

## LEGAL ASPECTS OF COMPUTERIZED LAND MANAGEMENT IN ROMANIA AT FARM LEVEL

C. Popa<sup>1\*</sup>, Elena Gîndu<sup>1</sup>

<sup>1</sup>"Ion Ionescu de la Brad" University of Agricultural Sciences and Veterinary Medicine, Iasi, Romania

### Abstract

Information technology has been playing an increasingly important role in modern economic activity. The dynamic and unpredictable nature of combining factors of production in agriculture has slowed down the development of computer applications and their use widely, but lately a remarkable progress has been made in this direction. This study focuses on the identification of data required for land management at farm-level in Romania, as reflected in incidental legislation in this field and its application in practice. The research consists of a legislation review and scientific literature, in order to design a computerized module for managing land resources, as well as discussion of the results from the testing process in a study sample of six commercial farms. The study reveals that excessive fragmentation of land in Romania requires a significant effort to record and manipulate data, and non-harmonized terminology and approach at the institutional level create additional problems. It was also found that the recorded data is not sufficiently capitalized nationwide, each institution having its own filing system, uncorrelated with other databases.

**Key words:** management, land, information system, computer

### INTRODUCTION

Despite having a history shorter than half a century and despite only being used more intensely in the past 20 years, computer systems are essential components of any industry today and it seems an inconceivable idea that we could perform without them. It is sufficient to note that an interruption of access to communication networks would disrupt or completely halt activity in almost any industrial, military or service area, anywhere in the world.

In agriculture, the most unpredictable characteristic of the technological process has hampered the creation of computerized tools with broad applicability in farm management, but remarkable progress has been made in this direction lately, especially in the agricultural activities conducted in controlled environment. [2]

The creation of useful computerized systems requires thorough analysis and research to determine which data and information are useful in decision-making, the optimal methods to collect, save and process data and the types of outputs to be obtained. [10]

From this point of view, the legal framework in the field and other

computerized systems already in use play a decisive role, impossible to ignore.

In this perspective, this article aims to highlight the issues and problems encountered in designing and testing a software module for management of land at farm-level in Romania, considering primarily the legal requirements in this field and their practical consequences.

### MATERIAL AND METHOD

The research was conducted in five stages:

- a) a short review of the law and literature was made in the first step in order to define the relevant concepts and how they relate to each other
- b) designing the database structure and graphical user interface
- c) implementation of the model
- d) software module testing by farmers
- e) improvement of the model based on lessons learned from testing.

Implementation of the model was done by two programmers paid under a service contract using PHP, Java and an SQL database.

Testing was done in six commercial farms from the county of Galati.

The methods used to conduct the research were mainly: review of the law and literature, analysis, synthesis, data collection, data modelling, computer programming, software testing, interviews and observation.

\*Corresponding author: cosminpopa1111@yahoo.com

The manuscript was received: 15.03.2013

Accepted for publication: 25.09.2013

The materials used were: eight computers belonging to people involved in the project, a car for travelling, about 2,000 original documents proving the right to use the land (lease contracts, deeds) and about 50 other documents relating to tax payment, delivery receipts, bills, etc.

The research was completed within a period of approximately four months.

## RESULTS AND DISCUSSIONS

The land is one of the most relevant resource at farm level through both its economic value and the relationships engaged by its management.

The analysis of literature and legislation revealed that land management at farm level involves three key dimensions: the legal dimension, economic dimension and technical dimension. [14], [17]

The legal facet outlines the rights over the land and offers the tools to prove them in relation to third parties.

Any impossibility to accurately determine the extent of ownership rights or the right to use the land has serious negative consequences for society, causing economic losses, litigation and clashes among those who claim their rights. [9]

The reference in this case is the general cadastre and land registry system of Romania, defined by law "as a unitary and compulsory recording system, of national importance, for technical, economic and legal data of all buildings and land across the country."

