers (or their advisers) to apply for a credit. Therefore the software developed is at the moment much simpler than the FADN. Other PHARE-projects that could be related are the Marketing Information System and the Extension System.

#### *Review of the current situation*

It will take several years before the Ministry of Agriculture will be well informed on the private farm sector. The 1991 census could be quickly outdated if privatisation takes off and it will take time to develop the FADN into a representative sample.

The main bottlenecks (in decreasing order) are:

- The willingness of the farmers to cooperate. Interviews with farmers revealed positive experiences with accounting, but low interest in comparison of farm data and two main reasons for not to cooperate in a network. The first was the fear of disclosing an income that might be taxed. The second is the existence of deep-rooted reservations against data exchange in general and with the Ministry of Agriculture in particular.

Farmers are not queuing to cooperate and they also will have to be trained in economic concepts. Reliable and representative (tax) data for sale to the government are also not available. In such a situation the FADN should be modelled like the existing networks in Denmark, the Netherlands or Ireland: by an independent institute that barter the farmer's data for information on his own farm and its relative position. Obliging the farmers to disclose the data or buying their cooperation should be avoided as long as possible.

- Information to the farmer. His information needs are unclear and especially (but not only) in the TAPIR-project there is

no guarantee that the farmer is interested enough in the information so that he is willing to cooperate or to use (and pay for) the data.

- Ignoring the privatized cooperatives. The information systems developed are geared to the family (TAPIR) or even only to the family's farm (FADN). If private cooperatives will play an important role in the future, it is unclear how this affects the systems developed and how information on privatized production cooperatives should be collected.
- Organisational questions.
- The use of accountancy data in research and policy reporting. As accounting data describes the past, activities will be needed to update the data ('prognosis') and if possible farmers should be asked for their plans.
- Representative. This is an important problem, but it is unlikely that it can be solved in the near future as reliable census data will be lacking.

The interviews revealed also that the moment is arriving that more coordination is needed. This includes coordination between the PHARE-projects (which has certainly not impressed the Hungarians), coordination between the FADN and KSH on the use of the census for the representativity and the sampling of the FADN, coordination on economic and accounting terminology, and coordination between the EC's FADN in Brussels (and its management committee) and FADN-projects in Central and Eastern Europe. This list explicitly excludes more cooperation between the FADN and TAPIR as each project has its own objectives. However, data gathering by the TAPIR/Farminfo project could well lead to support the FADN. A (harmonized) chart of accounts and possibilities to check its representativity are then needed.

### *Conclusions*

Private farming will become even more important in the coming years. Policy makers need more and better information on this type of farming. Data on private farms (small holders) are available in the census of the Statistical Office KSH. If transformation takes off, this information could soon be outdated. Several systems that could provide the Ministry with information on private farming are under development. The PHARE-project 'Farm Accounting System' includes an FADN for Hungary. The TAPIR/Farminfo-project is mainly tailored to support credit applications by farmers as well as tax accounting. As such it is too general to fulfil all the information needs of the Ministry, but it could well develop into a supplier of FADN data.

The most important bottleneck is the willingness of farmers to cooperate with these information systems. Interviews with farmers revealed deep rooted reservations against data exchange. The FADN should be run by an independent institute that barterers the farmer's data for information on his own farm and its rela-

tive position. Obliging the farmers to disclose the data or buying their cooperation should be avoided as long as possible.

The current systems ignore the possibility that privatized cooperatives will play an important role in especially arable farming. Additional problems and areas for coordination, that were signalled above in the review of the current situation are also reinforced in the conclusions.

The current status of the projects and the statistical program indicate that the Ministry of Agriculture will face a deficiency in information on private farming until the second half of this decade.

### **Recommendations**

The recommendations concern the most important and largest topics. These should mostly be carried out in approximately the next year. Several of the recommendations could be turned into additional projects.

The main suggestion is to start a project to investigate and influence the farmers attitude for cooperation in accounting activities and a network in particular. Workshops should be held with farmers on their need for information systems including information on and from their cooperatives (extension workers could be involved). Clear brochures with accounting and economic information should be made available, and farmers should then experience and discuss the different available information systems (like the FADN, TAPIR). Such a project should have the form of a 'demonstration project'. Positive results should be communicated to other regions and the methods for the workshops etc. should be made available to be used elsewhere.

A second recommendation concerns the FADN. It should formulate and execute a clear public relation policy.

All parties interested should cooperate in an initiative to publish and maintain a standard chart of accounts, standard definitions of financial indicators and publication models. Procedures should be worked out to use MIS and FADN data in the extension system.

The EC should improve the coordination between the FADN, the know-how available in its management committee, and projects in Central and Eastern Europe

The TAPIR-team should consider the implementation of a chart of accounts in its software. Studying simple accounting software for West European or American farmers might help.

When the first data are available, the AKII should reflect on the methods to analyse the data, to update it with price and yield statistics ('prognosis'), and to publish it.

At a later moment AKII's FADN and KSH should investigate the possibility to use EUROSTAT's Common Typology in the agricultural census as well as in the FADN and to see how the census could be used to formulate an efficient sample and to improve representativity.

The Ministry of Agriculture should formulate its own information strategy policy, to cope with the lack of information in the coming years and the data possibly needed for administrative purposes. A foundation could be a usefull solution to organize demonstration projects.

## KÖVETKEZTETÉSEK

(based on the original text in English)

A mezőgazdasági magángazdálkodás, amely jelentős részét képezi a mezőgazdasági termelésnek különös tekintettel a kertészetre és az intenzív állattartásra, egyre nagyobb jelentőséggel fog bírni az elkövetkezendő években. Mind az interjúk mind a mezőgazdaság politikai programjának vizsgálata az támasztják alá, hogy a mezőgazdasági magángazdálkodás területéről egyre több és jobb minőségű információra van szükség, és ugyanezt igazolják az Európai Közösség tapasztalatai is. Az Európai Közösségen belül az éves felmérések (census) és a Mezőgazdasági Könyvelési Információs Rendszer (FADN) képezik az elsődleges információforrást. Az ily módon rendelkezésre álló adatokat nem csak a Mezőgazdasági Minisztérium használja fel, hanem a Pénzügyminisztérium és a farmerszervezetek is hasznosítani tudják azokat.

A mezőgazdasági kistermelésről a Központi Statisztikai Hivatal (KSH) éves felmérései alapján rendelkezésre állanak adatok, amely adatok azonban a mezőgazdaság átlakulása után elveszíthetik információértéküket. Az új statisztikai törvény jelentősen befolyásolja majd a statisztikák készítését, különösen a Földművelésügyi Minisztérium számára. A statisztikák készítése a Központi Statisztikai Hivatalban fog koncentrálni, de a kutatások számára lehetőség lesz egyedi adatok gyűjtésére. A kialakuló rendszer teljesen megegyezik a Nyugat-Európai rendszerrel. Abban az esetben, ha a mezőgazdasági politika is közelíteni fog a nyugati politikához lehet, hogy szükség lesz egy "éves felmérésre" az adminisztratív célok megvalósítása érdekében.

Néhány, a földművelésügyi tárca információs igényt szolgáló rendszer már kidolgozás alatt van. A PHARE-project keretében ír mintára egy Mezőgazdasági Könyvelési Információs Rendszer kifejlesztése folyik, amely kapcsolódhat az Európai Közösség rendszeréhez (FADN-hez). Az AKII-ban munkálatok folynak TAPIR/Farminfo elnevezéssel. Ez a rendszer elsősorban hitelkérelmek készítésével és adóügyek (adókönyvelés) rendezésével foglalkozik. Lehet, hogy ez túl általános a Földművelésügyi Minisztérium információs igényeinek kielégítéséhez, de adatokat szolgáltathat a Mezőgazdasági Könyvelési Információs Rendszernek (FADN-nek).

A PHARE-project keretén belül kidolgozott Piaci Információs Rendszer adatokat szolgáltat az árakról, és ha kapcsolódna az FADN-hez, akkor plusz információs forrást jelenthetne.

A legnagyobb probléma a magángazdálkodók részéről jelnetkezik, akik semmilyen célból sem adnák ki szívesen adataikat. A másik szük keresztmetszet az, hogy nem rendelkeznek azzal a tudásszinttel, amely képessé tenné őket az

együttműködésre. Ez utóbbi megoldása lehet egy ún. gazdasági képzés beindítása.

Valós és reprezentatív értékelési adatok sem állnak a Kormány rendelkezésére. Ebben az esetben a dán, a holland és az ír példa alapján lehet a megoldást megtatolni: egy a Kormánytól független intézet felállítása, amely az adatok cseréje alapján oldja meg a farmarek együttműködési problémáját. Így az adatcsere a magángazdálkodók számára is nyújt információt pl.: a gazdaság egyedi értékelése, a gazdaságok összehasonlító értékelése. Az adatok feltárásának kötelező volta és az adatok vásárlása e módon kiküszöbölhető.

A létrejövő rendszerek (TAPIR, FADN) csak a családi gazdaságban, mint a kutatás alapegységében gondolkodnak. Az említett rendszerek teljesen figyelmen kívül hagyják a privatizált szövetkezeteket, amelyek a jövőben nagy szerepet játszanak majd, különös tekintettel a szántóföldi növénytermesztésre. Bár a jövő még nem teljesen világos, de számos magánvélemény azt sugallja, hogy a termelési szövetkezetek az elkövetkezendő években jelentős helyet foglalnak majd el.

Még egy jól előrejelezhető probléma a szervezeti kérdések mellett a reprezentativitás.

Jelenleg folyamatban van néhány project. A megkérdezettek rámutattak a PHARE-projectek közötti együttműködés problémájára. A lehető legjobb kapcsolatot kell kiépíteni az FADN és az éves felmérés (census) között. Mind a számviteli rendszerek, mind a szaktanácsadói, mind a banki rendszerek bevezethetik a saját számviteli és ökonomiai fogalomrendszerüket, koncepciójukat. Ezek a különböző rendszerek azonban akadályozhatják és zavarhatják a magángazdálkodók és a szaktanácsadók ökonomiai kiképzését. Az együttműködés ezen a területen szintén elengedhetetlen. Koordinációra szükség van az FADN és az FADN-projectek között Kelet; és Közép-Európában is.

