

FarmHand User Guide for HandHelds

General Notes

FarmHand is a general purpose data collection program that is designed to run on handheld computers (PDA's) running the Palm Operating System (Palm OS). It is not intended as a replacement for a Herd Recording program, although there is a version of the program that does run on Windows and will perform these functions to a large extent. **Farmhand** is therefore available in the following flavours...

- HandHeld version only
supplied to organisations making their own provision for two-way data handling (such as for 'Mistro' users)
- HandHeld + Windows version
supplied to organisations that promote packages with menu-driven linkages to FarmHand such as 'PCFarm', 'EasyDairy', 'Imagenes'. It includes a 'Shell' that allows two-way data communication and a handheld 'Simulator' program.
- HandHeld + Extended Windows version
as above but extended as a stand-alone basic Herd Recording package not requiring a 3rd-party host system. The extended version may not provide all the features of other packages but contains basic functionality to keep a system ticking over and provides export facilities for spreadsheets such as Microsoft Excel.

Depending on the software supplier or agent, the **FarmHand** CD will provide access to all the versions but each one needs to be 'unlocked' before it can be truly usable. e.g. in order to save data on the handheld and for access to the Extended Windows version the programs need a PIN number. Otherwise, they are complete working versions. In particular the Windows 'Simulator' program allows a prospective user to examine the way the Handheld version would operate if they had one.

The information in this document relates to running **FarmHand** on your handheld device. The windows-based control program is *not* covered here. However, the instructions for Windows Handheld 'Simulator' program itself *are* implied as the two are practically identical in functionality. The windows version looks similar but for instance, the Main Menu buttons are always visible whereas they have to be activated on the handheld by choosing the appropriate icon.

To see how to run and use the Windows shell program, consult the *Farmhand User Guide for Windows*.

The term '*host system*' is used for your Windows-based Herd-Recording program. To see how to prepare and transfer data to and from the unit, consult the program guide for that system. Note that some host systems such as 'Mistro' do not use the FarmHand Windows version (and Simulator). They make their own provision for communicating with the HandHeld.

In order to keep this documentation generic, certain terminology e.g. '*Graffiti*' has been used which may be called something else on devices from manufacturers other than Palm.

It assumes that you have downloaded your herd information and are ready to start entering data. It also assumes that you are familiar with the basic concepts of the handheld such as the location and meaning of the 'Application' button and the 'Menu' button.

Program Start-up

The program is activated through the *FarmHand* icon in the Application Window. The **Application button** looks like a house (hence the connection with a 'Home' key). It appears under the glass below the data display area and to the left of the Graffiti entry scratchpad area otherwise known as the 'Solk Screen'. The **Menu Button** icon looks like a Windows drop-down menu and appears below the Application button. As with the Application button, do not use the **Calculator button** while using the program or it will close it down and you may lose your last data entry. The **Find button** cannot be used in the program. It only relates to the Palm Operating system and apparently cannot be accessed by other third-party programs.

Because of the possibility of accidental shutdown of the program by pressing the lower buttons it is recommended that you use the actual Menu Icon in the program window itself.

The Main Menu is accessed by pressing the drop-down icon at the top left corner ==>

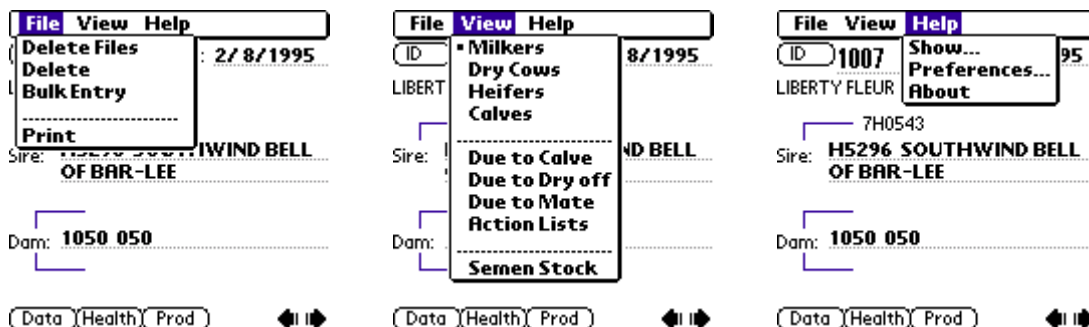
These lower buttons switch between the Major screens ==>

The left and right-pointing arrows jump To the next cow or health item depending on which screen is showing.