According to the cadastre system, the indivisible entity in terms of identifying the land is 'the parcel', defined as 'land area with one category of use'. [14] Although the law proposes a lapidary definition, it should be understood implicitly that the parcel is a unit of land with its own borders, stable over time and possible to be identified physically, which, along with its name, gives a unique, unmistakable nature in relation to other plots.

The identification system used by the national cadastre system can be found and it is used in the title deeds or property documents, kept by persons to prove their right to each plot of land.

Ignoring national system of land

identification in designing software for land management, although practically possible, it would be tantamount to abandoning the legal size and its consequences in the farm economy.

The economic dimension aims to establish the exchange value of the land in the event of a sale and also in terms of current revenue potential for the owner or holder. It should be noted that this value is shaped by several types of data that can be: technical data (land class, soil type, slope), identification data (distance from the nearest town), data about natural or artificial facilities nearby (irrigation systems, shelterbelts), data which, being known, can precisely highlight the economic value of the land concerned.

The technical dimension of land management has consequences in choosing the most appropriate methods to exploit it, by determining the type of materials to be used, the needs of capital and labour, in short, determining essentially how to conduct the production process in order to maximize the economic outcome.

To identify the required data according to the three dimensions mentioned above, we started with the mandatory information required by authorities and farmers' partners. In the second stage, the data recorded and used for practical needs at farm level or deemed useful by the literature were identified.

Based on questionnaires and law reviews, it was concluded that the main institutions and partners with whom farmers come into frequent contact and exchange information about the land held, are as follows:

- land owners of the leased land
- municipalities on whose territory the land is located
- Agency for Payment and Intervention in Agriculture
- farmers associations
- Payment Agency for Rural Development and Fisheries
- Ministry of Finance, through its local offices
- Consulting companies and institutions

1. The owners of rented land are the largest group of people with whom the farmers get into contact frequently, a situation generated by a great fragmentation of agricultural land in Romania.

Analysing the data collected from all six farms in the sample, revealed that an average

of 1.23 ha of land has been leased from each owner, or in other words, excluding land owned by farms, 60 renting contracts were signed for each 100 ha rented.

The situation is confirmed by national statistics showing that the average area of a subsistence farm is 1.95 ha (these farms representing landowners exploiting their land), and secondly, that the 3,584 commercial exploitations work an average of 190 hectares each, land obtained mainly by renting. [7]

In order to make a written letting contract, the farmers need the following data:

- identification data for the land owner
- contact details of owner
- identification data about every parcel and the rent agreed for each. The necessary information is presented below:

Table 1 Data needed for the lease contracts

<b>Lessor identification data</b>
<b>Individuals</b>
Full name
Personal identification code
Identity card number
Date of issue
<i>or</i>
<b>Companies</b>
Name of legal entity
Registration number
Company type (legal form)
Director(s) full name
<b>Details about lessor address</b>
County / District
Town/City/Village
Street
Building name or apartment number
Contact details (tel., fax, email)
<b>Bank details</b>
Bank name
Branch
IBAN account
<b>General data included in the lease contract</b>
Date of signing the contract
Effective date of starting to use the land
Termination date
Penalties in case of payment delays
<b>Data on leased land</b>
County where the parcel is located
Town/City/Village
Category of use for each parcel
Within incorporated area/or unincorporated area
Parcel number
Number of the plot where the parcel is situated
Nickname of the land given by local people
Area ( in hectares)
Rent due per calendar year for each parcel

For future justifications to other authorities, the farmers usually keep, together with the lease contracts, copies of land ownership titles and copies of owners' identity documents, these documents being the major source of the data mentioned above.

According to the fiscal law, there are kept also information about the rent payment, usually incorporated in documents such invoices, delivery notes and receipts but also in a synthesis report, kept for administrative purposes. The distinction is useful, as from other study it was concluded that in all commercial holdings from the sample, the persons dealing with the financial issues at farm level are not the managers.

The analysis of data recorded in farms included in the study sample revealed that the registration, updating and the exploiting of this data is difficult without the use of computerised systems.