A projectek jelenlegi állapota és a statisztikai program azt mutatja, hogy a Földművelésügyi Minisztérium sem rendelkezik információval a magángazdálkodók helyzetéről. Annak ellenére hogy az ezirányú munkálatok már elkezdődtek, még néhány év el fog telni addig, amíg a privatizált gazdaságról reprezentatív FADN és éves felmérés (census) adatok rendelkezésre fognak állni.

A magas költségek szintén nehezítik az éves felmérés adatainak összegyűjtését. Ez is egy jó ok az FADN minél előbbi létrehozására.

Az FM információs hiánya szükségessé teszi egy Inforációs Stratégiai Terv kidolgozását, amely magában foglalja a helyzet megoldását, az adminisztratív irányításhoz szükséges adatokat (kvóták, támogatások), és a kifejlesztendő rendszerek közötti együttműködést.

## JAVASLATOK

(recommendations based on the original text in English, chapter 5)

Ez a riport (főleg a 4. fejezetben) több javaslatot tesz szoftverek bevezetésére és a különböző együttműködések kialakítására valamint az információk kicserélésére. Mindezek a dolgok nem említendők újra ebben a fejezetben.

A riport végén csak a legfontosabb és leglényegesebb kérdésekre mutatunk rá. Valószínű, hogy ezeknek a problémáknak a nagy része az elkövetkezendő években megoldódik. Néhány javaslat talán projecté alakulhat át, amely könnyebbé tenné megoldásukat.

a., A magángazdálkodók együttműködése a legnagyobb és legsürgetőbb problémája a reprezentatív információ kialakításának. A legtöbb folyamatban lévő project egy felülről lefelé irányuló együttműködést próbál kialakítani: információkat adnak a magángazdálkodóknak. Kevés munka irányul a farmerek információs igényeinek, és a magángazdálkodók rendszerre való hatásának felderítésére. A rendszer tesztelésében ösztön a farmerek is részt fognak venni.

Ugyanakkor vizsgálni fogják a számítógépes rendszer helyességét is.

Mindezek miatt azt javasoljuk, hogy a munka elindításához elsődleges feladat a farmerek véleményének befolyásolása. Ilyen project működtetése olyan területen lenne kívánatos, ahol van már néhány magángazdálkodó és egy-két, az átalakulás folyamatában lévő termelőszövetkezet. Így lehetőség nyílna a farmerek reakciónak tanulmányozására mind a számviteli rendszerrel, mind a termelési szövetkezettel kapcsolatban. Sőt megtudható lenne, milyen információkra van szükségük ahhoz, hogy saját gazdaságukat illetve szövetkezetüket irányítani tudják. Workshop (szakmai megbeszélés) projectek foglalkozhatnának a farmerek információs igényeivel (szaktanácsadók is bevonhatók), világos kiadványok segíthetnék az ökonomiai és számviteli információk elérhetőségét (lásd Poppe, 1990.), és a magángazdálkodók elmondhatnák és megbeszélhetnék tapasztalataikat a különböző információs rendszerekről (FADN, TAPIR). Azt is tisztázni kellene, hogy milyen egyéb igények léphetnek fel, és azok az adatok gyűjthetők-e (4.2.2. és 4.2.5. fejezetek).

A fentiek érdekében létre lehetne hozni egy "bemutató projectet". Az eredményeket más régiók számára hozzáférhetővé (sajtó, szemináriumok, cikkek), és végül a workshopok módszereit szabadon alkalmazhatóvá kellene tenni. Egy ilyen project elindítása olyan régiókban is hasznos lenne, ahol van már más a privatizációs folyamattal kapcsolatos project is. Két okból kívánatos lenne nyugat-

európai szakemberek bevonása: egyrészt a farmerek információs igényeivel kapcsolatban át tudják adni tudásukat és tapasztalataikat; (King,1992., Poppe,1991a.); másrészt közvetítői szerepükből kifolyólag növelni tudják a magángazdálkodók együttműködési készségét.

- b., A farmerek együttműködési problémájának megoldása lehet az AKII és az FADN kapcsolatának világos kidolgozása (magában foglalva a garantált jogokat is). Néhány javaslat a 4.2.1.-es fejezetben található.
- c., Az AKII kezdeményezője lehetne (egyetemekkel és szaktanácsadói hálózattal együttműködve) egy standardizált számviteli és pénzügyi fogalomrendszer (mérlegfogalmak, eredménykimutatás, publikációs modellek) kialakításának. J6 példák találhatóak Franciaországban, Hollandiában és Németországban (lásd 4.3.fejezet c.pont). A munka minőségének emelése érdekében hasznos lenne az ezekből az országokból származó szakemberekkel való együttműködés.
- d., Látván a PHARE-programok közötti koordinátlanságot kívánatos lenne, ha a Piaci Információs rendszer és az FADN között kapcsolat épülne ki, és a szaktanácsadói rendszerek is kapcsolódnának ehhez (4.3.fejezet).
- e., Az EK segítségével javítható az együttműködés az FADN-ek között, a know-how hozzáférhetőségének esetében és a keletés közép-európai projectek összehangolásában (lásd 4.3.fejezet).
- f., A TAPIR-csoport a szoftvernek megfelelően kidolgozhatna egy számlasémát, ezáltal létre lehetne hozni az input és az output adatok közötti összhangot. Hasznos lenne a néhány nyugat-európai és amerikai szoftver tanulmányozása is (Poppe, 1991).
- g., Mikor az első adatok rendelkezésre állnak (kb.50 farmer adatai) a kapott adatokról az AKII-nak egy elemzést kellene készítenie, és az ár- és termelési eredményeket publikálnia kellene. Az ehhez a munkához szükséges módszerek tanulmányozására szintén projecteket lehetne létrehozni azokkal az országokkal közösen, akiknek ezirányú tapasztalatai már vannak.
- h., Az AKII-nak az FADN-nek és a KSH-nak fel kellene ismernie az EUROSTAT Közösségi Tipológiáját, hogy az FADN rendszerhez és az éves felméréshez kialakítandó adatlapok megfelelő reprezentativitást tegyenek lehetővé a kiválasztott mintából. Ehhez az EK FADN rendszerében dolgozó szakemberek tudnak segítséget nyújtani.



- 1., A Földművelésügyi Minisztériumnak egy információs tervet kell kidolgoznia, hogy koordinálhatóak legyenek az egyes fejlesztés alatt lévő területek, és hogy el tudja hártani az információhiány miatti támadásokat. Az információs terv magában foglalhatja egy külső és egy belső információs politikát (5.1.ábra). A belső információs terv tartalmazhatná azokat az adatokat, amelyek a mezőgazdasági politika kialakításához szükségesek (támogatások elosztása, kvóták); valamint a KSH-tól és az AKII-től elvárt információkat, amelyek megkönnyítenék a Minisztérium munkáját. A külső információs politika feladata az ökonomiai és számviteli információk tökéletesítése, amely megoldást kínálna az a. és c. pontban említetteknek. Az a. és c. pontban leírtakra megoldás lehet egy bemutató project szervezése, amelyet az a. pontban részleteztünk már, és egy alapítvány létrehozása elősegítheti az egyes intézetek közötti együttműködést. Hollandia már rendelkezik pozitív tapasztalatokkal ez ügyben, amely esetben egy alapítvány teszi lehetővé az információs technológia tökéletesítését (Zachariasse, 1991). Magyarországon is egy hasonló alapítvány növelhethé meg az ökonomiai és számviteli információk használatát a farmerek számára. Egy sikeres alapítvány javítja az adatok felhasználását, melynek pozitív hatása van a magyar mezőgazdaság hatékonyságára. Közvetve segíti az AKII és a szakértői rendszerek munkáját, segíti egy standardizált rendszer kialakítását, egy világosabb kép létrejöttét a farmerek információs igényeiről, és a farmerek nagyobb érdeklődését egy olyan reprezentatív információs rendszer kialakításával kapcsolatban, mint az FADN.

# 1. INTRODUCTION

## 1.1 Aim of the study

At the moment Hungarian policy makers have little insight in the private farming sector and its developments. As this sector grows in importance and an ongoing evaluation of the privatisation process will be necessary, this lack of information will become even more problematic. Therefore it is necessary to create an information flow from the private farming sector to the Ministry of Agriculture.

The objective of the commissioned research is to describe and test which information the Ministry needs and how it could be collected.

Central in this objective are the information requirements of the Ministry at the moment (during the privatisation process) and in the near future (after transition). These requirements have to be realistic from the supply side: farmers and/or existing data sources must be able and willing to supply the data. This aspect will also be addressed in the study.

During the field work it became clear that several projects within the Hungarian Ministry of Agriculture and the Research and Information Institute for Agricultural Economics AKII are strongly related to the objective of this study. Where the objective stated above could be interpreted as a feasibility study for a Farm Accountancy Data Network (FADN), the PHARE-project on the Farm Accounting System (under development in AKII and described in more detail in section 3.2.1) is already implementing such a system. This discrepancy must partly be blamed on the elapse of time between the period in which the original objective of this study was designed, and the moment the field work was carried out. Faced with this situation the research team decided to interpret their mission more broadly and to review the current situation in order to make recommendations for the follow up of the projects under way.

## 1.2 Private farming

The term 'private farming' needs to be clarified. At the moment (summer 1992) there are three types of farms in Hungarian agriculture: state farms, cooperatives and smallholder's plots. State farms have been formed after the second world war (in the period to 1956), often on the land of large estates. In the period 1959 - 1962 Hungarian agriculture was fully collectivised, leaving only a tiny proportion in purely private ownership. Coop-

erative farms were formed by private farmers, who brought their land and buildings into the cooperative but retained a legal title to their original possessions.

Private plots of different size however were allotted to the members of the cooperatives for cultivation in their spare time and after completion of their work for the cooperative. Work on these plots could be done with full help (machines, selling of products) of the cooperative [EIU,1990].

Measured in hectares, state farms (120 farms with on average 8,000 ha) and cooperatives (1,300 with on average 4,000 ha) are dominant (Forgacs, 1990): less than 20% of the agricultural area is cultivated by private farmers (Rutten, based on KSH, 1992). In the production of eggs, pigs, vegetables, fruit and grapes however, the private plots have a market share above 50%. It can be estimated that one third of the total production value in agriculture (excluding food processing and non-agricultural activities of cooperatives and state farms) is realized on private farms (including plots of members of cooperatives). Fifty percent of the production value is realized in cooperatives. In addition one has to realize that horticulture represents 30% of total agriculture production (Göndör, 1991). Horticulture and pig meat are also important export products.

