

Installation

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3. Installation

This chapter states the hard and software requirements of The Land Use Database and provides the procedures to install the software on your computer.

3.1 Hardware and Software Requirements

The Land Use Database has the following hard and software requirements:

- Your personal computer must be an IBM, or true IBM-compatible, with a 386 or faster processor.
- It must be equipped with a hard disk containing at least 6 Mb of free space. Check this, when in DOS, by typing **DIR C:**. The last line of the information printed on the screen states the amount of free bytes on your hard disk.
- The operating system (DOS) must be version 3.3 or higher. Check this, when in DOS, by typing **Ver** or **Command**. The current DOS version will be printed on the screen.
- At least 170 kB of conventional memory plus 512 Kb of extended/expanded memory is required. Additional memory, when available, is automatically used. The software runs in '*protected mode*', which speeds up its performance. Check the available memory, when in DOS, by typing **Mem**. The total free memory will be printed on the screen. If not enough memory is available, you must unload memory resident softwares and/or use a memory optimizer. Please, check your system manager or computer dealer for more details.
- The **CONFIG.SYS** file (in the **C:** directory) must contain a **File=** statement that must be equal to or larger than **45**. The installation program of The Land Use Database will automatically try to change this value when applicable.

Important

You are strongly recommended to add **SMARTDRV.SYS** to the statements in the **CONFIG.SYS** file or **SMARTDRV.EXE** to **AUTOEXEC.BAT** (see DOS manual). This creates a disk cache in extended memory (if available). It will significantly improve the speed of disk operations, and thus enhance the performance (speed) of The Land Use Database. For more information, please refer to a DOS manual or your system manager.

3.2 Installation Procedure

The Land Use Database is supplied on one 3.5" high density floppy disk. It contains the following 9 files. (*.ARJ files are compressed by the **ARJ.EXE** program):

INSTALL.EXE	ARJ.EXE	PROG.ARJ	CONFIG.ARJ	UPDATES.TXT
LUTBASE.ARJ	LBCFG.ARJ	DATA.ARJ	GLOSSARY.ARJ	

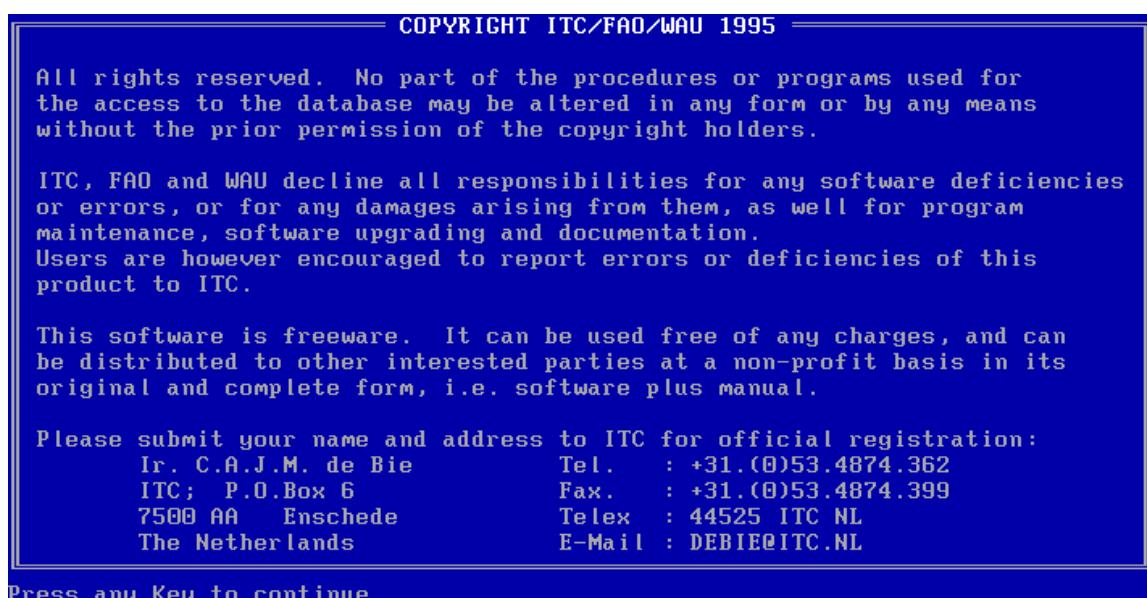
If your computer does not have a 3.5" floppy disk drive, copy somewhere the above files to one or more suitable floppy diskettes and follow the steps as stated below.

In order to use The Land Use Database, the program must be installed on the hard disk of your computer or server. Carry out Installation by using **INSTALL.EXE**.

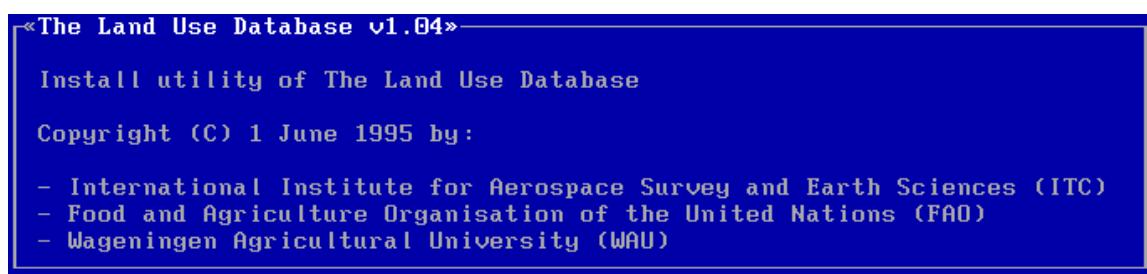
In case The Land Use Database was already installed on your computer, a complete re-installation of the software will **overwrite** all existing Land Use Database files, including data files, glossary files, query files and the filters file. Be sure to retain a backup of these files or skip installation of the applicable files.

Follow the next steps to install the software and/or data files:

1. Insert the installation disk (containing **INSTALL.EXE**) in a disk drive.
2. Type **A:\Install** (if the installation disk is in drive A) or **B:\Install** (if the installation disk is in drive B) and press **Enter**. Following this the next message will appear:



3. Press **Any Key** to continue. The following message and a first question (see step 4) will now appear:



Answer all following questions when they are displayed on the screen. Press **Enter** after each answer. You may abort installation at any moment by pressing **Ctrl-C**.