When exchanging contracts, filling in a minimum of 4 originals (as required by law) is time-consuming, requiring about 30 minutes for each contract. When testing the module it was found that this time to fill in the contracts and print them from the computer was reduced to about 4 minutes. It was found also that 9.8% of all existing contracts expired (without farmers being aware of this) and because they hadn't enclosed automatic renewal clauses, the contracts remained deprived of legal effect. This problem has been plainly solved in the module intended for land management as it is designed to warn the users in advance to renew the contracts in time.

The recording and effective payment of rent without electronic instruments involved a considerable administrative effort, each payment requiring data compiled from multiple documents and repetitive centralization of the important elements of every payment. Using the software module to save and process the data, the effort required for the preparation of summary reports was completely eliminated and the effort required to introduce and update data was significantly easier. According to the results of the questionnaires filled in by farmers after testing the software, the efforts decreased to about 20% compared to the use of classical methods and the complexity of available results increased by around 60%.

2. According to the legal provisions, the Municipality is the local authority responsible for maintaining the Agricultural Register, a database aiming to 'ensure uniform recording of used land, by categories, and also of agricultural resources, production and livestock, in order to contribute to the development of agriculture and better use of local resources'. [16]

The Tax Code also gives local authorities the right to collect local taxes, of which the tax on land and buildings are the most important as a share of the local budget. [15]

The Municipalities have the power to issue certificates proving the quality of an individual agricultural producer, which imply verification of worked land and the estimated production, both documentary and in the field. [12]

Systematized, the information relates to:

- identification of the holding and its representative
- data on farm premises
- description and identification of parcels of land in use
- area of cultivated crops, every year
- areas (actually) irrigated every year

Data recording is done by specially appointed officials, based on the written statement of land owners, in some cases accompanied by supporting documents. [6]

The analysis of data requirements and the registration process illustrate some drawbacks and weaknesses of the system, both in terms of organization but also concerning the content.

In terms of organizing the collection and processing of data, limitations are caused by:

- redundant requirements of the law, with a strong formal character
- lack of openness and transparency of the system
- lack of connections with other databases

Regarding the first type of limitation, the public authorities have a legal obligation to record the data in the Registry, both electronically and on paper, annually. Paper forms are standardized and must comply with some formal requirements which demand duplication of data entry work, using the keyboard and writing by hand.

Considering that each land owner or holder must declare the data annually, the system in place is one that consumes

unnecessary resources, both at farm level and especially at the administrative unit level.

The questionnaire results revealed that every year the farms' representatives allocate approximately 20 hours to prepare and declare their data for the Agricultural Register. From calculations made by the authors, the time needed just for recording and updating the data related to land would be about 6000 hours/year (equivalent to working hours of 3 full-time employees) at administrative unit level. But because the Agricultural Register includes more types of data and other activities, not covered by this study, managing the Agricultural Registry requires at least 6 people in every medium-size administrative unit.

Analysing 7 software used by Municipalities led to the conclusion that the land owners have no access to data, neither for input nor for retrieval of data, which is a major impediment to shorten working time, observing errors, causing also low interest and confidence in the recorded information.

In terms of recorded content, the system also has deficiencies. For example, data relating to the cultivated crops and the irrigated plots are dynamic, suffering changes every calendar year, due to sometimes unpredictable factors. These facts cannot be recorded in the Agricultural Register according to the current structure required by law.

The data are also not correlated with other existing databases that serve similar purposes (Land Information System based on Land Cadastre, Registry of Farmers managed by A.P.I.A., database held by National Institute of Statistics).

The law also requires recording some data of no practical relevance, like land held in other administrative units, degree of kinship between members of a family or data never exploited, like the land holder's date of birth. [3], [7]

During the research it was also found that the lack of electronic records of the land at the farm level resulted in farmers declaring erroneous data. After centralizing the parcels by using the testing module, it was found that farmers owned a larger area (plus 1.6%) than they stated and thought. Failure to declare the entire surface is only the consequence of inappropriate calculation methods, since there is a great interest to obtain subsidies for the whole land worked.