Summarizing, one could say that an important part of the agricultural production value (and probably even a higher part of the value added) is already realized on private farms.

Hungary has decided to transform the ownership conditions. Approximately 70 - 80% of the arable land may become private property. The law of compensation and the uniform cooperative law support this process. At this moment (summer 1992) it is not clear how the new structure will look like. There may be members of cooperatives who successfully farmed their own plot and feel confident enough to enlarge their plot. By getting their land back from the cooperative and by renting or buying land they could start their own family farm. Some will do this in a private partnership. The 1991 census held by the statistical office KSH revealed that 36,000 farmers had a farm as their main job. Another 29,000 expressed their intention that they would like to be private farmers. That could mean 65,000 family farms, although one has to realize that the profitability in farming has declined seriously after that census.

Especially in arable farming this formation of family farms seems unlikely as it hurts the competitiveness of production and demands much capital or involves high risks.

Many interviewed persons (but more civil servants than farmers) expect that the old cooperatives will be transformed into a new type of cooperatives. The old, kolkhoz-type cooperatives have to be abandoned by law before the end of 1992. Their members (or a group of them) could find it attractive to found a new cooperative (a vote on the management and property rights on all land is then obligatory) for some of their activities (e.g.

selling or renting the machines) or even for all. In that case the members bring their labour, land and capital together and share the profit. However, it is not yet clear how in this case the distribution of profits as a reward for labour (wage), land (rent) and capital (interest) of the members should be done. In a private enterprise or partnership these decisions could be taken at forehand by the owners, geared to their own wishes. In a new cooperative 'one man, one vote' could be the rule. It is not unthinkable that this leads to a conflict of interests between smaller and larger members. In any case the difference with the old situation would be that such a new cooperative can go bankrupt. The government will not stand in to guarantee its existence or the payment of income to its members. That means that these new, privatized cooperatives would be private farms too.

In this report we will use the term 'private farm' for all those farms whose existence is not guaranteed by the government. At the moment these are the smallholders' farms. In future this could also include privatized cooperatives and state farms or new formed family farms. However, much of the interviews for this study were on the private smallholder's farms. The results of the study could nevertheless also be beneficial for the other groups of privatized farms.

### 1.3 Method

In principle four strategies for the determination of information requirements exist (Davis and Olson, 1985):

- Asking (by closed or open questions, by brainstorming or group consensus).
- Deriving from an existing information system.
- Synthesizing from characteristics of the utilizing system.
- Discovering from experimentation with an evolving information system.

In this case the last strategy is not appropriate, but a mix of the first three seems beneficial. A review of recent reports on Hungarian agricultural policy (Min. Ag, 1991, Min. Foreign affairs, 1992, etc.) and interviews with top-decision makers of the Ministry could reveal the characteristics of the utilizing system: which decisions have to be made in the near future and will need data on the private sector.

In addition interviews with future users have been held to address specific topics and details. One of these interviews has been with the Ministry of Finance, as they have an information need not only to prepare the budget but also to advise on taxes and subsidies in agriculture.

Next step is to examine if such a type of information can be collected, and which limitations exist with farmers and in the infrastructure. AKII, the agricultural economics research insti-

tute, including STAGEK (the section on data collection and statistics, formerly part of the Ministry) could play an important role in this activity. Experience from other countries show that universities, tax-data and the statistical office could also play a role in the infrastructure. All these organisations have therefor been interviewed.

Special attention has been given to the farmers' willingness to cooperate in exercises comparable to a farm accountancy data network. Activities of AKII, and especially its Farminfo project, have also been reviewed.

Farm accountancy data networks (especially successful ones such as in the Netherlands and Denmark) are not only used by policy makers, but as well by farmers, extension (farm advisory service) as well as for research purposes. Those links have been taken into account in the interviews and the report.

#### 1.4 About this report

Chapter two describes the information needs for policy making. It starts with the results from the interviews (described in section 1.3 as 'asking'), followed by an analysis of the current policy ('deriving'). It ends with a description of the systems used in the EC for monitoring farms ('copying').

Chapter three describes the systems under development. The information is based on interviews with persons involved in the projects. Special attention is given to the FAS/FADN project and the Farminfo project, both under way in AKII.

Chapter four reviews the current situation and contains suggestions to solve issues raised in the interviews. The last chapter contains the conclusions and a number of recommendations for further action.

## 2. INFORMATION NEEDS FOR POLICY MAKING

### 2.1 Decision making in agricultural politics

Political decision making is by definition a process that is hard to describe and full of aspects that not always look rational to an outsider. This is even more true for a country that is going through an important period of change. The interviews held for this study revealed that the current work in the Ministry is dominated by the big issues like the privatisation, the law on compensation and the structure of the (new) cooperatives. Besides these important issues there are the day to day operational questions.

Compared to the situation in Western Europe there is not yet a routine information process for the parliament on the state of agriculture through planned reports (like the yearly Agrarbericht in Germany). Where discussions regarding agriculture in Western Europe are concentrated on certain predefined moments, and therefor mainly deal with the strategy of the policy, the situation in Hungary is probably less routine-like. That makes it harder to describe the information requirements for the decision-making process. It also asks for flexible systems.

One could suggest, and some of the interviewed persons took this position, that there is hardly any need to support the political decision making process with hard facts at all. The Ministry of Agriculture stopped to give commands to the sector, and, in their view, it could therefor restrict itself to issuing market regulations without much need for information. As the next section will show in more detail, this is wrong. To make and justify an agricultural policy the Ministry needs to know what is happening in the sector on the farms. Otherwise the effect of the measures can not be judged, and the Ministry becomes a decision making unit that controls a steering wheel without having a compass.

Most of the persons interviewed underlined this point. They felt that the data received from the cooperatives and the state farms (the so-called 'balances', giving data on income, costs and profit) would become more and more irrelevant. The uncertainty about the future agriculture structure and the lack of a law on statistics make it hard for them to see how the future information needs could be fulfilled. However they are convinced that information will be needed to support decision making.

## 2.2 Important decisions in the coming years

The Hungarian government has published its agricultural policy and the program for the period 1991 - 1994 (Min. Ag, 1991). The most important task is described as

*'determine the main directions, comprehensive framework for the agricultural policy concept, which is the primary task of the present work'*.

It seems that this must also be true for the establishment of information systems: a framework for the future is needed.

The paper mentions several policy areas where information on (private) farms is needed to support these decisions. In order of the paper, these include:

- As a consequence of the Compensation law 'land use and land ownership will be separated to a considerable extent, even over the long term'. 'The Government is going to protect the enterprising leaseholder risking his capital against the owner'. This means a regulation of the land market. In this regulation the market conditions will be governing, but the example shows that information on land rents, land values and the effect of them on investments and land use is necessary to make these decisions.
- 'The pressures and uncertainties of the world market should not be fully released on the Hungarian agriculture; Hungarian agricultural production and exports should not be left completely without state subsidies'. This position implies a proposal to copy important (but not all) elements of the EC's Common Agricultural Policy. The technique of regulation in the EC market regulation system, the system of interest coordination, the price regulation based on guaranteed intervention prices, the information system and the quota regulations are mentioned as being among those elements. The formation of product boards is also foreseen.
- A taxation system will be installed that follows the general taxation principles but does not change the present level of tax burden. The new land tax should be developed in such a way that farmers realizing disproportionately higher profit on better quality lands should be burdened by a relatively higher withdrawal. For the personal income tax small farmers (that is up to a certain amount of annual sales) will be taxed on the basis of a flat cost rate. All these proposals imply several calculations.
- Calculations will also be needed to determine the compensation rates in the simplified VAT system for the small scale farmers.
- Subsidies to disadvantaged agricultural regions, including the present system based on area, remains.

This list of items from 'the government's agricultural policy and program' shows that the Hungarian agricultural sector will face circumstances that are comparable to those in the EC.

The list also shows that the policy-makers will not withdraw completely from the sector. During and after transformation they keep taking decisions that shape the market. To be able to judge the effects of these decisions, information on the farm sector itself will be needed. Therefore there are good reasons to look which information systems are used in the EC to support policy making. That is the subject of the next section.

### 2.3 Information systems in the EC

In the EC and its member states there are two main systems with information on private farming, the census and the FADN. The census provides the statistical offices (and at EC-level EUROSTAT) with detailed data on the cropping pattern, the number of animals and the labour and machinery available of all farms, excluding some very small private activities. Some of the member states organise a census once every two or three years (depending on arrangements with EUROSTAT), and in some of those years they run the census on a sample basis. Others have a full census every year. This is also the case in the Netherlands, where the data of the census are also heavily used by the Ministry to allocate and check subsidies and quotas. Therefore farmers are obliged by a Statistical Law to take part in the census.

Census data are used for research in structural developments (number of farms, type of farming, farm size). In the ideal situation the data are available in individual form (anonymously) to a research institute and on a time-series basis. Data can then be used optimally to analyse structural developments and policy proposals. Data can then also be used to draw samples (including for the FADN) and to control the representativity of these samples.

Censuses are often held in spring, after the crops have been sown. If the results are published quickly (that is to say within a few months) the data on crops and animals also have a value for the farmers and other market players, as they are estimators for the size of the harvest.

The second information system on private farming is the Farm Accountancy Data Network (FADN). It is a representative sample of all farms (above a certain size). From each farm in the sample a bookkeeping is made that reveals detailed data on the output, costs and profit of the farm and its enterprises (activities). The amount of detail as well as the method of collecting the data varies between the EC member states. Some member states only collect the data necessary for Brussels, others also collect data (e.g. on gross margins of activities or data on input prices) that are of interest to farmers and / or their national policies. The method of collection also differs. Most EC-countries have an agricultural institute that collects the data by their own personnel, some mainly by filling in punch forms (Ireland), others with portable computers (Portugal, the Netherlands). A few (most-



ly large) countries buy and rework the data from accounting offices, that often have the data for tax purposes.

