COWCULATOR SOFTWARE: INSTALL & OPERATE

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INSTALLATION: Computers running Windows 98 and above.

Insert the CD into your CD ROM Drive, the installer should start automatically; if it does not:

1. Left click on the 'Start' button: Bottom left on the Task Bar.
2. On the pop-up Start Menu, left click 'Run'. The Run Windows appears.
3. Type 'D:\install' in the text entry window, where 'D' is the letter of your CD-ROM drive.
4. Click 'OK'.

The Cowculator installation screen appears with the message that the program files will be installed.

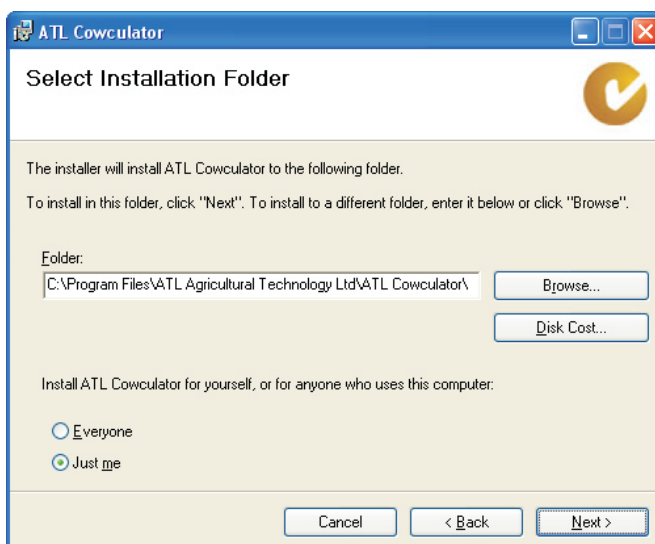*Please Note: The currently supported operating systems are:*

- *Windows 98*
- *Windows ME*
- *Windows 2000*
- *Windows XP*
- *Windows VISTA*
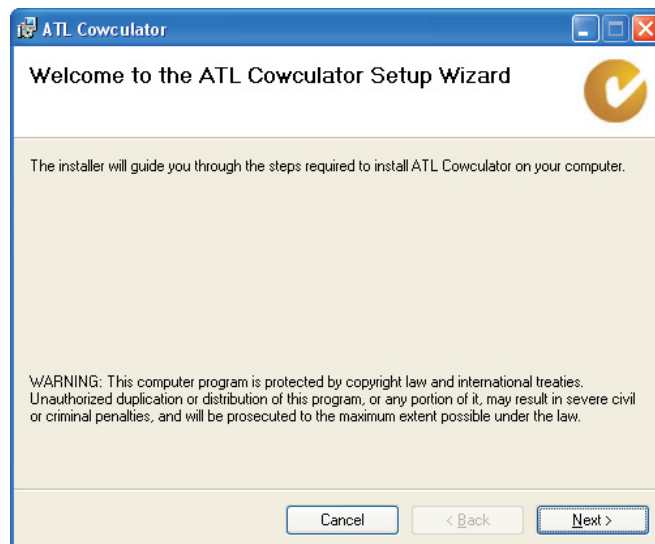
Step 1: Click Next
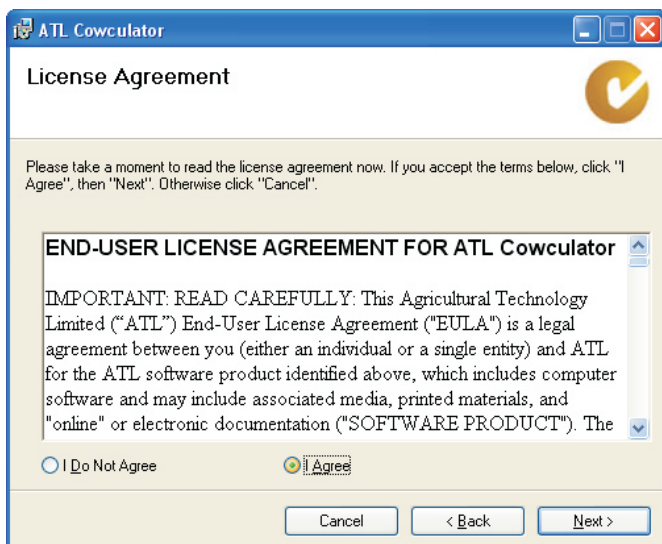
Step 2: Please read and agree to the license agreement. Then click next.

Step 3: Please select the installation folder and the users allowed to use the program. Then click next.

The Cowculator files will be copied from the CD-ROM onto your computer's hard drive into the folder specified.