Another report established with local authorities is related to payment of land tax. The tax is due from the land owners, but the analysis of documents found in the farms and the farm managers' declarations lead us to the conclusion that farmers often pay the tax on behalf of the lessees, the money being deducted from the rent value.

At farm level the situation is drawn for each owner in each calendar year and includes land owned by farm and the land leased. The units of information required are listed below.

Table 2 Land tax payment - data required

1	Land owners (lessors) full names	
2	Total area held in each Municipality classified by type of usage and location (for each land owner)	
3	Annual tax due for each land owner	
4	Annual tax paid and the payment date for each land owner	
5	Amount left to be paid in behalf of each land owner	*
6	Total payments due (at farm level)	*
7	Total amount paid as land tax (at farm level)	*
8	Total amount remaining to be paid (at farm level)	*

\*Data can be calculated automatically

As a justification of payments, the receipt issued by the municipality is kept.

3. Agency for Payments and Intervention in Agriculture (APIA) is the national institution empowered to implement support measures financed by the European Agricultural Guarantee Fund (EAGF), especially direct payments, subsidies coupled with certain cultures and subsidies for livestock.

The Agency keeps track of the direct payment and their beneficiaries, through the Integrated Administration and Control System (IACS).

Data recording is done by appointed officials, or by validating data entered into the system directly by farmers. However, because the application form needs to be submitted in paper format and because the presence of the farm representative is required in order to give legal effect to the applications, the software is only being used to shorten the interaction between officials and farmers.

Analysing the application forms and adjacent legislation it was concluded that data expected from farmers can be structured

according to the same criteria as those used for the Agricultural Register (Appendix 1, column 2).

But comparing data required by the 2 institutions, we found that only 36% of the requested information is identical (16 pieces of data from 45), marked with a grey background). APIA requires, in addition to Agricultural Register, another 11 pieces of data, but does not use 17 pieces.

Apart from this, APIA uses a different approach to the concept of *parcel*, which is not in line with the legal approach discussed in the first section of this article.

According to instructions to fill in the payment application forms, an agricultural parcel is a continuous area of land declared by one farmer cultivated with only one group of cultures. Following subsequent clarifications, it means that the farmers must give a number (unique only for their farm) to every individual plot of land cultivated with the same crop in one year, thus representing a 'parcel'. [1]

Using this system, the size of the parcels can change over time and also the same parcel number could represent another area compared to the previous year, depending on the crop rotation system. The analysis of practical cases provided by farm managers in the sample showed that:

a) one APIA parcel (e.g. PA22) may represent in fact one or more parcels in a legal sense (which have their own territorial boundaries marked with a black solid line) – Fig. 1.

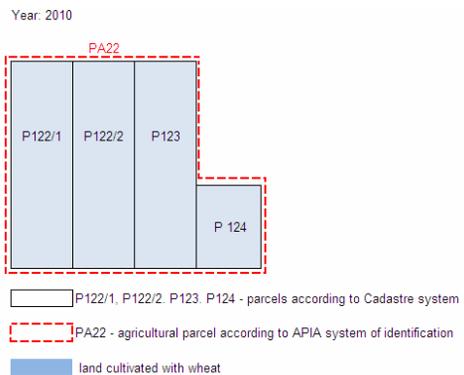


Fig. 1 Representation of parcels according to the Land Cadastre and APIA (first year)

b) a given area of land, which is part of an APIA parcel in an agricultural year, may be part of another APIA parcel next year, due to the cultivation of another crop (E.g. P123 is part of PA22 in 2010 and part of PA23 in 2011) -See Fig. 1 and Fig. 2