4. Enter the letter of the drive FROM which you are installing (A/B):

Type the letter of the floppy disk drive in use; this must be **A** or **B**.

5. Enter the letter of the drive TO which you are installing (C/D.):

Type the letter of the hard disk: in most cases this is **C** (not **A** or **B**).

6. Install The Land Use Database Modules? (Y/N):

- Type **Y** to install the three modules of The Land Use Database.
- Type **N** to cancel installation of the three software modules.

7. Install the Glossary, Data Entry Filters and Data Files? (Y/N):

- Type **Y** to install the Glossary, Data Entry Filters and the Data Files with example data as obtained through field tests of The Land Use Database.

If these files already exist on your hard disk, make a backup of them before continuing with the installation procedure!

If you install The Land Use Database for the first time, you are strongly advised to install the glossary and data files. The glossary contains a large number of terms which are very useful to describe land use; the data files contain a large number of land use data which may provide guidance in using the software.

As The Land Use Database is able to contain a large number of diverse datasets, the performance of the program will not be affected by installation of the data files.

- Type **N** if you do not want to install these files.

If the relevant files already exist on your hard disk, they will not be overwritten. If they do not exist, empty files will be created when starting The Land Use Database.

8. Install the Settings File? (Y/N):

- Type **Y** to install default program settings.
If a program 'settings' file existed, it will be overwritten. The following question will now be asked:

What type of Screen do you have (can be changed after installation)

Type M for Monochrome, L for LCD or C for Colour:

- Type **C** If your computer is equipped with a colour monitor.
- Type **M** If your computer is equipped with a black-and-white monitor.
- Type **L** If your computer is a portable with a LCD display (Liquid Chrystal Display).

- Type **N** to cancel installation of the program 'settings' file.
An empty one is created when starting the software.

9. Depending on your answers to the above questions, one or more of the following lines will now appear:

- The Land Use Database Modules will be installed in C:\LUSE.
- The Glossary and Data Entry Filters will be installed in C:\LUSE\GLOSSARY.
The Data Files will be installed in C:\LUSE\DATA.
- The Settings File will be installed in C:\LUSE.

Existing files WILL BE overwritten !

C:\CONFIG.SYS will be changed

Press any key to continue, or Ctrl-Break to abort

- Press **Ctrl-Break** to abort the installation.

The following message is then displayed, and you will return back to the operating system (DOS prompt).

```
An error occurred during installation.  
The Land Use Database was NOT installed successfully.  
Please retry and check your input carefully; else contact ITC at  
tel +31.(0)53.4874.362; fax +31.(0)53.4874.399; E-Mail DEBIE@ITC.NL  
Attention Ir. C.A.J.M. de Bie
```

- Press **Any Key** to start installation.

The Land Use Database will be installed now. If an error occurs during installation, the procedure is aborted and the above 'error' screen is shown.

Only install the program in case you are sure not to overwrite existing Land Use Database files containing valuable information.

10. During installation, the program searches for files in the following order; it extracts files to the listed directories (**INSTALL.EXE** and **UPDATES.TXT** are not put on the hard disk):

ARJ.EXE	copied to C:\LUSE	
PROG.ARJ	extracted to C:\LUSE	(if question 6 was Y)
CONFIG.ARJ	extracted to C:\LUSE	(if question 6 was Y)
LUTBASE.ARJ	extracted to C:\LUSE	(if question 6 was Y)
LBCFG.ARJ	extracted to C:\LUSE	(if question 8 was Y)
DATA.ARJ	extracted to C:\LUSE\DATA	(if question 7 was Y)
GLOSSARY.ARJ	extracted to C:\LUSE\GLOSSARY	(if question 7 was Y)

The files that **must** be on your hard disk after a **complete** installation are listed in **Appendix 1**.

Note

After installation, in the various directories, also ***.CDX** files may be present. They represent 'index' files. When certain ***.CDX** files are absent, the software will automatically create new ones during start-up procedures. Then for each ***.DBF** file one ***.CDX** file must exist.

11. After the installation is completed, the following message appears:

«The Land Use Database v1.04»

This program is freeware. This means that you may use it free of any charges and distribute it in its complete form to others.

Copyright (C) 1 June 1995 by:
ITC - International Institute for Aerospace Survey and Earth Sciences
Department of Land Resource and Urban Sciences (Dept-II)
P.O. Box 6, 7500 AA, Enschede, The Netherlands
FAO - Food and Agricultural Organization of the United Nations
AGL
Viale delle Terme di Caracalla; Rome; Italy
WAU - Wageningen Agricultural University
Department of Agronomy
P.O. Box 341, 6700 AH, Wageningen, The Netherlands

Type LUSE and press <Enter> to start The Land Use Database.
Edit LUSE2.BAT to change to Novell network options.
Success!

- If the installation was successful, the software can be run ([Section 4.1](#)).
- If the **CONFIG.SYS** file of your computer was automatically changed during the installation, the following lines are added to the message of step 11.

The changes in CONFIG.SYS make it necessary that the installation disk is removed and the system rebooted; then type CD\LUSE and press <Enter>.

 - In this case, the following question appears:
Do you want to reboot your computer now? (Y/N):
 - If confirmed the following message appears:
Please remove the floppy from your floppy drive and press Enter
- If an error occurred during installation, the last two lines of the message (see step 11) will be replaced as under:

An error occurred during installation.
The Land Use Database was NOT installed successfully.
Please retry and check your input carefully; else contact ITC at
tel +31(0).53.4874.362; fax +31(0).53.4874.399; E-Mail DEBIE@ITC.NL
Attention Ir. C.A.J.M. de Bie

Check if the installation disk contained all required files and if files can be read properly. If not, you require a new installation disk.

Additional Comments on Installation Procedures

- The current version of The Land Use Database is a network version. It can be used on stand-alone personal computers and within a Novell network as a multi-user package. This means that many users can enter data into the same database files simultaneously; when users are entering data, the query module will remain operational.