Besides these two main information systems on private farming, a few additional ones should be mentioned. First of all there exists the so called 'sector income index', an income statement on the total output and inputs (aggregated in millions of ECU) of the agricultural sector. It can be seen as a detail in the framework of the national accounts. A yearly forecast update gives information on the actual income situation in agriculture but for policy analysis it is of little use, as the income can not be traced back to types of farms, farm size or regions. So the income distribution remains unknown.

Yield estimates and price statistics are also an important statistical activity. Their main function is to improve the transparency of the market. By disclosing this information, especially on a regional level, market players can get informed. For policy analysis they are of interest because they make it possible to update results from earlier years. Accounting data are by definition information on the past. By multiplying the input and output items with price and volume changes (derived from price statistics and yield estimates) the current income can be estimated.

Of course other important information systems for policy making exist, like statistics on imports and exports, but these are not describing the situation on (individual, private) farms.

#### 2.4 Other users of information

In the first two sections of this chapter the information requirements of the Ministry of Agriculture have been discussed. It should be stressed that this Ministry is not the only potential user of data from the private sector.

An interview with the Ministry of Finance revealed that they are using the data of cooperatives and state farms to estimate the taxes and subsidies for the budget. In addition the data are used to estimate the effect of policy proposals on taxes and subsidies. The users of this data were very much aware of the fact that their information system will soon be outdated.

The interest groups are also possible users of information on private farming. This point is clearly demonstrated by the fact that the Farmer's Union 'Magyarországi gazdákörök országos szövetsége' tried to organize their own survey in the beginning of this year (1992). The survey was intended to look at the cropping pattern, number of livestock, type of holding (main or second job) and the main bottlenecks on the farm. The survey failed, reportedly due to lack of enthusiasm among the information providers.

The use of data on the private farm sector in the extension service will be discussed in the next chapter.

### 3. AVAILABLE INFORMATION

#### 3.1 Current systems

In the past there were two main collectors of agricultural data in Hungary: the Statistical Office KSH and the Ministry of Agriculture (and especially its STAGEK-section). The KSH concentrates on the census (number of farms, crops, animals, machinery, family size) and on surveys of the cropping pattern, the number of animals, yields and the number of machines. The census is a full census every ten year (for the FAO-world statistics). It includes the 1.4 million smallholders that are all visited and counted in this census. In addition there are 600,000 persons who have agricultural activities for home production or as a hobby (but not bringing their produce to the market). The last FAO-census was held in 1991. Between two FAO-censuses (that is 5 year after the last) a census is made on a sample basis. By law everybody has to cooperate in the census as well as the special surveys (on sample basis) by giving the required data.

The Ministry of Agriculture gathered data depending on its own information requirements, which could change from year to year. Besides operational information of the state farms and cooperatives, yield estimates were made, and questionnaires were organized on the plans of the farms for next years.

In addition data were collected on the output (income) and costs of the production. Cooperatives and state farms were obliged to fill in an income statement (the so called 'balance') that provided this information. It was also used to calculate their tax bill. Income from small-scale farming was not taxed. These farmers have no accounts for tax purposes and very often they do not have them for management purposes either: their farm was small enough to be managed without paperwork. This situation of tax-accounting is unlikely to change considerably in the future. No taxes have to be paid on incomes lower than Ft. 750,000. On sales lower than Ft 2 million, the income will be calculated by a flat rate (10% in animals, 30% in plant production) of the total sales. An itemized statement (in the form of accounts) is only needed above this size or if one wishes not to apply for the flat rate.

In the past most of the data were gathered on state farms and cooperatives only, and they had to cooperate. However for some statistics estimations were made for the production on private farms and the census also collected information on these small plots. This situation made it even possible to publish on an income comparison between large scale farms and small scale farms (Juhasz, 1991), that showed that the income on small scale

farms is higher than on large scale farms (cooperatives and state farms).

The reliability of the data from the state farms and cooperatives must be questioned. Those farms were obliged to give the data in an identifiable form and it was used to control and direct the farms. This situation, in which independent statistics were scarce, made statistical activities an unpopular phenomenon and gave them a bad name.

At the moment the statistical processes are also in transformation. A statistical law is in preparation (see section 3.3), and western methodology is introduced. It will nevertheless take time to repair the image of the statistics. Confidence is quicker lost than gained.

It is from this starting point that work is in progress to create new information systems. They will be discussed in the next section.

One remark should be made on the organisational changes. In the past the Ministry of Agriculture had its STAGEK-section that was responsible for gathering information to feed the policy making process. It also financed the Agricultural Economics Research Institute AKI. In AKI worked approximately 40 persons, in STAGEK 80. Recently these two institutes have been merged into one new institute, called AKII. It combines the tasks of AKI and STAGEK.

## 3.2 Systems under development

### 3.2.1 The Farm Accounting System 1)

The Farm Accounting System (FAS) is one of the PHARE-projects under development. It is under management of AKII, in particular the former STAGEK group. The project contains four elements:

- a. An information system to monitor output, inputs and profits of large farms (at the moment state farms and cooperatives) and their activities. Based on the traditional 'balance'-statements of the cooperatives and the state farms some data in this system are now available.
- b. An information system to monitor output, inputs and profits of activities of very small farms (at the moment small holders, secondary job activities). This part of the system is also finished and some data are available.
- c. An information system on the food processing industry, to monitor the whole vertical production chains, especially with regards to margins.

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1) The description of the project is based on an interview with the project manager.

- d. An information system with the bookkeeping of farms. In effect this will be the Hungarian FADN.

The project is carried out by an Irish company (DEVCO). The Hungarian FADN will be a copy of the Irish FADN. This is thought appropriate after a comparison of the systems in Ireland, Northern Ireland and the U.K. At the moment the field book used by the farm recorder has been translated in Hungarian and people are trained in the system. Software is installed in a network in the main office. In autumn there will be a first test with 10 private farms. The methodology is totally based on the regulations of the EC's FADN.

It will also depend on developments in the agricultural structure, how many farms can be surveyed. In addition it will be hard to determine the representativity of the network as a census of all farms is lacking. It is unclear if the farmers are willing to cooperate. The project team is optimistic, although it will take time to build up trust. Other persons interviewed however, have their doubts. They suspect farmers have a deep rooted attitude of hiding information for the state and for the tax authorities. The total organisation of the network, including the question how much cooperation in the data gathering with the extension service and/or the tax-accounts is possible or needed, is still in study.

### 3.2.2 The TAPIR/Farminfo project 1)

The TAPIR-project is a joint project of the MENTOR-company and AKII. The TAPIR-project contains four elements:

- a. 'FARMER': an accounting system for private farms that generates financial information for the farmer, his bank and -if necessary- his tax-form.
- b. 'FARMINFO': a system to collect the data from the FARMER-part and distribute it in aggregated form to banks, cooperatives, research, extension, the Ministry of Agriculture and other interested parties. The system also diffuses information back to the farmers (and other users): market information, market regulations, etc.
- c. 'FARMBANK': a system to support the local and corporate management of agricultural banks. Data on individual clients or the agricultural economic environment are generated by FARMER and FARMINFO.
- d. 'AGRONET': a telecommunication service to support the data-transmission, probably by satellite to bypass the problematic rural telephone system.

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1) The description of the project is based on an interview with the persons involved in the project.

The basis for the accounting system in FARMER/FARMINFO is the farm family, which is divided in four elements: the main income generating activity, other income generating activities, the household as a service centre and other household spending. The first two activities generate the Family Farm Income (as it is called in the EC's FADN). Family Farm Income could come from more than two activities (enterprises like sows, cows, vegetables). Then their output and costs are taken together.

The third activity has been introduced because a common feature of Hungarian agriculture is to provide food (and sometimes lodging) to casual workers (e.g. who work for a couple of weeks at harvest time). Total costs of this 'profit-centre' are therefor calculated and allocated to the costs of the first two activities and private consumption. In accounting theory one would call this a profit-centre.

A clear 'field book' exists. There are working sheets to register the opening balance, the closing balance and the depreciation. There are three types of 'cashbooks': one to register payments based on invoices (with columns for expenditures and cash-inflows, both further detailed to the four activities mentioned), one for small pocket expenditures and one for accounts receivable (as it often takes two to three months before farmers get their money from their sales). The recording in the cashbooks can be done by the farmer. Another worksheet collects the data on internal transfers within and between the activities (e.g. the use of products in the household or as a feedstuff). All these worksheets are entered in the computer program. That does not use a chart of accounts (or an equivalent code scheme) with the effect that several lines with the same subject (e.g. selling of pigs) can not be added up. All entries are made in volumes as well as in monetary data, so in theory unit prices could be calculated. The total area of the farm can be calculated by entering the rented area in the balance sheet with the real size (in ha) and a value of zero. The cropping pattern can be calculated by entering the different plots in the balance sheet under the name of their crop (with a rotating cropping pattern that means that data for a new opening balance can not be taken from the last closing balance).

After entering the worksheets into the computer, it calculates a balance sheet with some additional data (e.g. on depreciation), a cash flow statement, and an income statement. These statements do not (yet) generate additional financial indicators as the solvability, liquidity ratio's, the borrowing capacity and others.

In addition to the system some worksheets are provided to the farmer to register (financial) management data like the fertilizers and chemicals used per crop and the production per animal. Computerisation of these worksheets is not yet foreseen.

The total system is clearly intended to be used by banks (probably the 260 saving cooperatives) to support their credit evaluation, mainly on the basis of monetary data. Note however

that the practice of agricultural credits has not yet been established.

The project described, is not funded by the PHARE-project and cooperation is sought with the savings cooperatives. The Mentor company, once the program is ready, aims to build up regional teams to provide farmers and banks their services and advice with the software. These services will also include tax information market information and juristic support. In the field of the organisation of, and cooperation with, the credit administration, the programme has the specialist assistance of the Dutch RABObank. At the moment the software is tested with 10 - 15 farms. This will be finished in the autumn of 1992 to support the privatization process.

The future cooperation between AKII and the Mentor-group is not yet decided. The main interest of AKII was the development of the methodology. If the use of the software takes off, a service is provided to farmers and banks that could be privatised: in the EC commercial accounting offices play this role. Nevertheless AKII could stay involved in the programme (and perhaps even in a joint company) for two reasons: further development of the software to improve the use of financial data by farmers and receiving data for research. This would be comparable to the situation in EC-member states.