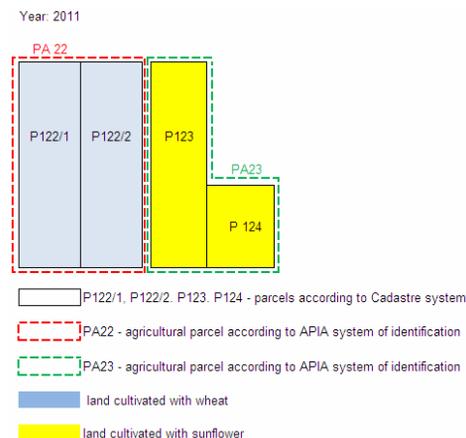


Fig. 2 Representation of parcels according to the Land Cadastre and APIA (second year)

c) keeping a track record of crop rotation based on APIA parcels is not practical, because the names of these plots and their boundaries change every year and some parcels may disappear through merger or division, depending on their location and the surface allocated to one crop in a certain year.

d) the right of possession or ownership of a parcel (APIA), cannot be proved with documents because the borders of a parcel (in the legal sense) do not overlap often with those of an APIA parcel

e) the area declared by a farmer can be checked by measuring the borders of one crop as long as the crop still exists or the land was not ploughed, but not thereafter.

Thus, although there is a formal equivalence for 26% of the requested data between the Agricultural Register and the Agency for Payments and Intervention in Agriculture, addressing different the fundamental concept of *parcel*, the two institutions have in fact different systems to record and to manage the data related to land.

This different approach is significant also in defining other terms such as: names and the coding of legal forms of organization, name of

the land categories, name of crops, etc. [5]

In terms of information management, the system used by APIA makes the connection with other external databases impossible, except for the exchange of summary information.

The questionnaire survey showed that the number of hours required to prepare and to declare data for direct payments varies primarily related to the size of worked parcels and secondly to farm size, requiring on average 7 hours per 100 hectares of land owned. The required time increases at a rate of about 70% when compared to the previous agricultural year, changes in the exploited surface occur.

When designing the software module, the solution chosen was one that combines the two approaches. This is because the fragmentation of land makes it unworkable for users to maintain technical records for each legal parcel (redundant work and time consuming), but on the other hand, the system used by APIA is not sufficient in terms of legal implications.

Therefore, the model allows to record the land as in the ownership documents (deeds) and then, for technical management, the parcels can be merged together in bigger plots, as in reality.

3. Farmers' associations and organizations do not ask for large amounts of information and neither impose repetitive interactions with farmers, which could make an impact in this article. The data required is mainly the identification data for the farm and its representative, total exploited land, annual crop structure and livestock number.

Filling the forms usually takes a few minutes and is done in writing. Except for generating summary reports of general interest from the farm, we couldn't find enough relevant requirements that could support the development of the software module for this purpose.

4. The Paying Agency for Rural Development and Fisheries (APDRP) is a government institution established by reorganizing the SAPARD Agency and it is responsible for managing EU funds for investments related to the agriculture and rural development sector. [13]

Requirements for writing the investment projects directly addressed to farmers or consultants are presented in the Guidebooks of Measures: 112, 121 122, 312, 313, 141 and Annexes of these Guidebooks, which set the format of the application and the supporting documents which must be attached. A comparative analysis showed that 25% of the requested information is common with the Agricultural Register demands and APIA demands, and there are only two entities (out of 51) additionally required by APDPR, compared with the other two institutions (Appendix 1, columns 3-6). However, the format of data presentation about the land is not similar for all measures which imply unnecessary effort.

### 5. Ministry of Finance

Under the Tax Code, individuals who obtain income from leasing agricultural goods are required to pay income tax in the amount of 16% of net income from this activity. In this respect, landowners must register the lease contract to the tax authorities (Article 81 of Fiscal Code) [15]. In terms of the amount of information needed, the law does not raise special problems.

In this regard, the lessee is asked to register the contract with the municipality where the land is located. In addition, he must register the contract with the tax authority from his locality of residence. But the income tax can be deducted at source and paid for by the tenant on behalf of the lessor in his locality, as the law allows. In this case (82% of the situations in our study sample), the fiscal authorities cannot check the reality of the declarations, thus the process of registering contracts becoming useless.

The difficulty to exploit the data stems from the fact that contracts are not recorded electronically by authorities and their databases are not connected or linked. Any attempt to search and centralize the data became in this way a very time-consuming process.