The Main Menu

When running *FarmHand*, pressing the Menu button shows **File / View / Help** on the top line. Tapping one of these words shows a drop-down menu. You can get to an item in that list by direct tap or by *holding the stylus down* when the drop-down appears and dragging up or down to an item and letting go when you are over the topic you want.



Program Operation

If you work through these notes with one of your animals, and then perhaps follow through with the deletion exercise, you will have covered most of the basic elements within the program. Other aspects of operation such as Bulk Data Entry where you can work with lists of animals is recommended for further study through the use of the on-line help system after you have become familiar with the basic steps.

You should first familiarise yourself with all the tunable options. These are found under **Help / Preferences**. These options relate to the handheld itself and generally have no bearing on your host system. The values should remain set between sessions. For instance, you can set the amount of data contained in the Health Window, choose whether to hear sounds from the unit or whether to use colour and so on.

Getting started

Firstly a few general points about the screens and controls. Most of the actions used to enter data do not rely on entering text. The forced use of the Graffiti text entry or the inbuilt keyboard has been kept to a minimum. Most entries are done on a 'point and peck' method. This helps in adverse conditions where for instance the unit may be operated when inside a clear plastic bag.

Data can only be entered in the Data Entry screen. All other windows are for reference purposes. Buttons are defined with borders. They either produce more information or show another screen. Some fields *act* as buttons but are only appear to change their wording. These borderless areas are always in bold text such as "**Male**", "**All Codes**", "**Live**" and they are simple 'toggle' switches that change from one heading to another. Repeated clicking eventually cycles back to the initial setting.

Many screens have an information button **|i|** at the top right. This on-line help can be toggled on and off by repeated clicking of the button.

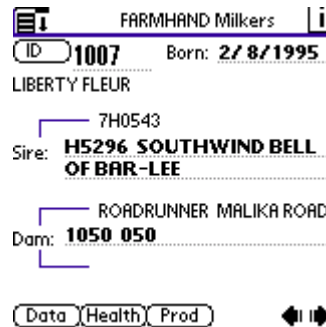
The Main Screens

The main level screens are always accessible through the buttons at the lower edge of the screen. Alternatively, they may be able to be shown by an action on another e.g. clicking on an item in the health window will show the Data Entry screen for that item.

- Pedigree Screen
 - Sub-pedigree ('Classification' Screen)
- Data Entry Screen
 - Semen Stock screen
 - Bulk Data Entry
- Health and Mating screen
- Production screen
 - Herd Test screen
 - Cell Count Graph

Pedigree Screen

This contains a 2-generation pedigree. The dam of the sire is missing purely to make the screen more readable. (In most instances the sire would be an AI sire). If information is incorrect or deficient in some way, you will have to correct it on your host system before transferring the animal information over again. The only way to add a new animal directly onto the handheld is through a calf entry.



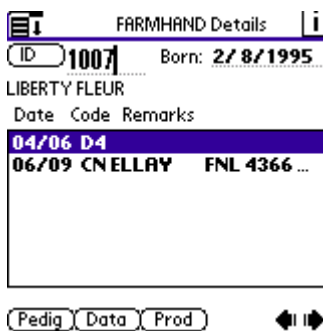
The Pedigree window may also show a lower button with simply a '?' in it. Click this to show more details about the animal, including eartag, herdbook number and latest workability information. This screen therefore will be particularly useful for providing information during a **Herd Classification visit**.

Hint: If you can't get this button to appear, you need to ensure that the option regarding Herdbooks is turned on in under the General Options Tab in Windows version of Farmhand. See also under Help / Preferences.