Because of safety reasons, the Glossary Module will remain a stand-alone application. To run the network version it is required that all directories used by the program, i.e. **/LUSE**, **/LUSE/DATA**, **/LUSE/GLOSSARY** and **/TMP** have read- write- delete- modify- and create-rights for all users.

To change from a single-user to a multi-user environment, two aspects count:

- that you are connected to a Novell file server;
- that relevant settings in **LUSE2.BAT** are put correctly (please edit this file when required; guidelines are incorporated in this file).

- If you want to limit the possibility that users, e.g. data entry personnel, can freely edit glossary and data entry filters, then delete the **CONFIG.EXE** file of the relevant computer units.
- Please, refer to **Section 6.2** for information on software settings and **Appendix 2** for screen and colour settings.
- The 'ARJ' software is supplied with The Land Use Database; please consider registering when you use it for making backups of data files.
- The software automatically creates two additional directories at initialisation:
 - **C:\Luse\Error** where error information is stored in case you find an unknown bug.
 - **C:\TMP** where temporary information is stored when running the query; and where **LB.CFG** is placed to avoid problems when you load the software from a file server.

4. General Instructions

General instructions on how to use The Land Use Database, i.e. how to get started, aspects of common screen elements and common routines, plus a list of operational keys.

4.1 How to Start The Land Use Database

To start The Land Use Database, carry out the following steps:

- Go, when in **DOS**, to the **C:\LUSE** directory: Type **CD C:\Luse** and press **Enter**
- Start The Land Use Database: Type **Luse** and press **Enter**

Two statements may be added to this command in order to read files from another directory. This may be required if you wish to keep separate sets of glossary and/or data files in different directories. Note that you can also edit the directory settings in **LUSE2.BAT**.

To read data files from another directory type **Luse /DP:<Path>**, e.g. **Luse /DP:'C:\Project\Data'**

To read glossary files from another directory type **Luse /GP:<Path>**, e.g. **Luse /GP:'C:\Project\Glossary'**

To read both data and glossary files from other directories type **Luse /DP:<Path> /GP:<Path>**, e.g. **Luse /DP:'C:\Project\Data' /GP:'C:\Project\Glossary'**

The main menu of The Land Use Database is now displayed on your screen:



Choose one of the options from the **<Select a Module>** menu:

- Highlight an option from the menu by using the **↑** and **↓** keys
- Press **Enter** to select the option

The available options are explained below:

Glossary - Glossary; Filters; Repair; Backup/Restore

Large parts of the land use data stored in The Land Use Database are described by items (terms) from a glossary. The Glossary Module offers you possibilities to:

- Add new items to the glossary or edit existing ones to shape it to your needs.
- Define a data entry filter in which parameters and parameter values are selected in order to shape the data entry procedure to your needs.
- Reindex data files and reset counters of glossary items.
- Make a backup of glossary and data files or restore a prepared backup.

The Glossary Module can also be started from the Data Entry Module, at any moment, by pressing the **F2** key.

For instructions on the use of the Glossary Module: Chapter 5

Data Entry - Land Use Data; Land Use Classes; Settings

Data entry of collected land use data is carried out following a fixed procedure in the Data Entry Module. This module allows you to:

- Enter collected land use data or edit stored land use data.
- Enter *a-priori* land use classes of applicable land use classification systems.
- Select program settings.

For instructions on the use of the Data Entry Module: Chapter 6

Query - Search, Retrieve and Export stored Data

Data stored in The Land Use Database can be retrieved after defining a search condition. The condition may be complex; it can contain several rules which are connected through boolean statements. The search procedure is called a query. This module allows you to:

- Select and retrieve stored land use data and land use classes
- Export retrieved data to various file formats

For instructions on the use of the Query Module: Chapter 7

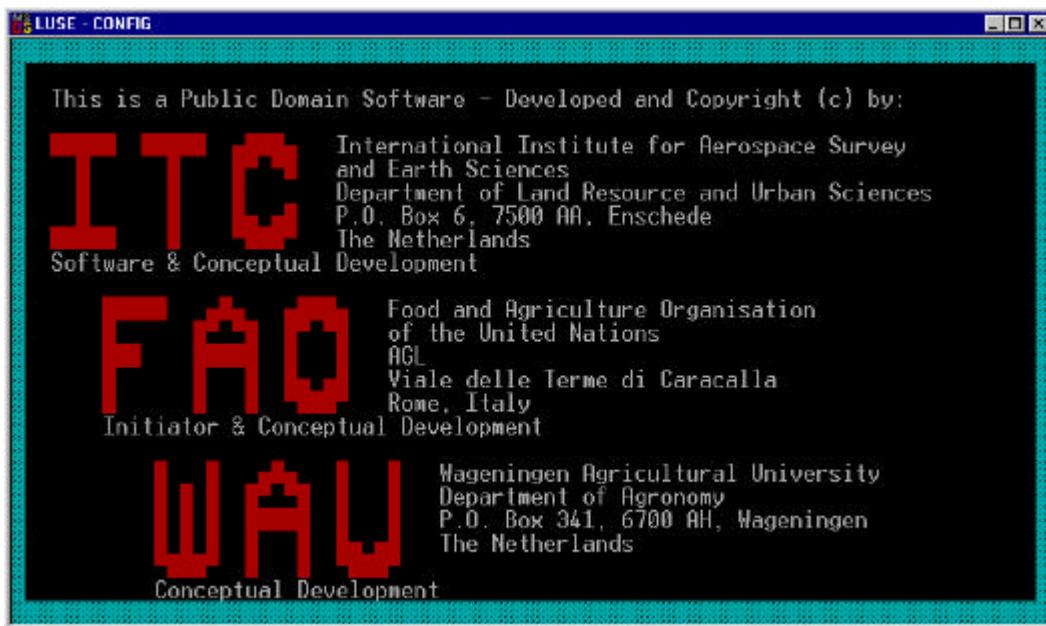
Exit <Esc> - Return to the Operating System

To return to the operating system of your computer (DOS).