After the program files have been Installed you can run ATL Cowculator.

REGISTRATION.

Before the Cowculator program can run using your herd data, it has to be registered. After successful installation the first time it is run the Registration screen will appear. Three items are required for registration:

The Registration Name, Organisation and Activation code

The Activation code MUST BE TYPED EXACTLY AS IT APPEARS inside your CD case.

If the information has been entered correctly it will be acknowledged and the full program will be registered and ready for use with your herd data.

To run the program using the Demonstration Data only, do not type either Registration name or key, simply click the demo button. The program will then run in demonstration mode only, and no data will be saved.

RUNNING COWCULATOR:

Double left click on the desktop Cowculator icon or use the program icon in the start menu.

The Registration Screen

The Successful registration message

CONFIGURE

The settings made during configuration, will determine how the program calculates animal rations and the data displayed on the Edit Screens. The set up screen is accessible from the configure menu by selecting the ATL Cowculator menu item.

Percentage Value

The percentage value is used when showing cows with yields up or down on the main screen.

Apply Maximum Feed Adjust.

Functions only as part of a feed to yield regime. The checkbox enables the maximum feed adjust controls in the edit groups screen.

The ATL setup screen

Feed Per Unit.
This figure represents a single portion of feed- the smallest amount that the feeders have been calibrated to dispense as a single ration- and is used in the 'feed-to-yield' calculations. It is also used in the display of the in parlour feed and total in parlour feed values.

Feed For Dry Cows.
Represents the standard ration that a dry cow will receive in the parlour. It must be a multiple of the Feed Per Unit value and divisible by the Number of Milkings per Day.

Milkings Per Day.
Set the number of milkings per day- either 2 or 3

Milk Yield Source.
Use the drop down arrow to select either 'current' or 'Average' yield source. This specifies the source of yields for use in feed-to-yield calculations.

Communication Ports.
The lower part of the Configuration Screen is concerned with the computer inputs from the In-Parlour feeding and Out Of Parlour feeding systems.

Additionally the in-parlour system has the use '4 digit cow numbers' This is to stop Cowculator from uploading 4 digit cow numbers to a 3 digit control version. Also the 'delete cows on send' option is available to delete cows from the micro control when uploading the cow data.

Please note that version 4.12, or above of the Micro Marque 3s is required for the 'Delete cows on send' function.
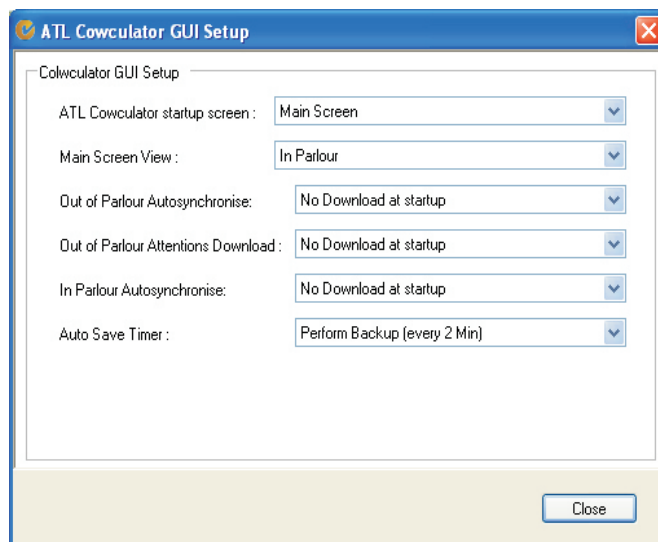
Configuring The User Interface:
ATL cowculator can be configured to show different screens at startup and to automatically download data at startup of the program.
To access the GUI setup screen select ATL cowculator GUI from the 'Configure' menu.