If an animal name is too long to display in the top line, there is a horizontal scroll button to the right. Clicking this alternately will switch between the start and end of the animal name. If there is room, the animal's eartag number will be shown at the end of the name line, otherwise you will need to click the | ? | button to see it.

Health Screen

Select the Health button to show the following screen ...

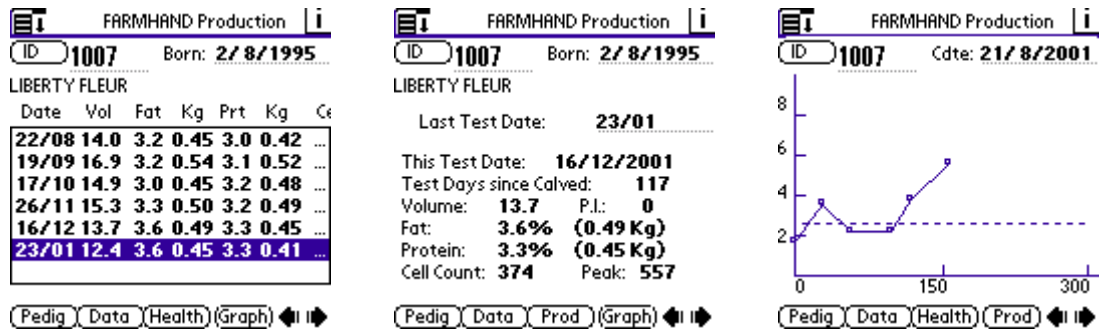


This contains all events that have happened in the recent past. How you determine 'recent' is controlled by you. Two years is considered to be adequate by most users but downsizing this would reduce the data storage requirements and also the time taken to show a full screen. Note that your host system may not allow you to tune this figure. Also, in order to take advantage of such a reduction, you would normally need to completely remove pre-existing data files from your handheld from time to time otherwise the amount of data would just keep on growing.

This may not be an issue for Herd Testing users as normal monthly download procedures would involve a full refresh.

Production Data screen

Select the 'Prod' button to show the screen on the left.



Data is provided for all herd tests since the latest calving. Even if data is stored for more than one lactation, only the most recent will be shown. There are a couple of other screens that relate to the Production Window. One is to click on any test value line. It will show that test in more detail. Another feature is the Graph button. This will show a cell count graph. If the graph spans more than 300 days, clicking on the lower scale bar will switch between start and end of lactation.

Data Entry screen

Because all entries are coded, data can be entered for any event that happens to an animal. The code can include up to 5 characters. All codes conform to A.D.H.I.S. standards. Depending on the capability of your host system, these codes may be extendable with ones of your own. Please check your host system documentation for more information.

Let's take by way of an example how to enter a heat, mating and a calving for a cow. This will cover most of the type of features contained in the program.

Entering a heat

In simplistic terms, this is done by

1. Select the cow
2. Select the date
3. Select the type of heat code
4. Enter any remarks (optional)
5. Save the entry with the Add button.

From then on, as a shortcut for entering the next cow on heat, simply perform steps 1 and 5 (assuming the other details are the same).

1. Select the cow either from the ID selector or by typing its number in the text space provided alongside. If you use the keyboard to enter the digits do not press the Enter key (rightmost button on the 3rd row). Simply type the numbers and click the **Done** button. You then need to terminate the text entry. Do this anywhere in the Graffiti window by entering a '/' character (from the top). Do not confuse with a '\' character! Alternatively, tap the Graffiti window twice in the same spot. This will check your entry is in fact a valid ID for an animal.

If the animal is not in the current view list you will be prompted with an invitation to switch to that list. e.g. if a cow is in the Milkers List and you are currently look at Dry Cows it will show a message box entitled “Found elsewhere!” and the text “xxxx is a Milker. Switch to that list?”. If you respond by clicking the Yes button the list will be switched to Milkers.