The questionnaire applied to farm managers in the sample revealed that the control bodies of the Ministry of Finance asked farmers to present summary lists with centralized data about all lessors, leased surfaces, and amounts paid as rent at the farm level. These situations do not require extra information compared with

that required by other institutions, but without the help of information technology, the preparation of such reports requires a considerable effort. Below is the data determined as sufficient to cover all the aspects treated on this particular topic, which were included in the software module:

Table 3 Income tax to be paid in behalf of lessors- information required

1	Lessors' full names	
2	Area leased from each lessor and due rent, each year	
3	Tax payable in each calendar year	
4	Annual tax paid and the date of payment for each lessor	
5	Amount left to be paid in behalf of each lessor	*
6	Total payments due as income tax (at farm level)	*
7	Total payments made as income tax (at farm level)	*
8	Total amount remaining to be paid (at farm level)	*

\* Data may be automatically calculated

6. Consulting companies (or institutions) demand different information from farmers, according to their profile. The questionnaire results revealed that the required statements are considered by managers as having a low difficulty (91% of the answers) and the majority already exists at the farm level (87% of the answers).

The document analysis consistently revealed that farmers are asked to report information about:

- a) amount and type of pesticides used on a particular parcel of land
- b) amount and type of fertilizer used on a particular parcel of land
- c) soil type and approximate inclination of the land

Above requirements, though less known in practice, are mandatory to be kept, by law.

The order no. 1234 from 2006 imposes a record of all pesticide users and operations involving the use of pesticides, including: the date of purchase, date of manufacture of the product, the supplier of pesticides and the purchase price. Such evidence is required in principle by the Guidebook for filling in the Agricultural Register [5] but it is not applied in practice.

The Code of Good Agricultural Practices [11] recommends to every farmer to keep a register which should be recorded for each plot: the fertilization history, rotated crops, obtained yields, the type and dosage of applied fertilizer, the time of application, plus other relevant observations, in order to constantly improve the fertilization plan and economic management of the farm.

In our study at the farm level, it was found that only unsystematic recordings relating to the above operations were kept. The main justifications were lack of time and inappropriate tools for recording and processing such information. When designing the software module, the only difficult problem was to keep an effective account of fertilizers and pesticides on each parcel, since they could be part of different land plots over years as discussed earlier in this article.

## CONCLUSIONS

Land management at farm level is a critical activity, not only due to the higher economic value in relation to other types of resources, but especially due to the complexity of the relationships generated by its management.

The study showed that excessive fragmentation of the land in Romania creates additional problems for all parties involved in this process.

This material highlighted that the legal fundamental of the land management system in Romania is the Cadastre and Land Registry System, based on which legal documents are released entitling people to prove their rights.

Although the making of lease contracts does not incur major difficulties, the study showed that the process to keep them updated is difficult. In the sample studied, it was found that 9.8% of lease contracts were expired, being without legal effects and the area declared by farmers was smaller by 1.6% in relation to the actual surface exploited by them.

The analysis of the legal requirements governing relations between farmers and institutions lead to the conclusion that the approach and the terminology used at the institutional level are not harmonized, adding unnecessary inconveniences in this process.

In addition, the data is not sufficiently capitalised at national level, each institution having a unique filing system.

Thus, at the level of municipalities, it is required to double the data entry work, both computerized and paper form, the computer systems at territorial units are not connected to each other or with other authorities, and the databases cannot be accessed for consultation by interested parties. In terms of content, some requested data remains without practical relevance and others are not exploited in any way.

The Agency for Payments and Intervention in Agriculture uses an identification system of land that is not integrated within the established legal framework and the terminology used is different from that of the administrative units. These cause difficulties in keeping track of crop rotation, fertilization history, use of plant protection products and make it complicated to justify the right to use the land.

The Ministry of Finance is struggling to determine the payment obligations because they don't use data from other institutions and they don't record the needed information in a systematic way.

It was also noted that separate payment obligations relating to land ownership exist both towards local authorities and the central authority (Ministry of Finance), a situation that, if executed precisely, would generate high costs for those concerned.