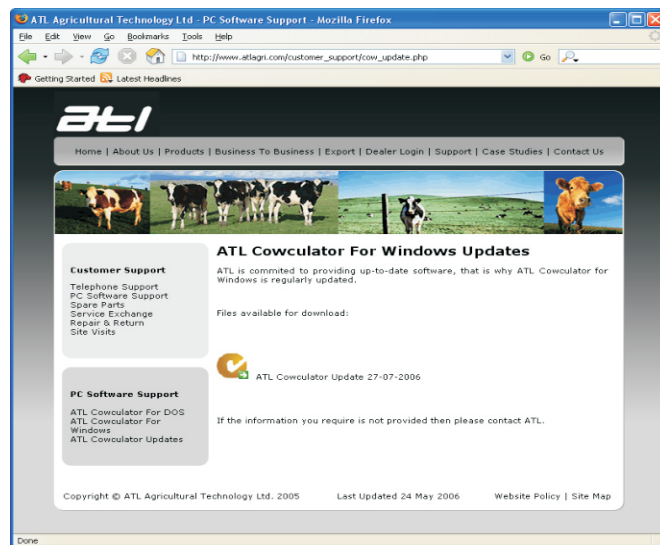*Please note: GUI stands for Graphical User Interface.*
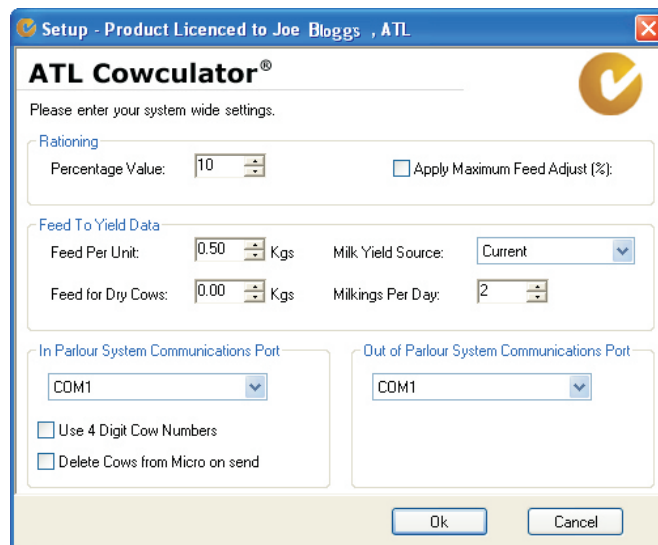
The Setup Screen

*The ATL Cowculator GUI Setup Screen*

Online Updates

ATL Cowculator is regularly being updated with new features and improvements. To make sure you have the latest version visit the ATL website and download the latest update.

The ATL Website Updates Page

Installing An Update

To install an update firstly download it onto a PC, if the PC is the one running ATL cowculator then simply run the update on the machine, if it is not then copy the update onto a floppy disk and take it to the correct PC.
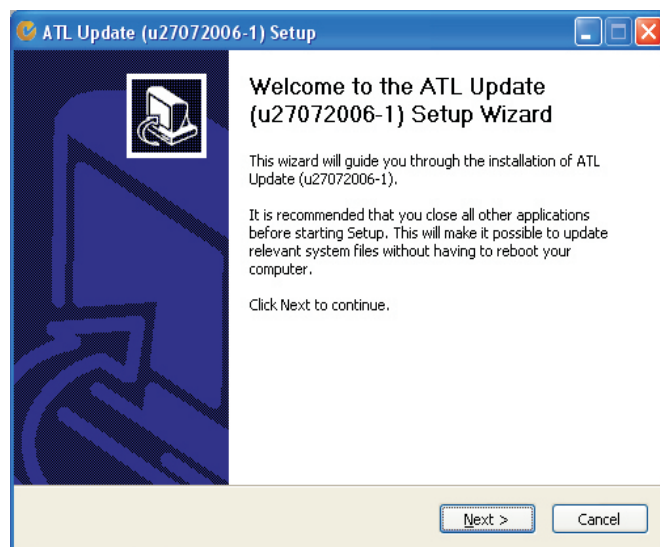
The ATL Cowculator Updates Installer

The Edit Records Screens.

There are 4 pre-fixed screens available and one custom screen:

> *In-Parlour: Details of total feed, days before A.I. and warnings.*
> *Milk Recordings: Up to three yields and differences where applicable.*
> *Out Of Parlour Feed: Rations for both A and B out of parlour feeders together with feed remaining.*
>
> *Auto-ID Tag Number: Full 16-digit electronic tag numbers.*
> *Custom : A custom view*

Each of the 4 pre-fixed Edit Screens displays the same herd and cow data in the left hand columns:

Cow Number:	*In the range 1 through 9999. This is the freeze brand or primary ear tag number not the electronic ear tag number if fitted.*
Group:	*The Management Group (0 through 15) to which the cow has been allocated.*
In Parlour Feed:	*Daily In-Parlour Ration as multiples of the Feed Per Unit value on the Configuration Menu (kgs).*
OOP Feed A: applicable	*Out Of Parlour Feed 'a' ration if (kgs).*
OOP Feed B: applicable	*Out Of Parlour Feed 'b' ration if (kgs).*
Milk Yield:	*Total yield in litres from all milkings- either 2 or 3. The 24 hour period starts with the first milking after 12noon on the first day.*
Tot. Milk Yield:	*For this lactation (litres)..*
Total Feed:	*This is the cows colmatative total in parlour feed for this lactation*

The In-Parlour Edit Screen.