### 3.2.3 Other PHARE-projects

Two other PHARE-projects must be mentioned here: the Marketing Information System (MIS) and the Extension System. The MIS is ready. The English company Landell Mills and the Hungarian EUROPARITAS were involved in its realisation. It collects and distributes prices of agricultural products in several markets. This information should make the market more transparent for the market players and improve market efficiency. It is mentioned here for two reasons: price developments as such could give indications on increasing or declining profitability in the farm sector. Secondly the data can be used, assuming there are harmonized data definitions, to update farm accounting data in order to make forecasts of farm income.

The Extension System (under construction by a German consultancy, GFA) provides an integrated database and network concept with two kinds of information: data from the government to the farmers (e.g. market regulations, intervention prices, subsidies) and scientific data (technical coefficients, budgeted gross margins etc.) The Extension System is mentioned here because farm accounting data (on group averages) was one of the elements mentioned that will be included in the database. At the moment extension workers are being trained. They will not have a task in providing the Ministry information on the actual situation in farming.

### 3.3 Statistical law

Statistical activities are at the moment also under review. The task of making statistics will in future be concentrated in the Statistical Office KSH. That implies that the Ministries will abandon this work and concentrate themselves on the process of preparing and executing laws. This is thought to improve efficiency, also because some data are now gathered twice. The Ministries will advise the KSH through their seat in a Statistical Committee. The management of KSH prepares its final proposal for the work programme, based on this advice, for the Government.

A new statistical law is in preparation. The result will be that the statistical framework will be more or less comparable to that in Western Europe. It is foreseen that all subjects who are asked for data in the framework of a statistical program that is derived from the Statistical law, are obliged to cooperate. Surveys that are not based on programmes mentioned in the Statistical law will need the voluntary cooperation of people. The statistics will all be made public. Individual data will be available for research institutes and universities in such a form that the individual data can not be traced back to recognisable persons or enterprises (that means without names and addresses).

The data of the 1991 FAO-census will probably be outdated soon, as transformation goes on. However there are no plans to do an extra census or to bring forward the 1996 census (on a sample base). The high costs of such censuses are prohibitive.



## 4. A REVIEW OF THE CURRENT SITUATION

### 4.1 Introduction

Chapter two of this report gave an overview of the information requirements of the policy makers, especially in the Ministry of Agriculture. Chapter three described the information systems that are being made at this moment. Once finished they should be able to provide most (and perhaps nearly all) of the information needed. In this chapter we review the situation: is it likely that these systems will be successful, what are the main bottlenecks and can they be solved. It should be stressed that the focus of the report changes from analysis and description to comments. That involves judgements which are made by the research team and not necessarily confirmed by the persons involved in the projects.

Next section lists the main bottlenecks, with emphasis to the two farm accountancy systems and census data. Arguments for this emphasis were already given in section 2.3. Section 4.3 deals more explicit with the question of coordination between the systems.

### 4.2 Bottlenecks

In decreasing order we see the following bottlenecks in the information systems to provide the Ministry of Agriculture with data on the private farming sector:

#### 4.2.1 The willingness of the farmers to cooperate

This seems to be a difficult topic for the FADN as well as (but perhaps to a lesser extent) for the TAPIR project. Because there is no experience available, interviews with 7 farmers were conducted. Although the farmers for these interviews were certainly not chosen randomly, even so the interviews revealed controversial evidence on the question.

It appeared that several farmers had positive experiences with bookkeeping, especially through the work in their main job or even the job of their wives. One small farmer held books himself on his mixed farm for management purposes. But farmers expressed that they had not much interest in comparison of farm data and study-circles of farmers (and extension officers). Mentality, historical reasons (do not ask your neighbour how he organised his activities) and competition in local markets were mentioned by several interviewed persons (not being farmers) as possible reasons. One of the farmers doubted if he would accept a cost-free bookkeeping for management purposes.

Two reasons were mentioned why farmers would be unwilling to cooperate in a network at all. The first one is tax avoidance. The fact that more farms are brought under the tax system could harm the relationship with the farmer. However, this does not apply to the TAPIR project (aiming to provide farmers with accounts for tax- and credit purposes) as far as the number of cooperating farmers is concerned. It could however question the reliability of this data, and even make it unusable for the FADN. For the FADN one should take note of article 15 of its official regulation (79/65/EEC, 15 June 1965):

*'It is forbidden to use individual bookkeeping results and all other individual data that have been collected in the framework of this regulation, for fiscal purposes' (our translation).*

This article, which is law by definition in all EC-member states, should also be written in the Hungarian law if Hungary adopts the FADN without being a member of the EC. That gives the FADN the possibility to gain the trust (which will take time) of the farmers.

Gaining of that trust is necessary. The second reason for non-cooperation are deep rooted reservations against the state. The current low status of statistics (see section 3.1) adds to this point, even if one thinks that some farmers will cooperate because they think that cooperation with statistics is obligatory. As two of the farmers answered, when we asked them if they thought the Ministry of Agriculture was well informed on the actual situation in the rural areas:

*'Perhaps not, but even if they would be aware, they would rather like to be unaware, to escape changing the policy'.*

Another one replied that in his opinion policy making had nothing to do with information. It is just a power struggle. In addition the Ministry of Agriculture was not seen as an institute that guards the interest of the farming community to other government priorities (as it often functions in Western Europe) but as a part of the anti-farming government.

Some of the farmers interviewed, realized that information means money. For sharing information, even with other farmers, they liked to be paid.

This situation does not improve the chances of cooperation. It should be stressed however that EC member states have also faced this situation. For that reason the EC regulation on the FADN states (article 5, 79/65/EEG) that in each member state a National Committee and in its regions Regional Committees should be formed. These committees have clear regulated duties (like monitoring the sampling of the farms and the representativity of the FADN and to guarantee the reliability, consistency and privacy of the data collecting). Their members are recruited from all organisations that can benefit from the FADN, including universities, farmers' organisations, accounting organisations and others.

The creation of such a Committee is just one measure to improve the status of the FADN with the farmers. Another is the presentation of the organisation that collects the data (in this case AKII) as an organisation as independent as possible from the Ministry. This independency has practical consequences (separate housing with own address, telephone numbers and logo) but should also be an independency 'in its heart': policy reports with results of calculations based on FADN-data should be made available to farmers' organisations, product boards and political parties at the same moment that they become available to the Ministry of Agriculture. This scientific independence should be stressed by the FADN to the cooperating farmers. The FADN should also be presented as a 'European' activity. To all stakeholders involved it should be clear that the FADN is an objective method to measure the income situation in farming. The political process is not on denying or confirming this information; it is a discussion on types of actions needed or not needed, knowing what the objective situation is.

In the EC member states in essence there are two ways of running an FADN. The first one (which is practised in Germany, France and Spain, and in the EC itself), the FADN is run by the Ministry of Agriculture itself as an instrument to analyse policy proposals. Results of these analysis are seldom made public. Farmers have no reason to share their data with the Ministry, so the data are bought from accounting offices that pay farmers (or give them a reduction on their bill for doing the tax-accounts). In a limited number of cases the data are given to a research institute or a university for a certain, well defined, research project.

The second one (which is practised in the Netherlands, Belgium, Denmark, Ireland and Italy) the FADN is run by a research institute that uses the data not only for policy research but also for a lot of research projects. Many of these projects investigate problems that are of clear interest for farmers themselves (like optimal farm size, differences in farm income etc.). Often these institutes gather the data themselves (but not by definition: Denmark gets them from accounting offices of the Farmers Unions) and develop special reports to give back farmers as much as information as possible. Their relation with the farmers (a barter of data) makes payment unnecessary.

In the case of Hungary farmers are not queuing to cooperate, and they have to be trained in economic concepts. Reliable tax data are not available for sale to the government either. And probably the Ministry has other priorities for spending its money. In such a situation it is advised to adopt the second way.

At least one of the persons interviewed played with the idea to put the FADN in the framework of a statistical programme and attach it to the Statistical Law. Farmers could then be obliged to take part in the network. Although at first sight an attractive idea, there are good reasons not to do so. The first one is more philosophical: can you ask 1% of the farmers by law to coop-

erate in something that they are not willing and that demands a considerable amount of time of them? Can such a situation (that is felt as being unfair) really be enforced without bringing laws in general in discredit? A second reason deals with quality management. If farmers are obliged to take part there is no incentive for the management of AKII and its FADN to improve their reports to the farmer. That would not be a situation that suits Hungarian agriculture. To end this section optimistic: a sample like the FADN can be highly representative even with a high non-response. The FADN in the Netherlands is highly representative, although the non-response is more than 50%. An excellent statistical sampling procedure is then needed (see section 4.2.6)

#### 4.2.2 Information to the farmer

If farmers can be reassured that their data will be used for a good objective (guaranteed by an independent organisation) they will base their response on a question to join an information network by comparing the extra work they face with the rewards. These rewards could be information/advice and money. As the last section argued: in a situation where farmers are deficit in economic know-how it is more attractive to use the resources for providing information than for buying their cooperation with money.

It appears that the systems under development (FADN as well as TAPIR) have mostly concentrated on creating a computer-system and not on determining the information needs of the farmer by asking them. The testing of the systems in the second half of 1992 will bring some experiences with the farmers. That could be rather late and these experiences will concentrate on the question whether the developed information systems are correct (from an accounting point of view). In this phase it is unlikely that the information needs of the farmers themselves play an important role. A critique often formulated on information systems for farmers in Western Europe is that they are also too much developed in the office and not with the users. It applies also here 1).

The FADN seems to be in a better position here than the TAPIR-project, as it copies the information given to the Irish farmers. But the level of schooling and know-how will differ. To learn economic concepts it is often easier to start with a cash-accounting approach than with accrual accounting (see Poppe, 1991a for a review of the literature). Specialists in education can perhaps contribute in solving such problems. Coordination

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- 1) A favourable exception seems to be an accounting program under development in the consultancy company EUROPARITAS that is developed in close cooperation with (ex-cooperative) agricultural processing companies.

between the reports for the farmer and brochures used in economic training is also needed (see also section 4.3).