If you have cow numbers less than 4 characters, they will be shown in a list with leading zeroes. e.g. if your cow is simply numbered 18 it will show up as 0018 and therefore be in sequence with its peers and not coming up after cow 1799. However, if entering that cow in the text box you only need to enter 18 and not 0018.

You can ‘click and drag’ over all or portions of a text field. This will highlight that text. By entering a backswipe character in the Graffiti area (a horizontal swipe from right to left) you can clear this text and it will allow you to enter different text. *Note that in this version of the program, if you do not do the backswipe first, the first letter you enter will terminate the text entry as though you had finished with it.*

2. Select the Date

Let’s assume you have entered and displayed the animal you want. If you are not already in the Data Entry window, change to it by clicking the lower button entitled **Data**. Note that the plastic buttons on the unit tie up with the lower 4 buttons across the screen, whatever their content. The two centre buttons allow scrolling up and down a selector. The next thing to check is the date. You can re-enter the text in the text area or, if it is a date within the last week, click on the **Date** button and select the right one. If you enter text, there are some useful shortcuts. One is to not enter the slashes. The other is to drop the year (or month). e.g. enter numbers from 1 to 10 will assume that day of the current month. Enter 45 and a double tap will show 04/05/2002 (working backwards). If you can’t seem to be able to enter today’s date, check that your handheld has its date set correctly in the Handhelds ‘Preferences’ application.

3. Select the Code

Click the code button or enter the code if you remember it, e.g. ‘HN’ and a swipe or double-tap will show the word ‘Normal’ under the code and focus will move to the Remarks area. Note that all text entries except for those in the remarks area is converted to UPPER CASE. When clicking the Code button, it will either show all codes or be pre-primed with valid heat codes. If the former and the category selector shows other non-heat events such as Calvings, Matings and so on you will need to click the line that says “**Heats**”. If the latter, and heats are not shown, you will need to switch to entering heats by clicking the wording that appears in bold at the top right. This wording defaults to “**All Codes**”. Clicking it will cycle through common data entry topics such as Calvings, Matings and so on depending on how your host system has set it up.

4. Enter remarks.

Remarks are optional of course. If you have several common entries that require a non-trivial amount of text, remember that you can use Cut/Copy and Paste commands with the control key commands. To see how these codes work, consult your handheld device manual.

They do not, however, appear in the *FarmHand* Main Menu itself but can be entered through the command line option graffiti stroke (a ‘/’ from the bottom).

A special option occurs in the Heat data entry window. You can click the selector to show whether or not you want to mate this cow. Click the option repeatedly to turn on or off. Your host program may then be able to make use of this information. One possibility here is to Auto-draft that cow. Consult that documentation to see how this can be arranged. In technical terms, the flag is a ‘#’ character in the 1st position in the Remarks area. It is hidden in *FarmHand* windows to avoid confusion.

5. Save the data!

Finally, click the **Save** button in order to save the data you have just set up.

The Save button will disappear and a ‘Data Added’ confirmation box will appear momentarily.

The Save button will not re-appear until the next set of information is added that will permit its use – i.e. until a valid ID, code and date has been entered.

Entering a Mating

Follow the same procedure above except choose the category “Mating” events. Then choose whether it’s an AI or a Natural mating.

Click the Sire button and a list of bulls should appear. This would normally be your bull team that’s in use for this mating season and is provided from your host system. If the list is deficient, you will need to consult that documentation. It may involve recreating your Codes Master File. Alternatively, when you enter text for a valid bull ID (e.g. the NASIS Identity) and it’s not already recorded you will be given the option to add that bull to your team and it should from then on appear in the team list. The first item in a bull list is either “Switch to All sires” or “switch to Team sires” depending on the list you are in. Click that selector item to switch to the other list.

Entering a valid bull (one you have already recorded in your system) will show his name under his code.

You will notice a ‘?’ in a small box on the right of the bull code line.

Click this box to show more details about him. If he’s an AI sire this will show semen stock details as well as which list he appears in. These details are optional and consist of Stock Doses held, On Order quantity, Straw Price and Tank Location details. You can enter details here just as you would as if you had entered the View/Semen Stock option in the Main Menu and selected a bull.