The right hand panel of this screen shows:

WARNINGS:		*Warning flags set, if any. These are represented by a tic shown in the column.*
	AI :	*Artificial Insemination.*
	VET :	*Veterinary attention*
	MAS :	*Mastitis*
	DRY :	*Dry*
	TST :	*Test*
	BULL :	*Bulling*
	SLOW :	*Slow milker*
Mastitis Days :		*The number of days to keep the mastitis flag on for*
Due AI:		*The number of days due before A.I.*
Calving Date:		*The cows calving date.*
Lactation:		*The lactation number*
Lactation Days :		*The number of days in lactation*

Mastitis Days

If the mastitis flag is set, the Mastitis days figure represents the days remaining before the milk may be used, assuming the proper tests have been carried out. The value is decremented by the system clock.

The Milk Recording Edit Screen.

The four data columns associated with *automatic* milk recordings are:

> *Rec1: The last but two milk yields.*
> *Rec2: The last but one milk yields.*
> *Rec3: Represents the latest milk yield values.*
> *Diff: This shows the difference in litres between the previous two milkings of the same time.*

The Milk Recording Edit Screen

The Out Of Parlour (OOP) Feed Edit Screen.

If an Out Of Parlour Feeding system is not present, these figures will be set to zero.

Uneaten Feed A:	*Weight (kgs) remaining of feedstuff in this 24 hour period.*
Tot Feed A:	*Cumulative total for feedstuff 'A' ration (kgs) for this cow.*
Uneaten Feed B:	*Weight (kgs) remaining of feedstuff 'B' in this 24 hour period.*
Tot Feed B:	*Cumulative total for feedstuff 'B' ration (kgs) for this cow.*

The OOP Edit Screen

A powerful feature of the ATL Meridian Out Of Parlour Feeding System, is the ration boost facility for effective 'steaming up'.

The value in the 'Adjust' column represents an increase in ration to be added to the existing ration over the number of days in the 'Days' column. The values set here will be transfered to the out of parlour system when cow data is sent back to the out of parlour control. The out of parlour control will then recalculate the ration at the start of each cycle.

Visits: The number of visits a cow has made to the system.

Time: The length of time spent at the units

Average: The average time spent in a stall

Please Note: That the visits, time and average columns are only available on version 1 of the out of parlour control.

The Auto ID Screen.
TIRIS electronic ear tag numbers are displayed on this screen. The tag numbers may be manually altered.

Cow name: A name allocated to the cow.
Nationally Identity Number: This column can used as a identifier for the cow, for example a passport number.
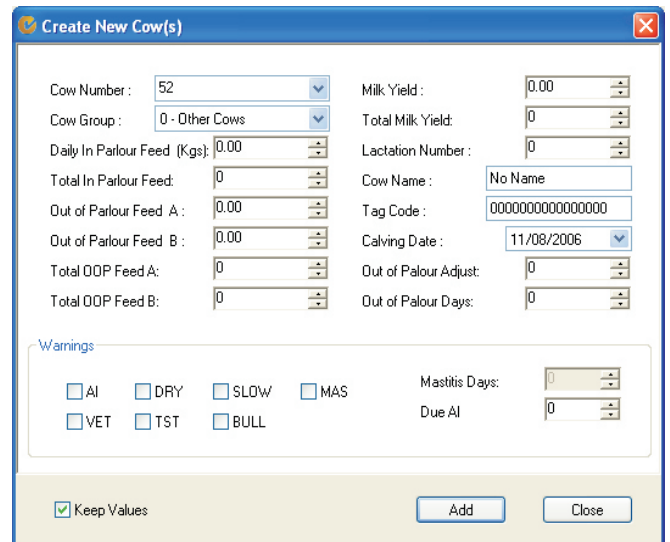

The Auto ID Edit Screen

Creating a New Cow Record:
Proceed as follows: (Click the 📄 icon)

Type the new cow number. No need to enter leading zeros and click ADD. If the cow already exists the dialogue will display a message saying that the cows already exists.

If the entry is valid the new cow record is created and placed in numerical sequence on the display. (Once the 'create cow' window is closed)

The New Cow Screen

Statistics Display.
Data includes the total number of cows in memory, a breakdown of the ration values and milk yields together with a listing of the Warning Flags that are set and the number of cows against each.

Averages are provided for ration and milk yield and totals displayed for both feed and yield.

This screen is accessible from the edit menu under statistics.