Farmers are often more oriented towards bio-technical processes than towards financial information (Christensen et al., 1984). The FADN provides a lot of production volumes and bio-technical data, although probably not enough. The current content of the TAPIR-project is clearly deficient in this respect. A chart of accounts is lacking, so average volumes and unit prices per year are not calculated. The method to administrate the cropping pattern, including on rented land, through the balance sheet works for a test phase but is unlikely to be error-free in a large professional organisation. Using a chart of accounts is foreseen in the future, but this could be a large programming effort. When the accounting services will fly as high as the TAPIR-team hopes, professional software (e.g. with the same level as the German software reviewed in Poppe, 1991b) will be necessary. The management will then face the question of making or buying (and in stead using the resources to build up the organisation). For the moment the TAPIR-software probably supports the accounting for credit decisions and for taxes well enough. The situation in the Netherlands learns however that once bank-officers have learned to judge loan applications from farms, they are also interested in the technical performance (e.g. piglets per sow per year). It gives an insight in the potential improvements that can be made in a farm. And the farmers (who are paying the bill) are interested anyway.

A last remark concerning the information to the farmers regards the timing. There is no need to wait, especially if one wishes to improve the response by the farmers. In particular the FADN (the persons that will write reports and analyse the data once they are in) could start with a Newsletter or articles or a column in the Farmer's magazines. As long as there are no Hungarian data to be published they could explain the network, the economic concepts and data from EC-countries. Would it not be interesting for (future) farmers to see an article with results of cereal farms (of different size) in France, Spain and England? One of the farmers interviewed for this project told that he had asked his 25 ha of land back from his cooperative. He would then like to start a dairy farm. He certainly would have read an article on the results of Bavarian dairy farms.

#### 4.2.3 Ignoring the privatized cooperatives

The two farm accounting systems are designed for family farms as they are well-known in Western Europe. This ignores the prediction of many interviewed persons that new production cooperatives will be formed. Would that prediction become reality then the systems need to be adapted and extended. As the systems take the farm family as the basic entity, they could still show the income of the family based on the payments by the cooperative. This already makes adaption of code-schemes and a

reflection on methodology (Is a profit made and retained in the cooperative income for its members or not ?) necessary. In its extreme the accounts get the character of a consumer-household survey. On the other hand one could imagine that the annual reports of the private cooperatives themselves would be of interest for research and policy making. This raises new questions of availability and comparability of the data.

Even if the new cooperatives would only deal with selling, buying and services, without having direct production activities themselves a reflection of methodology of especially the FADN is needed. The balance sheet (the so-called Table G of the Farm Return) includes all the holdings of agricultural shares (like capital invested in cooperatives) under one item: the circulating capital. It does not give rules on the valuation of these items. It is most likely that the information needs of the Ministry go much further than the FADN regulations suggest. An example could be price comparisons between regions, were a cooperative in one region pays a high price, while the cooperative in another region invests its money.

If cooperatives exists in future several farmers will be employed there. Also other farmers as well as their spouses will often have a (second) job that provides them with an income. In addition many farmers have already private savings. That makes the concept of the FADN to measure only the Family Farm Income and not the non-farm income out of date (Hill, 1991). The information need (especially for regional policy) will shift from the enterprise level to the family and personal level. Also in the EC a discussion is going on to gather data on non-farm income and wealth. As policy moves from price-support to income-support (GATT), the collecting of this data is strongly advisable anyway. This point does not apply to the TAPIR/Farinfo project. This accounting system focuses on the total family and its income. That is also necessary for credits and taxes. Farmers should therefor not be too reluctant to give these data; it also gives them useful data back.

#### 4.2.4 Organisational questions

Other problems which are not yet solved (and were often mentioned by persons involved) deal with organisational questions. This also includes communication with local or regional offices. Most issues raised fall outside the objective of this study.

One remark however has to be made on the problem of communication. As public telephone lines in Hungary's rural area's are likely to be of inferior quality in the next years, electronic data transfer will be difficult. This problem should not be aggravated too much in the case of accountancy data. These data are always late by definition. Field books and punch forms can be sent by post. If accounts are made on a PC in a regional office, a farmer can get his results quick enough for a credit applica-

tion. Building up a national database for statistical purposes faces a deadline only on a few moments in a year. Communication of accounts that are ready can therefor also be done by diskettes by post. The Netherlands has positive experiences with that system (although indeed nothing is as easy, and as costly, as a telephone line).

This of course does not apply for systems where time is an important factor, like marketing information systems. The TAPIR-project probably would like to distribute this information too. That would mean that their system could (on this point) be comparable to that of the MOSZ, the association of cooperatives. Probably the technical solution could also be comparable.

#### 4.2.5 Use of accountancy data in research and policy reporting

Once the data of the farms have been collected (be it in the FADN and/or Farminfo), they need to be analyzed. Probably these activities can also be positively influenced by experiences in EC countries.

Several problems are important here:

- Accounting data are by definition describing the history. Policy makers are more interested in the current situation and in the future. It is therefor important to update accounting data with price and volume-indices from other sources. Individual accounts as well as group averages could be updated. In the Netherlands the last method is used (called 'prognosis'), and the reports based on this method (Dröge, 1991) are highly appreciated by policy-makers.
- The high inflation rate in Hungary makes some kind of inflation accounting attractive. It also reinforces the point made above on the updating of the accounts.
- Besides accounting information the FADN could ask the farmers once or twice a year for their plans. Especially the cropping pattern (also needed to make updates of the accounts) and investment plans are of interest to policy-makers as well as to banks, merchants and other market players. Preparing plans can also be very interesting for farmers. Experience in Dutch dairy farming shows that farmers who make a plan for the coming year with a quarterly update, have a clearer picture of their farm and are able to react quicker to changing circumstances. Their performance is therefor better.
- A yearly report with the results of the network should be published. Such a report should not only contain the data, but also an analyzing text. It could be beneficial to compare indicators used (e.g. Hill, 1991) as well as the contents of the reports published in EC countries. Their content and relevance to policy-makers varies enormously.

Most of this know-how is not easy to diffuse from West to East. The first and the third item could be organised on a project basis. Visits to EC countries by researchers of AKII or to

AKII by West European researchers should be promoted to foster cooperation. The EC's Program for Cooperation in Science and Technology with Central and Eastern European Countries could provide the funding for these visits, as well as for organizing networks. The possibility of an electronic mail network (using the 'mailing lists' options in the Internet/EARN network) between the FADN-researchers through Europe should also be examined.

#### 4.2.6 Representative network

The results of a farm accountancy data network (be it the FADN or TAPIR/Farminfo) need to be representative. Several of the interviewed persons mentioned this as one of the most important problems. Although representativity may not be neglected, as a problem it ranks not as high as the cooperation of the farmers and related issues. If those points are not solved, representativity can not easily be reached either.

A second point is that representativity needs to be defined.

Answers are needed on questions like (Dijk, 1989):

- Representative for whom? All 'farmers', including the subsistence farmer and the bus driver with 0.5 ha? Or could they be surveyed with an easier and cheaper method? One should note that in the EC all member states use a minimum farm size for their FADN. Countries with a low minimum (like Spain) tend to increase it.
- Representative for what? Family Farm Income, or total family income or total production?
- Representative of what? Only for the average level of an indicator or also its distribution?

After solving these questions (which need to be decided by the users of the data, e.g. gathered in a National Committee) data on the total field of survey are needed to control for representativity.

As long as a census is not available, the best thing to do is to install committees of regional experts and ask them to choose 'representative' farms. At the start of its FADN at the end of the seventies, Greece sometimes used local dignitaries (like the town mayor and the head of a school) to play that role. It is said to improve a positive response too. The Netherlands used a similar method from 1948 until 1967.

Once a census is available statistical methods can be applied. The method of stratification can reduce the variance of the sample and thus make it more efficient. Stratification also helps to improve the representativity if a selected farm that denies to cooperate is replaced by a farm from the census with the same characteristics. It is clear that this can also be done without stratification.

If a census is available the representativity for variables which were not used in the stratification process can be checked too. A census makes it also possible to incorporate data from other sources (e.g. Farminfo data in the FADN) because its



representativity can be checked and corrected. Coordination between FADN and the census should therefore have some priority (see section 4.3). However it is unlikely that a total census will be available before 1997. The last (1991) census could easily soon be outdated, if privatisation takes off. Perhaps surveys planned by KSH, amongst others for vegetables and fruits, could be of help here.

If a census and some FADN data are available, a project on the statistical selection and weighting of the data can be done.

### 4.3 Coordination

In a period of rapid transformation coordination between developments is not always possible. It can even be desirable not to coordinate but to wait and see which initiatives are able to take the different hurdles.

However, after a certain time the call for coordination will come. This section makes that point: coordination seems to be lacking at several points. This does not necessarily mean that mistakes have been made. But it stresses that some future coordination, now that several projects are under execution, could be beneficial for the final result.

- a. Several interviewed persons raised themselves the problem of coordination between the different PHARE-projects. The lack of coordination concerned them for two points: the hard- and software used and the sharing of the data. All three systems use different computers and even different operating systems (MS-DOS, VAX/VMS and UNIX). It also seems likely that the results of the systems will be shared. All three systems (including the FADN) deliver results that are to be used by farmers and the extension service. In addition (as described in section 2.3) the FADN could benefit from updating its results with price statistics. The persons interviewed found this situation unsatisfactory, especially because the Ministry of Agriculture has an Information Committee that coordinates its own (non-PHARE) information systems policy. For the years to come this situation means that it will be necessary to have some standards (especially data definitions as well as procedures) to share the data between the different systems. This could be organized in two ways: the extension system should develop methods to include data from the FADN/Farminfo and from the Marketing Information System. The Bavarian videotext system 'BALIS' could be a useful example for this. The FADN/Farminfo could take the initiative to use price information for the updating of its accountancy data (see section 4.2.5).
- b. Coordination on accounting and economic terminology should be started as soon as possible. Systems like the FADN and TAPIR have their own definitions and terminology. Other sys-

tems, like information needed by banks and taxes and perhaps other commercial accounting software create their own terminology. To that comes the terminology used by the extension service and universities. This could create many (often minor but not unimportant) differences that confuse farmers during their training and use of economic data. It also hampers extension officers, teachers and bankers in their work as they have to deal with data from different systems. Examples of such differences in terminology could be definitions of gross margins (with or without work of contractors or calculated interest subtracted?), fixed assets (does that include all livestock or only breeding livestock?), value of land (in- or excluding investments in drainage and permanent crops), net value added (including subsidies in less favoured areas?) etc.