Another conclusion of this scientific investigation shows that data which are not absolutely essential for the relationship between institutions and farmers are unsystematically recorded.

These findings call for a further investigation and for a solution that will try to identify the best way of harmonizing the terminology and the approach at national level on land management. The question is how will Romanian institutions and farmers use the information more efficiently through a shared platform and have free access to an integrated information system?

## ABBREVIATIONS

MADR - Ministry of Agriculture and Rural Development

INS - National Institute of Statistics

APIA - Agency for Payment and Intervention in Agriculture

APDRP - Payment Agency for Rural Development and Fisheries

## ACKNOWLEDGMENTS

The undertaking of this study was possible with the financial European contribution within POSDRU/89/1.5/S/62371 project.

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<b>Appendix 1</b>		Column 1	Column 2	Column 3	Column 4	Column 5	Column 6
Type of required information		Institution who ask them					
		Municipalities	APIA	APDRP			
		Agricultural Register	Direct payments application form	M112 Investment projects	M121 Investment projects	M122/141 Investment projects	M123/312/313 Investment projects
<b>Farm's identification data and its representative</b>							
<b>Individuals</b>							
Full name	1	1	1	1	1	1	1
Personal identification code	2	1	1	1	1	1	1
Gender	3	1		1	1	1	1
Date of birth	4	1		1	1	1	1
Age	5			1			
Status in the household	6	1		1	1	1	1
Type of household	7		1	1	1	1	1
Country code ( for foreign citizens)	8		1				
Identity Card number	9		1	1	1	1	1
Residence	10	1		1	1	1	1
SIRUTA code	11	1					
<b>or Companies</b>							
Name of the company	12	1	1	1	1	1	1
Subsidiary name (if applicable)	13	1		1	1	1	1
Registration number	14	1	1	1	1	1	1
Company type (legal form)	15		1	1	1	1	1
Director(s) full name	16	1	1	1	1	1	1
Director(s) age	17			1	1	1	1
Director(s) personal identification code	18		1	1	1	1	1
Address of the director(s)	19	1		1	1	1	1
<b>Details about business main office</b>							
County where the business office is placed	20	1	1	1	1	1	1
Town/City/Village	21	1	1	1	1	1	1
Street	22	1	1	1	1	1	1
Building name and apartment number	23	1	1	1	1	1	1
Contact details (tel, fax, email)	24	1	1	1	1	1	1
Postal code	25	1		1	1	1	1
SIRUES code	26	1					
<b>Bank details</b>							
Bank name	27		1	1	1	1	1
Branch	28		1	1	1	1	1
IBAN account	29		1	1	1	1	1

<b>Description and identification of worked land</b>							
County where the land is situated	30	1	1	1	1	1	1
Town/City/Village	31	1	1	1	1	1	1
SIRSUP code	32		1				
Legal category of each plot of land (ownership, use, lease)	33	1		1	1	1	1
Category of use for each parcel (arable, woodland, etc)	34		1	1	1	1	1
Within incorporated area/unincorporated area	35	1					
Parcel's number	36	1	1				
Number of the plot where the parcel is situated	37	1					
Topographic number of the plot	38	1					
Nickname of the area, given by local people	39	1					
Cadastral Register number	40	1					
Number of the parcel in the Land Registry	41	1					
Number of the physical block	42	1	1				
Area	43	1	1	1	1	1	1
Further details	44	1					
Map number	45		1				
<b>Data about crops</b>							
Yearly planned crops on each parcel	46	1	1	1	1		1
<b>Data about irrigated areas</b>							
Yearly planned irrigated crops	47	1		1	1		1
<b>Technical data about cultivation system</b>							
Records of crop protection activities, quantity of pesticides used and their name	48						
Records of fertilisation process, quantity of fertilizer used and their type	49						
Soil type and slope of the land	50						
<b>Economic value and accounting value</b>							
Book value of the land	51				1		1

1 = data is required

grey colour = data is required by all institutions

other colour = data not required