After you selected a Module, four messages will appear at the bottom of the screen:

- Loading Module ...
- The Database will operate in Stand-Alone Mode. Edit LUSE2.BAT to change this. or:
The Database will operate in Multi-User Mode. Edit LUSE2.BAT to change this. or:
The Database will operate in Stand-Alone Mode; Sorry no Novell Connection!.
- Checking File Structure ...
- Reading Data Entry Filter ...

After these messages the following information screen is shown:

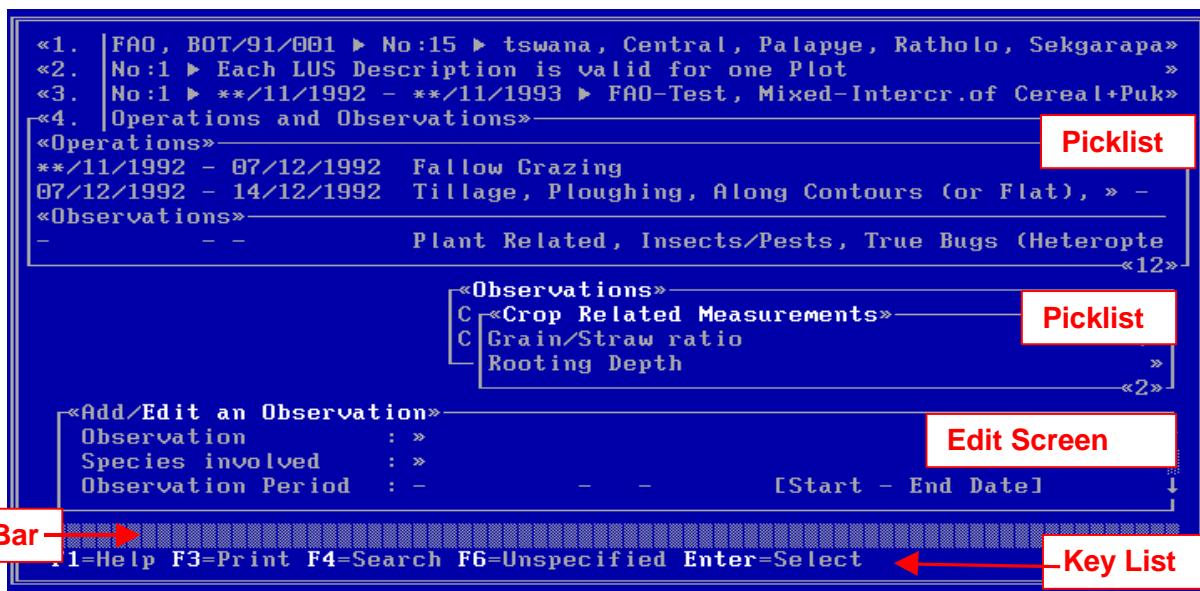


This screen is automatically removed after a short time span. Press **Any Key** to exit this screen immediately

4.2 Common Screen Elements

Throughout the program, a number of distinct screen elements are used for different functions. The use of a specific screen element is similar in most parts of the program. In the following sections the contents and use of the common screen elements is explained.

An example of the general screen layout of The Land Use Database is shown below. Names of the screen elements are given at the right side of the example. Below it, all common screen elements are listed with references to the sections where they are discussed.



For Information on:

<i>Picklists:</i>	Section 4.2.1
<i>How to Use Picklists:</i>	Section 4.2.2
<i>Edit Screens:</i>	Section 4.2.3
<i>How to Use Edit Screens:</i>	Section 4.2.4
<i>How to Use a Free Text Window:</i>	Section 4.2.5
<i>Information Bar:</i>	Section 4.2.6
<i>Key List:</i>	Section 4.2.7
<i>How to Use the Calendar:</i>	Section 4.2.8
<i>How to Use the Calculator:</i>	Section 4.2.9

4.2.1 Picklists

Picklists are menus, containing items, from which one item may be selected. Selection of an item may invoke a new picklist, which is a further specification of the item selected before. In this way, you can "branch" through the hierarchical structure of picklists.

Two example picklists are shown below. Picklist components are explained thereafter.

For instructions on using picklists: Section 4.2.2

The first example shows a series of **Datasets Identifications** stored in The Land Use Database.

```
«Dataset Identifications»
<Previous Series>
FAO, ZIMBABWE/91/005 ► No:27 ► Africa, Zimbabwe, Midlands, Gokwe, Mabalani
FAO, ZIMBABWE/91/005 ► No:28 ► Africa, Zimbabwe, Midlands, Gokwe, Mabalani
FAO, ZIMBABWE/91/005 ► No:34 ► Africa, Zimbabwe, Midlands, Gokwe, Thomas
FAO, ZIMBABWE/91/005 ► No:35 ► Africa, Zimbabwe, Midlands, Gokwe, Thomas
FAO, ZIMBABWE/91/005 ► No:35 ► Africa, Zimbabwe, Midlands, Gokwe, Ravi
FAO, ZIMBABWE/91/005 ► No:35 ► Africa, Zimbabwe, Midlands, Gokwe, Matare
<Next Series>
```

The second example shows two stacked picklists with items from the glossary. In the **Administrative Areas** picklist (behind) the item **Africa** was selected. In this way, the picklist Africa was invoked, containing African countries as items.

```
«Administrative Areas»
A «Africa»
A Angola
A Burkina Faso (Upper Volta)
E Burundi
N Benin
N Botswana
S Central African Republic
Congo
Côte d'Ivoire
Cameroon
↓
«56»
```

Components of a picklist are briefly explained below:

- **Dataset Identification or Africa**
The heading of the picklist, describing the contents of the picklist.
- **Angola or FAO, Zimbabwe/91/005 > No:27 > Africa, Zimbabwe, Midlands, Gokwe, Mabalani**
The name of the picklist item; the label describes the contents of the item.
- The question mark: **?**
A question mark right of the item name indicates that a help screen with item-specific information exists, which may be invoked by pressing **F1**.
- The lower level sign: **>>**
If this sign is displayed right of an item name, a picklist at a lower level exist that contains information that further specifies the item.
- Number: **56**
The number shown in the right lower corner of the picklist indicates the number of items in the total picklist.
- **<Previous Series> or <Next Series>** (in the first example)
Indication that the picklist contains items preceding or succeeding the displayed items (for large picklists that require a lot of computer memory).
- Scroll bar:  (in the second example)
The scroll bar on the right side of the picklist is displayed when it contains more items than can be displayed. The position of the highlighted item in the total picklist is indicated in the scroll bar by a different colour ().