Nor the new Accounting Law, nor the tax-regulations solve this situation by setting an example here. In addition the codes used in the FADN-regulation are also not of much help. These codes are not based on a chart of accounts but are just a list of numbers to transmit data from a punch form or from an accounting package to Brussels. If in future (private) accounting organisations are established, they will develop their own chart of accounts and models for the balance sheet, profit and loss account, income statement, and cash flow statement.

A certain amount of standardisation in this field is very attractive. In the Netherlands, France and Germany such standards have been developed. All three countries have their own standardized agricultural chart of accounts. In addition they have a dictionary with accounting and economic terms and their definition, as well as models for the statements mentioned. Everybody is free not to use them, and to develop its own, but out of convenience and in order to provide results that can easily be interpreted and compared, nearly nobody does. In contrast the United Kingdom never did such a standardisation exercise. The result is that data from the regional FADN-networks (which are run by the Universities) are not very well comparable because different indicators are used (see Hill, 1991 and Poppe, 1992). The same holds for data from the FADN and extension data. Standardization is extremely difficult once everybody has installed his own indicators and charts of accounts. Universities and AKII, together with AKII's FADN, and other interested parties (like TAPIR and the extension service) should therefor start this activity. The work in the Netherlands (based on EC-directives for accounting, see Poppe, 1991a), France (INRA) and Germany (although its highly efficient 'Kontenplan' differs strongly from what is normal in non-agricultural sectors) could be taken as an example.

- c. Coordination between the FADN and the work of the Statistical Office KSH on the census could be improved. To solve the

problem of representativity it is important that census data are available, worked out with the same methodology as the FADN uses. EUROSTAT's Common Typology with standard gross margins, which is used in all agricultural statistics in the EC and its member states (except Germany), should be used here to foster international comparisons. Perhaps that is easier said than done. In the past KSH found this Typology not useful, especially not for small farms: small mixed holdings change easily from one farmtype to another when there is a small change in the number of animals or crops. Also groups of farms are then not very homogenous. However, this problem occurs only in the type of farming and not in calculating farm size. Determining farm size is especially interesting for mixed farms. And when farms get larger due to privatisation, the problems mentioned will disappear. For the next census the application of the Common Typology should therefore be taken into consideration.

In addition it is important that the individual data of the census are (in anonymous form) available to AKII for policy-oriented research on agricultural structure. The form of the data should make it possible to trace the developments of individual (but not recognisable) farms over time.

A topic for discussion between the FADN and KSH could then also be if these individual data could be used for sampling. Roughly described, that would involve the following procedure (more or less also used in the Netherlands): AKII uses the individual census data to stratify its sample. Every year of every five year period (depending on the fact if one prefers a rotating or a constant panel, both have advantages and disadvantages) it selects a number of farms from the individual data. The numbers of these farms are then given back to KSH, and they are asked to disclose names and addresses. That makes it possible for AKII to visit the farms and ask for their cooperation. If a farmer refuses, another will be asked. Therefore the list with the numbers of the farms selected should contain e.g. 5 extra numbers per farm. Although the FADN could be run without this procedure (by choosing farms in e.g. the telephone book, and then determine their stratum), it is statistically very attractive and efficient to follow the described procedure.

If the agricultural policy indeed copies important aspects of the EC's Common Agricultural Policy, including quota and subsidies for farms in less favoured areas it is not unlikely that the Ministry or Product Boards have to build up databases with data on the producers involved. It then could be efficient to make one database at the Ministry or an operational agency, that could also be used for sampling farms for FADN and statistical purposes as well as for organising the census (this method is used in the Netherlands).

- d. Within the EC the coordination between the FADN and the developments in the Central and Eastern European countries could be improved. In the management committee of the FADN much more expertise is available than what seems to be used now. An example is the decision to install the Irish system in Hungary, based on a comparison between Ireland, Northern Ireland and the United Kingdom. This leaves out the interesting situations in e.g. Luxembourg and Portugal. Luxembourg installed commercial German software on PC's, that is also in use with farmers and accounting offices in Northern Germany. The advantage of this solution can be that software maintenance and distribution to other users in the country is much easier. Portugal installed its own software on PC's for its bookkeepers, with the help of the EC. Being one of the youngest members of the Community, it was able to use the latest developments in software. On the other hand in a recent FADN-meeting it was Ireland that raised the question if computerisation of the data recording could decrease their high costs.
- This is not to say that Hungary made a bad choice to install the Irish system. It could have done worse and the available communication (telephone lines) within the country could have been a barrier to computerisation of the farm recording. Labour costs are also lower than in Ireland. The point made here is that already a lot of the EC member states are solving the same problems regarding the efficiency of the FADN on their own without much cooperation or support from Brussels. It is unsatisfactory to see this number of non-cooperating countries grow, whereby efficiency is lost. In one of the 1991 meetings of the FADN management committee the question was raised if it would not be beneficial to have some concerted action for Central and Eastern European countries. The small size of the FADN team in Brussels did make this not an easy task. However, if the PHARE-program intends to foster FADN-projects in other countries it should invite one of the members of the FADN-committee (especially one with experience in data collecting) to be a member of the steering committee in the project of such a country.
- e. As soon as the first good data from the FADN are available (but that could perhaps not be earlier than the 1994 accounting year, so in autumn 1995), the EC and Hungary should consider an arrangement to add them to the FADN-database in Brussels. There is not much (scientific) reason to delay this until Hungary is a full member of the European Community. Especially in the stage of negotiating associate and full membership policy makers in Brussels and in Budapest will need comparable data on both 'nations'. Such an arrangement makes this easier and it would be a pity if political reasons prevented this cooperation. The situation of Portugal could be an example here: it (also ?) created its FADN just before becoming a member of the EC and it started

to deliver data from the accounting year 1984 onwards. It became a member in 1986. It should be noted that the first delivery was actually not long before the date of entry. Nevertheless there seems to be no definite reason why a comparison between data from the EC and Hungary could not be supported by exchanging them.

This list of items for increased coordination explicitly excludes more cooperation between the FAS/FADN and the TAPIR/Farminfo project. Some readers might be tempted to see a big overlap between the two systems, both developed in AKII. Perhaps they would even like to see this condemned. There are good reasons not to do so.

At the moment it is unclear which of the systems will be a sustainable system. Hopefully both, but each of the systems faces its own uncertain future. Both have to build up and finance an organisation structure. The FADN needs the cooperation of the farmers, the TAPIR project that of the banks and/or the farmers in the market. If the TAPIR-project becomes a commercial success, the maintenance of the system (but perhaps not the new innovations on the system) will be privatised.

The team working on the TAPIR/Farminfo project showed much interest in the data requirements and the data definitions of the FADN. The Farminfo concept clearly intends to make data available to policy makers and an FADN. Harmonisation of the data to the EC-FADN standard is regarded as important. Cooperation between the two systems (see also point c) above on standardisation) is therefore welcome.

The data gathered by the TAPIR-project will however mostly concern farms that pay tax or apply for a credit. That means that the data set could be heavily biased. As long as good census data are not available the representativity of this network can not be judged. And even if a census is available, then this check can only be made if the individual farms with accounts can be identified in this census. But it is not impossible to use data for the FADN from two sources, of which one is biased. The French FADN also uses data from a biased source (farms that have to keep books because they apply for an investment subsidy, as formulated in EC-Regulation 797/85) corrected by data from an unbiased one.

## 5. CONCLUSIONS AND RECOMMENDATIONS

### 5.1 Conclusions

Private farming, already an important contributor to the net value added in sectors like horticulture and intensive livestock, will become even more important in the coming years. Interviews as well as an analysis of the policy program show that policy makers need more and better information on private farming. Experiences in the EC suggests this too. There the census and the Farm Accountancy Data Network (FADN) are the most important sources of information on private farming. Not only the Ministry of Agriculture, but also the Ministry of Finance and farmers' organisations have an interest in such data.

Data on private farms (smallholders) are available in the census of the Statistical Office KSH. If privatisation takes off, this information could soon be outdated. A new statistical law will affect the making of statistics, especially in the Ministry of Agriculture. This activity will be concentrated in the KSH, but individual data will be available for research. That is a situation comparable to that in Western Europe. However if the agricultural policy is also copied from the EC, the Ministry of Agriculture and/or the product boards could feel a need to set up a census-like database for administrative purposes (like distributing subsidies or quota).

Several systems that could provide the Ministry with information on private farming are under development. The PHARE-project 'Farm Accounting System' includes an FADN for Hungary. It is copied from the Irish FADN. AKII also works on the TAPIR/Farminfo-project. It is mainly tailored to support credit applications by farmers and tax accounting. As such it is too general to fulfil all the information needs of the Ministry, but it could well develop into a supplier of FADN data.

The PHARE-project 'Marketing Information System' provides information on prices, and especially in connection with FADN-data this could be an additional source of information.

The most important bottleneck is the willingness of farmers to cooperate with these information systems. Interviews with farmers revealed deep rooted reservations against data exchange in general and with the Ministry of Agriculture in particular.

Farmers are not eager to cooperate and they also have to be trained in economic concepts. Reliable and representative (tax) data for sale to the government are also not available. In such a situation the FADN should be modelled like the networks in Denmark, the Netherlands or Ireland: by an independent institute that barter the farmer's data for information on his own farm and its relative position. Obliging the farmers to disclose the

data or buying their cooperation should be avoided as long as possible.

The current systems have the farmer's family (TAPIR) or only the farm (FADN) as an object of research. That totally ignores the possibility that privatized cooperatives will play an important role in especially arable farming. Although the future agricultural structure is unclear, many interviewed civil servants expect that privatized production cooperatives will be part of the scene in the coming years.

Additional problems are signalled in the areas of organisational questions, the use of the accountancy data in research and policy analysis and concerning representativity.

Now that several projects are under way, the need for coordination and cooperation increases. Several of the interviewed persons raised the problem of a lack of coordination between the different PHARE-projects. To improve representativity the cooperation between the FADN and the census must also be built up. As all accounting systems as well as extension service and banking systems and tax-regulation might introduce their own accounting and economic concepts, this can hamper the economic training of farmers and their advisers. Coordination in this field is necessary. Within the EC the coordination between the FADN and FADN-projects in Central and Eastern Europe needs to be improved.