Also on the bull code line, for an AI sire, there is a box with a ‘1’ in it. Clicking this will assume the straw is a split straw and the number will change to a ‘2’. Clicking again will go to 3 and again will clear back to a normal single dose. The words “Split Straw x 2” or as appropriate will appear in the remarks area. This has to be handled in the host system if correct stock assignment is to be achieved. There is no easy way to tie up the host and handheld systems, so depending on how you handle semen stock you may want to place reliance on one system or the other and not blindly assume the two are in step.

You would not normally need to enter any remarks in the area provided.

If you have chosen an embryo mating, or have elected to use technicians for your AI work, you will see a button marked “**Tech**” appear and a text entry line. Clicking the button should show a list of your technicians. If you only ever use one or do it all yourself there is no need to record the technician.

If an embryo mating has been chosen, an extra button appears for Donors. These donor ID’s will normally have been supplied from your host system, otherwise you can simply enter text for it.

Again, remember to click the Save button.

Enter a Calving

Follow the steps above to enter the ID, date and Code and choose what kind of calving it is, Hard Pull, Easy pull etc.

This screen shows a Normal Calving.

The screenshot shows the 'FARMHAND Data Entry' interface. At the top, there is a menu icon and the text 'FARMHAND Data Entry | i'. Below this, the 'ID' field contains '1007' and the 'All Codes' button is visible. The name 'LIBERTY FLEUR' is displayed. The 'Code' field is set to 'CN' and the 'Date' field is '06/09/2002'. The 'Sire' field contains 'ELLAY' with a '?' button to its right. The 'Sex' field is 'Female' with an unchecked 'Twin' checkbox. The 'Size' field is 'Normal' and the 'Fate' field is 'Live'. The 'Calf ID' field contains '4366 MARY ROSE'. At the bottom, there are buttons for 'Pedig', 'Health', 'Prod', and 'Add?', along with left and right arrow icons.

Bull code

The bull code that was used at a previously recorded mating will be shown in the bull code area. If there is none recorded, you will need to enter the correct code. If you leave it blank, when the record is saved it will go across to the host system as 0000. If there is more than one mating, the most recent 2 will be displayed in a special window together with an indication of the number of days from inferred mating date. You then have the choice of which one to select. If you suspect there are 3 or more possible matings you will need to investigate further and manually enter the code.

If you manually have to enter the bull code, click on the **Sire** button to show a list of Calving Sires. This list is generated by your host system. It is maintainable on the handheld. To do this, you need to click the [?] button at the end of the line to show more details about the bull and check the box marked "Calving Sire". If an AI bull, the same screen can be reached via the Main Menu option **View / Semen Stock**.

Sex, Size and Fate codes

To choose sex of the calf, click that button or the currently chosen one to switch. The same applies to the **Size** and **Fate** codes. The button will show all choices. However, clicking the current setting 'toggles' to the next one and may be quicker to use. Female calf's default to Live reared, Bull calf's default to Sold.

Entering Twins

To enter a Twin, check that box so marked. This will show an [A] in a box. This means that the current details are for the first twin. Click that A box to turn it to a B and the details for the second calf will be shown. Keep clicking the A/B button to switch between calves. Do not press the actual **Twin** button again before saving the data as this will assume it's *not* a twin and only data for the first one entered will be saved.

Calf ID's

These can be entered on the last line and you can optionally follow it by the calf name if required.

The ID would normally be your herd test ID. If you don't record the calf, you won't have a record of it and won't be able to link it back to its mother back on the host system. Even if you don't plan to record the Herd Test ID at this stage, it is important that some form of ID is entered instead – e.g. the Eartag number. This is in fact essential if you want to enter the calf name *without* a Herd Test ID. The ID must be the same number of digits used for all your other animals. Lead zeroes must be entered to make up to the right number of digits.