4.2.2 How to Use Picklists

Various actions may be carried out in picklists. They are explained below:

- To **move** within a picklist use the following keys:
 - ↑, ↓** Go to the previous resp. next item.
 - PageDown** or **End** Go to the last item that is displayed.
 - PageUp** or **Home** Go to the first item that is displayed.
 - Ctrl-PgUp**, **Ctrl-PgDown** Go to the last respectively first item of the complete picklist.
 - a **letter** Go to the first item starting with this letter (not possible if item names are preceded by a number).
- To **display** the preceding or succeeding set of items of the current picklist:
 - Highlight **<Previous Series>** or **<Next Series>**
 - Press **Enter**This is only applicable if the **<Next Series>** or **<Previous Series>** options are shown.
- To **search** within a picklist press **F4** (see Section 4.3.4)

- To **exit** the current picklist (without making a selection) use the following keys:
Esc Go to the previous picklist or edit screen, i.e. return one step back only.
Shift-Esc Go to the first of a number of stacked picklists. This is only applicable if the picklist was invoked from within an edit screen. *(see Section 4.2.3)*
Ctrl-Esc Exit all stacked picklists and return to the field of an edit screen from where the picklists were invoked. *(see Section 4.2.3)*
- To **select** the highlighted picklist item press **Enter**
 - If there is a picklist at a lower level for this item (a **>>** sign is shown right of the item name) you will go to the picklist at the next level.
 - If there is no lower level for this item (no **>>** sign is shown):
 - An empty picklist appears, or
 - An edit screen belonging to the picklist item is invoked, or
 - You will return to the field of an edit screen *(see Section 4.2.3)* from where the picklist was invoked. The selection made will be displayed in the edit screen.
- **Not to select** an item from the current picklist press **<F6>**

This is only possible when **F6=Unspecified** is shown in the key list. After pressing **F6** you will return to the field of an edit screen from where the picklist was invoked. The information entered in the field *(see Section 4.2.2)* will contain the value "Unspecified" for the last picklist level. Selection of items at higher picklist levels will be stored in the field.

For example, for a national land use survey, you need to specify the country in which land use data were collected. First, you select **Africa** from a picklist with continents, then **Zimbabwe** from a picklist with African countries. Then, a picklist appears with provinces in Zimbabwe from which you do **not** want to select any. In order **not** to select any of these, you can press **F6**, i.e. give the value "Unspecified" at this level. The previous selections, i.e. **Africa, Zimbabwe** will be stored.

Note that "Unspecified" must **not** be used if the required item, e.g. a province name, is not displayed in a picklist where it belongs. In this case a new item, the province name, must be added to the picklist. Adding of glossary items is carried out in the Glossary Module *(see Section 5.2.4)*.

- To **edit** information of a highlighted item use the following keys:
F10 This is only possible if the **F10=Edit** key is displayed in the key list.
Enter If there is no lower picklist level for this item, this key may be used. An edit screen is invoked in which you can edit the picklist item information.
- To **add** a picklist item press **Ins**
This is only possible if **Ins=Add** is displayed in the key list. In most cases an edit screen is invoked in which you can specify information for the new picklist item.
- To **delete** the highlighted item press **Delete**
This is only possible if **Del=Delete** is displayed in the key list.

For information on deleting: Section 4.3.3

4.2.3 Edit Screens

Edit screens are meant to enter or edit information (to be) stored in The Land Use Database. An edit screen contains names of parameters and fields in which the value of a parameter is entered. Fields are displayed as horizontal bars.

An explanation on the components of edit screens is given below the shown example, it concerns an edit screen in which information is entered or edited to identify the site where the described land use systems are located.

For instructions on using edit screens:

Section 4.2.2

```
«Add/Edit a Site Identification»
Site Fragmentation : »
Site Name : -
Mapping Unit-ID : -
- Comp./Element-ID : -
- Map Comments : -
Tenancy Arrangement : »
Cadastral Number :
Parcel Size : - - - - [Min - Max]
- Unit : »
- Info Source : »
Distance to Holding : - - - - [Min - Max]
- Unit : »
- Info Source : »
Comments :
```

Various components of edit screens are briefly explained below:

- **Add/Edit a Dataset Identification**
The heading of the edit screen describing its contents.
- **Fields with >>**
Items from a picklist can be entered in this type of field.
- **Fields with -**
Text or numbers can be entered in this this type of field
- **Fields with ***
A next edit screen is invoked in which information can be entered.
- **Scroll bar:** 
The scroll bar on the right side of the edit screen is displayed in case the edit screen is larger than can be displayed on the computer screen.

4.2.4 How to Use Edit Screens

Various actions may be carried out in edit screens. They are explained below:

- To **move** in an edit screen use the following keys:

↑, ↓	Go to previous resp. next field.
PageUp	Go to the first field of the entire edit screen.
PageDown	Go to the last field of the entire edit screen.
- To **enter information** in a **>>** field or to **edit** existing information press **<Enter>**
 A picklist will be invoked from which to select an item.
For more information on using picklists: [Section 4.2.2](#)
- To **enter information** in a **-** field or to **edit** existing information.
 Use the following characters and keys:

letters	To enter or edit the information in this field if letters are allowed.
numbers	To enter or edit the information in this field if numbers are allowed.
←, →	To move cursor in field.
Ctrl ←, Ctrl →	To move cursor one word to the left respectively to the right.
Home, End	To move cursor to beginning resp. end of field.
Insert	To determine whether characters are inserted or overwritten.
Delete	To delete the character at the cursor position.
BackSpace	To delete the character preceding the cursor position.
Ctrl-T	To delete the word right of the cursor.
Ctrl-Y	To delete the characters at the current line right from the cursor.