The current status of the projects and the statistical program means that the Ministry of Agriculture will face a deficiency in information on private farming until the second half of this decade. Unless additional work is undertaken, it will take several years before the data of a representative FADN and a census on the new, privatized, structure is available. High costs makes it problematic to bring the next census forward. That is an extra reason to build up the FADN as soon as possible. This information deficit also makes clear that the Ministry of Agriculture itself needs its own information policy. That Information Strategy Plan should contain a strategy how to deal with this situation, which data are needed for administrative purposes (subsidies, quotas) and how the development of systems should be coordinated.

## 5.2 Recommendations

In this report (especially in chapter 4) several suggestions have been made to improve software and coordination and to solve other problems. The interviews by the research team led also to suggestions or promises to exchange information. All these suggestions will not be repeated here.

At the end of this study the recommendations concern the most important and large topics. These should mostly be carried out in approximately the coming year. Several of the recommenda-

tions could be worked out into additional projects. That makes them easier to manage.

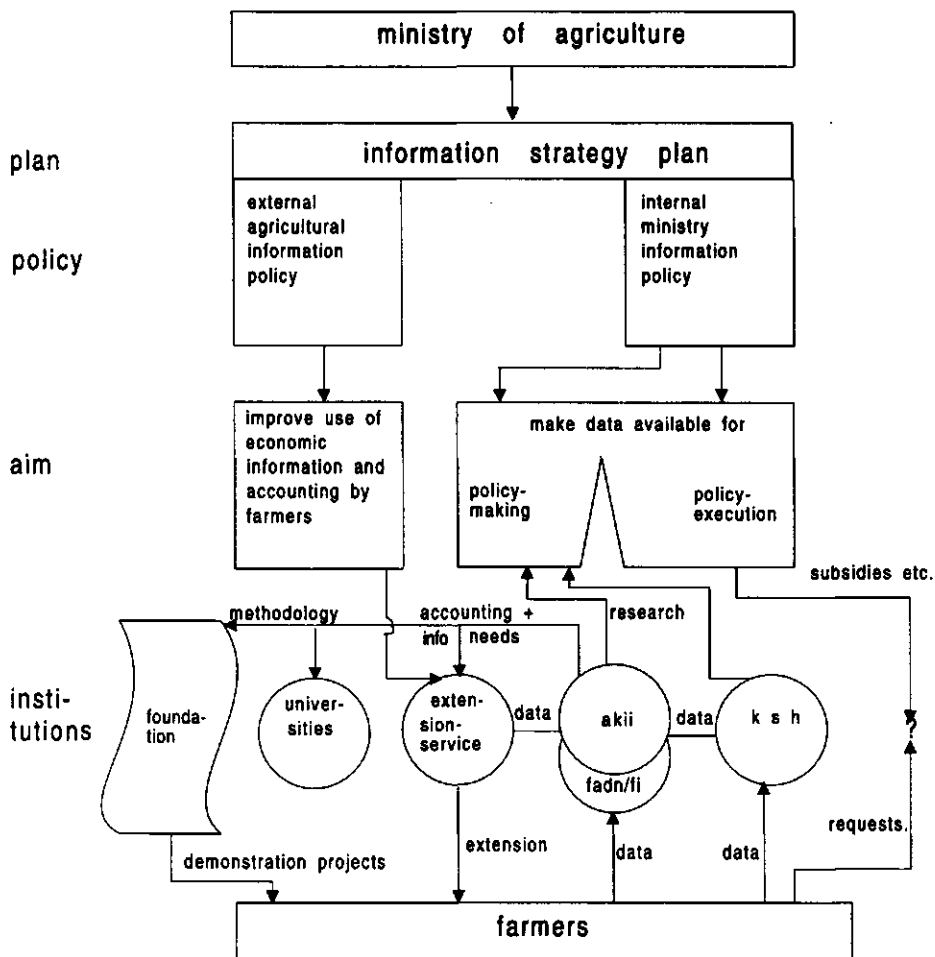
- a. The cooperation of the farmers is the biggest and most urgent problem for creating a representative information system on private farming. Nearly all the work in the projects undertaken so far has a top-down approach: they try to bring information to the farmers. Not much work has been undertaken to discuss farmers information requirements and their attitude to the systems under development. The tests with the systems this autumn will involve farmers, but not to study or influence their cooperation. They will be held to test the correctness of the computer systems as such. We therefore suggest to start a project to investigate and influence the farmers attitude. Such a project would preferably be organised in a region where already several private farmers are established and where one or two cooperatives are in transformation. That would give the possibility to study the reaction of the farmers and the effects of their relation with the cooperative on their accounts as well; it could also make clear which information farmers need from their cooperation(s) to manage their own farm as well as their cooperative. In the project workshops should be held with farmers on their need for information systems, clear brochures with accounting and economic information (see e.g. Poppe, 1990) should be made available, and farmers should then experience and discuss the different available information systems (like the FADN, TAPIR) available. This would also make clear which demand exists for extra information (section 4.2.2) and if it is possible to collect data on the farmer's plans (section 4.2.5). The extension service could also benefit from this activity, as it makes clear what type of questions they will face. Such a project should have the form of a 'demonstration-project'. Positive results should be communicated to other regions (press, seminar, articles) and the methods for the workshops etc. should be made available to be used in other regions afterwards. The execution of such a project in a region where also other projects are undertaken could be beneficial because then a process of change has already started. For two reasons it is also recommended to involve West-European experts in such a project: they can provide know-how on the determination of farmers' information requirements (e.g. King, 1992; Poppe, 1991a) and they enlarge the chance that farmers cooperate in the project because they can act as an intermediary.
- b. To solve the same problem of farmers' cooperation the FADN of AKII should formulate (in writing) and execute a clear public relation policy. Some suggestions (including necessary guarantees by law) have been made in section 4.2.1.
- c. All parties interested (AKII, Extension Service, universities) should cooperate in an initiative to publish and



- maintain a standard chart of accounts, standard definitions of financial indicators and publication models for the balance sheet, profit- and loss account, cash flow statement and income statement. Examples in France, the Netherlands and Germany could be used (see section 4.3, point c). Cooperation with an expert from one of these countries could be useful and could improve the quality of the work.
- d. Seen the lack of coordination until now between the different PHARE-programs (section 4.3), procedures should be worked out to use MIS and FADN data in the extension system 1).
  - e. The EC should improve the coordination between the FADN, the know-how available in its management committee, and projects in Central and Eastern Europe (see section 4.3, point d)
  - f. The TAPIR-team should consider the implementation of a code-scheme or chart of accounts in its software. That will result in a very positive shift in the balance between the amount of input and the output of the software. Studying simple accounting software for West-European or American farmers (see e.g. Poppe, 1991b) might help.
  - g. As soon as the first data (e.g. 50 farms) are available, AKII should reflect on the methods to analyse the data, to update it with price and yield statistics ('prognosis'), and to publish it. Studying the methods used in countries like the Netherlands and/or common projects with these countries is likely to be efficient. Proposals for regular (e.g., annual) reports on the economic situation in agriculture (like the German Agrarbericht) by the AKII should be worked out.
  - h. At a later moment the AKII's FADN and KSH should investigate the possibility's to use EUROSTAT's Common Typology in the census as well as in the FADN and to see how the census could be used to formulate an efficient sample and to improve representativity. Contacts or a project with an expert on sampling techniques in the EC's FADN could be beneficial.
  - i. The Ministry of Agriculture should formulate an adequate information strategy plan, to deal with coordination in system development and to counter attack the signalled information deficit. The information strategy plan should include an internal as well as an external information policy (figure 5.1). The internal information plan should show which data are needed to execute agricultural policy (distributing subsidies, quota etc.) and the information the Ministry expects to receive from KSH and AKII to support the process of policy making. The external information policy aims to improve the use of economic information and accounting in

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1) For MIS-data a project is already foreseen.



**Figure 5.1 Information strategy and the main organisations involved**

the agricultural sector itself and contains a plan how to solve the points a) and c) mentioned above.

In order to solve the points a) and c) above, it could be beneficial to organise demonstration projects as mentioned under a) and to improve the cooperation between institutes as mentioned under c) under the coordination of a foundation, to improve the use of information technology (Zachariasse, 1991). In Hungary the task of a comparable foundation would be to increase the use of economic information and accountancy data by farmers.

A successful foundation improves the information use by farmers, which has a positive effect on the efficiency of Hungarian agriculture. Indirectly it also helps the AKII and the extension service in their work, as it leads to standardized information, a clearer picture of the farmers information needs and more interest from farmers in representative information systems like the FADN.

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## **ANNEX**

## **Annex 1 Terms of reference**

### **Scope**

The agricultural sector in Hungary is in a privatisation process. Part of this process is the promotion of private farming. The statistics are still based on the state owned and collective farms. The policy makers have little insight in the private farming sectors nor in the developments that take place in this sector.

In order to be able to formulate a proper privatisation policy is necessary to arrange an information flow from the private farming sector to the Ministry.

### **Farminfo**

On the AKI institute an information system for the private sector is developed, named Farminfo. This system is initially designed for support to financial decisions (credits etc.). It is tested in 1991 on some farms; these tests will be continued in 1992 on 30-50 farms. If succesfull, the implementation can start in 1993. In principle the system could also be useful for the goal described above. It is questionable however if a combination of a system for financial uses can be combined with a system for information to the Ministry. Besides, the Ministry needs the information on the private farming sector in short term.

### **Activities**

1. To describe exactly the information the Ministry needs and which can be delivered (legislation).  
The Dutch Agro-economical Institute (LEI) will be asked to execute this study. They are experienced in the collection of information to prepare a government policy. They will interview key persons in the Ministry and from farmers organizations.
2. To execute some surveys to test if such a type of information can be gathered and what limitations exist (farmers willingness to participate). The LEI will be asked to execute these surveys in cooperation with their Hungarian colleagues.
3. Contact with the Farminfo-project.  
The experiences in these surveys will be exchanged with the farminfo-project to see to which degree the two system can strengthen each other.

As a result of these activities the Ministry will have some first information about the private farming sector. From the experiences in the surveys it can be concluded whether a permanent monitoring system must be set up and how to design such a system.