A future version of the program is planned to automatically record the calf's electronic tag ID at this point if you use a hand-scanner. This can be done at the moment in another area of the program and not at entry of calving details.

In the Main Menu under Help / Preferences there is a topic that allows you to automatically generate the next available calf ID. If you use this facility, the line for entering calf ID details will contain a button showing “**Auto**”. Click this to show the next available number. An eartag type number will also be incremented. e.g. W23 becomes W24.

Clicking the Save button will create a new animal record and place the animal ID in the List of Calves in the Main Menu under **View / Calfs**.

If the animal was in the dry list, it will be automatically moved to the Milkers List.

(In passing, if you dry a cow off it will be automatically moved to that list).

Changing an existing record

Enter the ID, date and code used. If the record is already on the system, any remarks and other details will show that were recorded at the time you last saved it. If not, it simply assumes you are going to add some and you can continue and click the Save button.

Alternatively, and the quickest, is to use the Health Window to show the item and click on that line you want to modify. The Save button will not show unless you have changed some details. Note that you can't change a record by changing any part of its 'key', i.e. if you change either the Date or the Code a **new** record will be created and you will have to then delete the other record.

Deleting an existing record

Enter the ID, date and code used. If the record is already on the system, any remarks and other details will show that were recorded at the time but the **Add** button will not immediately show. If not on the system, it simply looks like you are going to add some more details.

Alternatively, use the Health Window to show the item and click on that line you want to delete. Then use the Menu button and choose **File / Delete Data** to bring up a deletion confirmation button.

Other areas

There are a couple of graphical entry screens.

Entering an Udder problem that would normally require the entry of a quarter will show a schematic diagram of a cow's udder and entering Feet and Leg data will show the outline of a cow from which to choose the actual problem area. Simply click the appropriate point to show the affected quarter or leg. Reclicking will clear it. You don't then *have* to record the quarter(s) or leg(s).

Possible data loss

If the screen doesn't power up when you start the program it is likely that by inserting batteries or recharging the unit will resurrect the data straight away. If the unit has been out of charge for too long however, it will reset itself on availability of power but all your herd data and external programs will have been cleared. Simply perform a hotsync to attempt to bring it all back. The **Farmhand** program should also reappear. If not, refer to your host documentation to resurrect it. You will have to extract a full download in this case as well. *If data has been lost because you haven't hotsynced for a long time, you will have lost all that data and will have to manually enter it again.*

General notes about a handheld

If your screen is hard to read, especially outdoors, remember that most units have a brightness control. Check your handheld manual on how to change this. The program is also designed to work in colour but this has been used sparingly. If you happen to have a colour unit and the colours wash out too much outdoors, you can turn the program into black and white operation under **Help / Preferences** in the Main Menu. Colour units drain more power. To counter this you might try lowering the auto-off period under the handheld preferences.

Most units have backlighting so they can be used in the dark. This drains power much more than ordinary usage.

Because you will enter most data by 'pointing and pecking' this will be of assistance if entering data in the rain. It is recommended for instance that in adverse conditions you place the complete unit inside a sealable plastic pocket, which can be obtained cheaply at any supermarket. By moving the unit around inside the bag you should always be able to find a clear spot – even assuming the bag gets damaged by repeated pecking.

If you use Graffiti a lot, especially in the early days while getting used to it, you can change handheld preferences to display a complete character set of how it expects to see entered letters. This is achieved by swiping from the graffiti area up to the top of the screen (not just the Graffiti area) in one single fairly quick movement. This can also be made to bring up the keyboard, turn the unit on and off and so on if required.

Do not place the unit on the dashboard of a vehicle. It may refuse to operate at very high (or low) temperatures. However, reverting the unit back to normal temperatures should revive operation.

A useful idea is to place a strip of clear Scotchtape across the surface of the Graffiti area to protect the underlying screen surface. This will not detract from full operation. It lasts for months and is easily replaced. Beware of ripping off old tape as it may damage the underlying electronics. Also, without cleaning fluid it may be hard to clear any remaining adhesive. Nail varnish might be good for this.