 Note that some fields require information in specific format, e.g. dates and numbers; this will be stated in the information bar.
- To **enter information** in a ***** field or to **edit** existing information press **Enter**.
 A next edit screen is invoked in which information can be entered or edited. After saving the contents of the next edit screen, a new ***** field appears in which a second set of information can be entered, and so on. A maximum of 6 fields can in this way be filled with information. In required, information can be entered into more fields after saving the edit screen and invoking it again to edit. Each time, 6 additional fields can be filled.
- To **save** and **exit** press **F10**. The content of the edit screen is saved. You will exit the edit screen.
- To **exit without saving** press **Esc**.
 - For small edit screen, the contents of the edit screen will not be saved and you will exit the edit screen immediately.
 - For large edit screens, the following picklist appears:
 

Yes you will exit the edit screen without saving its contents.
No you will return to the edit screen as you left it. The content of the edit screen is not saved.

4.2.5 How to Use Free Text Windows

Free text windows are meant to store comments on data stored in The Land Use Database or to store definitions of terms entered in the glossary. Free text windows are invoked from a field in an edit screen of which the name always contains the word "Comments".

The use of a free text window is explained below the following example screen. In the example the free text window is empty, but it may also contain text. The heading of a free text window is always Free Text .



Actions that may be carried out in a free text window are explained below:

- To enter information in a free text window use the following characters and keys:

letters or numbers	To enter text.
←, →	To move cursor to left, resp. right.
↑, ↓	To move cursor to previous, resp. next line.
Ctrl ←, Ctrl →	To move cursor one word to the left or to the right.
Home, End	To move cursor to beginning resp. end of line.
Ctrl-Home, Ctrl-End	To move cursor to first resp. last displayed line.
Ctrl-PageUp, Ctrl-PageDown	To move cursor to first resp. last line of the total text.
Insert	To define if characters will be inserted or overwritten.
Tab	To insert a tab.
Enter	To insert a new line.
Delete	To delete the character at the cursor position.
BackSpace	To delete the character preceding the cursor.
Ctrl-T	To delete the word right of the cursor.
Ctrl-Y	To delete the characters at the current line right from the cursor.
Ctrl-B	To reformat a paragraph, i.e. to optimize the text layout of a paragraph.
- To save and exit the free text window press **F10**. You will return to the field in the edit screen from where the free text window was invoked.
- To exit without saving the contents of the free text window press **Esc**. The following picklist appears:



Yes you will exit the free text window without saving its contents.
No you will return to the free text window as you left it. The content of the free text window is not saved.

4.2.6 Information Bar

The information bar is shown at the bottom of the screen. It contains information on the current screen or position within the screen. It provides guidance in managing the program. An example: if you enter data about a land use operation, you may not know precisely the meaning of the field named "Periodicity". In the information bar an explanation is displayed that may assist: **State if this operation is carried out periodically during the specified period.**

If you require more help than displayed in the information bar, you can invoke a help screen by pressing **F1** ([Section 4.3.1](#)).

Apart from guidance, the information bar provides information on the actions that the software performs. For example, when you invoke a picklist, it may take some time before the picklist is displayed. In this case the following message appears in the information bar: **Making picklist, please wait...** .

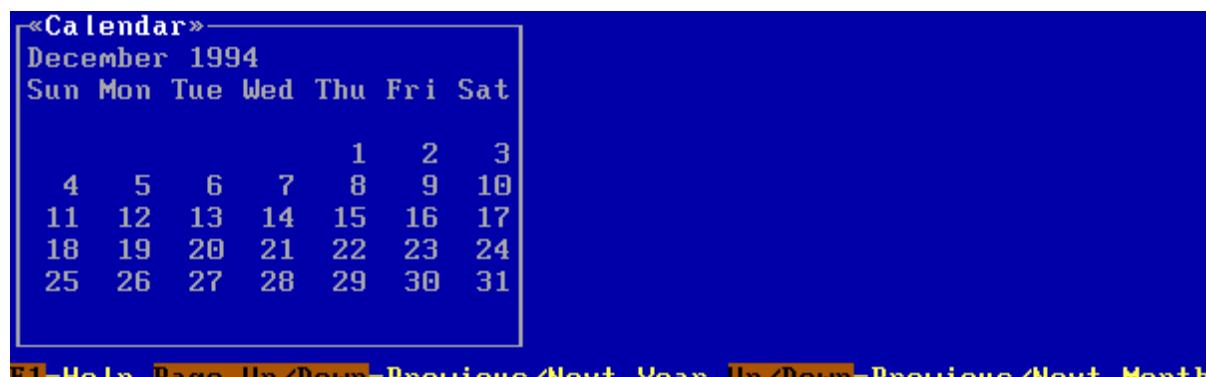
4.2.7 Key List

For each screen of the program, a selection of operational keys and their function is displayed at the very bottom line of the computer screen. The selection depends on the current position in an edit screen or the type of picklist displayed. Some operational keys related to picklists and edit screens were already discussed in the previous sections ([Section 4.4](#)). An example of key list is:

F1=Help F3=Print F5=Copy F10=Edit Ins=Add Del=Delete Enter=Select

4.2.8 How to Use the Calendar

If dates have to be entered in The Land Use Database, a calendar will be available to check dates. The calendar can only be invoked if **F8=Calendar** is displayed in the key list at the bottom of your computer screen. To invoke the calendar press **F8**.



The calendar shows the dates and days of one month. You can browse through years and months of the calendar. It is not possible to copy dates from the calendar to edit fields.

- To **display** the next resp. previous month press ↓ resp. ↑.
- To **display** the next resp. previous year press **PageDown** resp. **PageUp**
- To **exit** the Calendar and return to the edit screen press **Esc**.

4.2.9 How to Use the Calculator

If numerical data must be entered in a field of an edit screen, a calculator is available to facilitate mathematical calculations; use the **F8=Calc** option as shown in the key list. A calculation expression is entered in this screen and the result can be copied to the field in the edit screen.



To enter and evaluate the calculation expression, use the following options:

- To **enter values** in the expression type **numbers**
- To **enter operators** in the expression use the following characters:
 - + To add values
 - To subtract values
 - *
 - / To divide values
 - (and) To group part of the expression
 - ** or ^ To raise a value to a power, e.g. 32 is written as 3**2 or 3^2

Examples of expressions entered in the calculator screen:

3^2*((3+7+12)/2), or 3**2*((3+7+12)/2)

- To **get** the result of the calculation press **F8**. The result of the calculation is shown in the calculator screen
 - If you want to copy the result to the field press **F10**.
 - If you do not want to copy the result to the field, enter another calculation expression.
- To **copy** the result of the calculation directly to the field press **F10**. You will return to the field from which the calculator screen was invoked.
- To **exit** the calculator without copying the result to the edit screen press **Enter** or **Esc**.

4.3 Common Routines

A number of routines is commonly used in The Land Use Database. They are listed below together with references to the sections in which they are discussed.

For information on:

<i>Getting Help:</i>	Section 4.3.1
<i>Printing:</i>	Section 4.3.2
<i>Deleting:</i>	Section 4.3.3
<i>Searching a Text:</i>	Section 4.3.4
<i>Go to DOS:</i>	Section 4.3.5

4.3.1 Getting Help

For each field of an edit screen, for picklists, and for many picklist items, topic specific help is available. General help on how to use screen elements also exist.

All available help topics are stacked, i.e. going from specific (first) to general (last). For example, if you invoke a help screen when entering data of a land use operation, the first help screen is specific to the current field (e.g. the main power source). Then the help screen at the next level provides information on how to edit fields. Then the third on the contents of the complete edit screen, etc. The complete stacked help screens list for this example is:

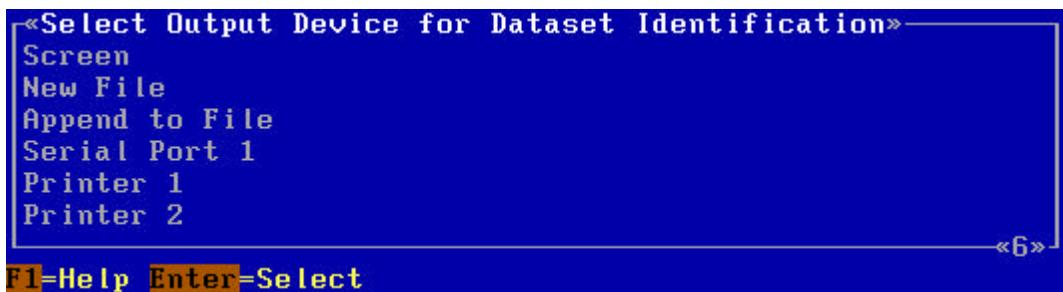
Specific	1. Main Power Source 2. Add/Edit an Operation 3. Edit Fields in Edit Screens 4. Operations and Observations 5. Land Use System Descriptions 6. Site Identifications 7. Dataset Identification 8. Picklists
General	9. How to use Help

- To obtain **specific help** press **F1**.
- To obtain **more general help**, go to the next help screen level by pressing **F1** again. A help screen with more general information is displayed. The last help screen contains information on <How to use Help>.
- To **go** to the previous (more specific) help screen press **Esc**. This is only applicable if you are not in the first (specific) help screen.
- To **print** the texts of help screens press **F3** ([Section 4.3.2](#)).
- To **edit** the contents of a help screen:
Only help screens belonging to glossary items may be edited. You can edit these in the Glossary Module ([Section 5.2.3](#)).
- To **exit** help:
 - If in the first (specific) help screen press **Esc**.
 - If in a more general help screen press **Ctrl-Esc**.

4.3.2 Printing

Options to print data or lists, i.e. as displayed on the screen or of related information, are present throughout the program. The information can be printed to several output devices. Printing is only possible if **F3=Print** is displayed in the key list (at the bottom line of the computer screen).

To print, press **F3**. A picklist showing all the available output devices as available to **your** computer unit will then be displayed:



Select an output device by highlighting it and pressing <Enter>.

Screen

The required output is shown (printed) on your computer screen. To move in the printed output use the following keys:

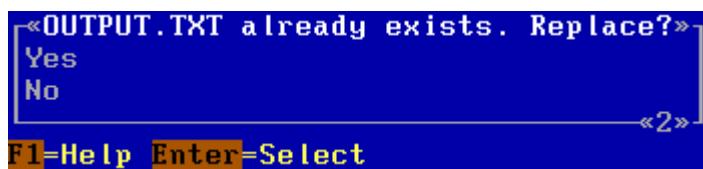
↑, ↓	To move one line up resp. down.
PageUp, PageDown	To move to the first resp. last displayed line on the screen.
Ctrl-PageUp, Ctrl-PageDown	To move to first resp. last line of the total text if the text is longer than displayed.
Home, End	To move to the most left resp. most right character of the line.

New File

The output will be saved as an ASCII file. An edit screen appears to specify a file name:



Enter a file name. If the file already exists, the following picklist is displayed:



Yes	The existing file will be overwritten.
No	The existing file will not be overwritten. You will return to the File to print to edit screen in which you may enter another name.

Append to File

The output is added to an existing file. The same edit screen as shown before is displayed to specify a file name:



Enter the file name. If the file does not exist, a new file will be created.

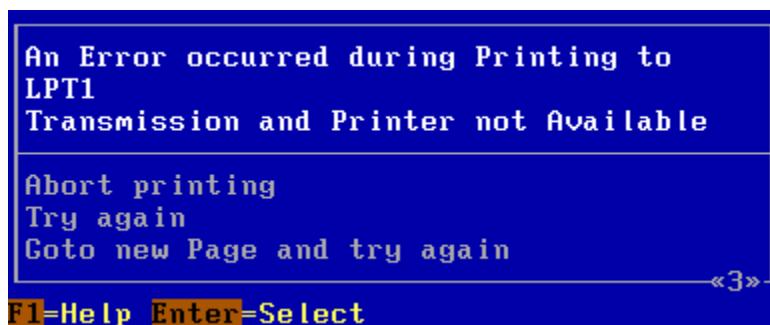
Serial Port 1, 2 etc.

The output is send to the specified serial port of your computer. The number of ports shown as output device options depends on the number of serial ports your computer has; they are named COM1, COM2, etc.

Printer 1, 2 etc.

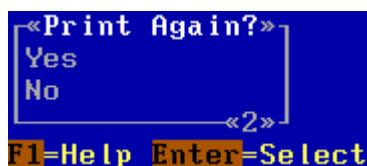
The output is send to a printer attached to your computer. The number of printers shown as output devices depends on the number of printer ports your computer has; they are names LPT1, LPT2, etc.

In case the selected printer does not respond or is not connected, the following message and picklist appears:



- **Abort printing:** Cancel the initiated printing procedure.
- **Try Again:** Retry printing of the information from scratch.
- **Goto new Page and try again:** Retry printing of the information from scratch. Now, the program will first send a page feed instruction to the printer, and then print the information (on the new page).

After printing, a picklist appears:



Yes The output device picklist will be shown again. You can select a different output device and repeat the printing procedure.

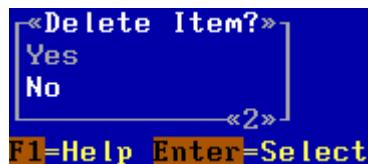
No The information is not printed again. You will return to the screen from where the printing utility was invoked.

4.3.3 Deleting

In some cases you may want to delete information stored in The Land Use Database. Deletion is only possible if **Del=Delete** is displayed in the key list at the bottom of the computer screen. Perform the following procedure to delete information.

- Select (highlight) the information to be deleted and press **Del**.
 - If the information to be deleted is a used glossary item it cannot be deleted. A message appears which tells you deletion is not possible.

- If the information to be deleted is not a used glossary item and small in size, the information is removed immediately.
- If the information to be deleted is not a used glossary item and large in size, the following picklist appears:



Yes The selected item will be deleted.

No The item will not be deleted, you will return to the previous screen, from which you started the deletion procedure.

4.3.4 Searching a Text

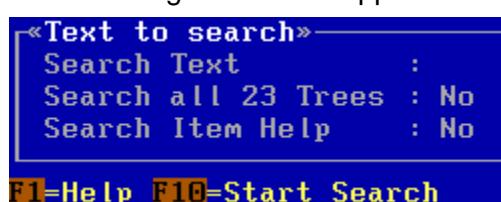
For large glossary picklists that cannot be displayed on one screen or for stacked picklists, there is a possibility to search for a text within the glossary and help texts belonging to glossary items.

For example, if you look for a species that has a name containing "beans", the glossary can be searched for the term "beans". Searches are always carried out for a complete glossary tree (see Section 5.2). A search can only be conducted if **F4=Search** is displayed on the key line of the bottom of the computer screen.

To search for a text, perform the following steps:

- Select a glossary tree or highlight any item within a glossary tree.
- Press **F4**.

The following edit screen appears:



Search Text

Enter the name of the required glossary item or a selected part of it.

Search all 23 Trees

To determine whether all 23 glossary trees must be searched press **Enter**. A picklist is invoked:



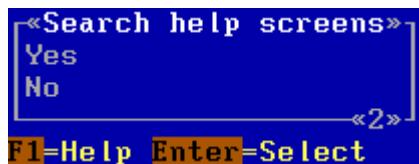
Yes All 23 glossary trees will be searched for the required text.

No The current glossary tree will be searched only for the required text.

Search Item Help

To determine whether item specific help must also be searched press **Enter**.

A picklist is invoked:



Yes

Besides glossary items, also the help belonging to glossary items, will be searched.

No

Only glossary items will be searched, not the attached help texts.

To **start** the search press **F10**. A picklist appears containing output devices to which the search results can be printed.

For information on printing: Section 4.3.2

4.3.5 Swapping to DOS

At any moment, when in The Land Use Database, you can swap to DOS. This offers the possibility to start other programs, change file names, or display information exported from The Land Use Database.

To **swap to DOS** press **Alt-F2**. A message appears in the information bar: **Swapping to DOS ...**

When in DOS, a line is shown: **Type EXIT to return to the Land Use Database**

To **go back** to The Land Use Database, from the DOS command line type **EXIT** and press **Enter**.

Note

The swap tool writes **all** information in memory (RAM) to your hard disk. The information is placed back in memory when you exit from DOS. Memory resident softwares, e.g. SMARTDRIVE, will not work after you swap to the DOS prompt, but will function again after returning to The Land Use Database.

4.4 List of Operational Keys

Below, often used keys are listed, with their uses by module:

Key	Glossary Module	Data Entry Module	Query Module
F1	Help	Help	Help
F2	-	Swap to Glossary Module	-
Alt-F2	Go to DOS	Go to DOS	Go to DOS
F3	Print	Print	Print
F4	Name Search	Name Search	Name Search
F5	Copy	Copy	Copy
F6	Select as unspecified	Select as unspecified	Select as unspecified
F8	Graft branch; new position of branch. Calculator	Calculator Calendar	Calculator Calendar
F10	Save Edit a picklist item Start copy Copy calculator result	Save Edit a picklist item Start copy Copy calculator result	Save Edit a picklist item Start copy Copy calculator result
Enter	Select a picklist item Confirm information in field	Select a picklist item Confirm information in field	Select a picklist item Confirm information in field
Esc	Go to previous picklist Abandon changes made	Go to previous picklist Abandon changes made	Go to previous picklist Abandon changes made
Shift-Esc	Go to first of stacked picklists	Go to first of stacked picklists	Go to first of stacked picklists
Ctrl-Esc	Exit all stacked picklists Exit all help screens	Exit all stacked picklists Exit all help screens	Exit all stacked picklists Exit all help screens
Ins	Add a picklist item Toggle insert mode on/off	Add a picklist item Toggle insert mode on/off	Add a picklist item Toggle insert mode on/off
Del	Delete a picklist item Delete the character at cursor position	Delete a picklist item Delete the character at cursor position	Delete a picklist item Delete the character at cursor position
Space	Display complete field value	Display complete field value	Display complete field value