The statistics screen

Deleting a Cow: ✕
Deletion removes all data relating to a cow and cannot be restored. Use with care. Highlight the row containing the cow:

Click the Delete icon. Warning . This cow will be DELETED
Click 'Yes' to delete the cow record- the cow data is also removed from the display- or 'No' to abandon the deletion.

Displaying Cow Information.
A comprehensive list of data relating to the selected cow is available. From any Edit or Group screen:

Right click on a cow number, select the edit cow information.
Click the cross to close the screen.

Finding a Cow Record:
To locate a cow record from any of the Edit screens: 🔍

Press the 🔍 icon and the find cows sidebar will be shown.

The find cows sidebar allows you to search for and display cows using the following parameters:

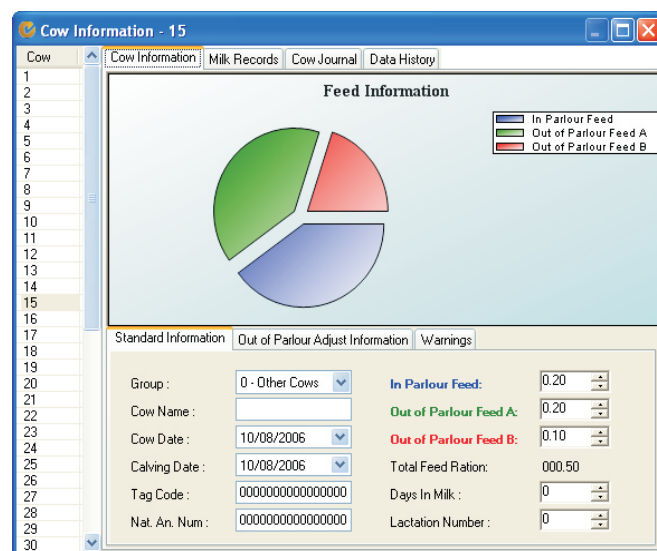|	
Cow Number:	*Find a specific cow.*
Group:	*Show all cows in a specified group.*
Tag Code:	*Find a specific cow from the tag code.*
Above X.XX Milk Yield:	*Show all cows with a daily milk yield above X.XX*
Below X.XX Milk Yield:	*Show all cows with a daily milk yield below X.XX*
Warnings:	*Show all cows with the specified warnings.*

Changing Values on the Edit Screens.
Many of the values stored in cow records may be changed. The procedure is:

1.Select the item
2.Double click the item
3.Enter the new value
4.Press enter to save the value

Changing Values by Column.
There are two ways to change an entire column:

1. Using the set column zero function in edit - set column zero. You can zero an entire column.

2. Using the group operations you can edit an entire column for a selection of groups.
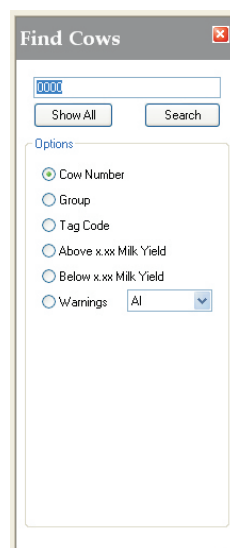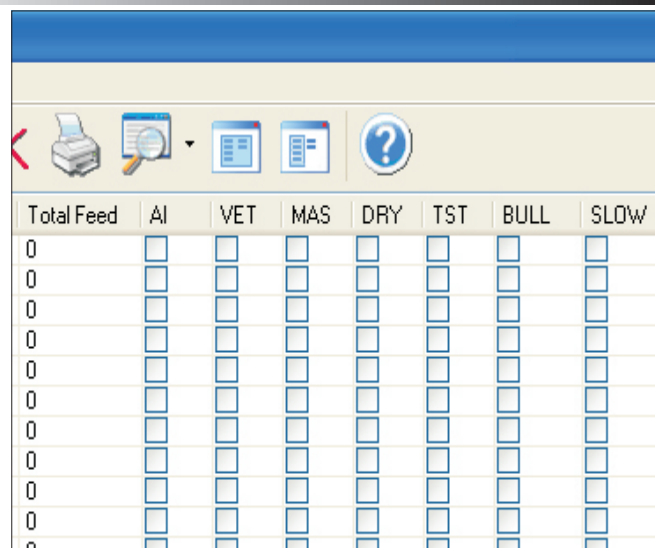

The Cow Infomation Screen

The Find Cows Sidebar

Setting or Clearing Warning Flags.
Simply click the column and row you wish to set

Warning Check Boxes

Working with Groups:
Each cow in the herd may be allocated to a Management Group. This facility allows cows that share similar characteristics- same calving month, for example- to be grouped together, simplifying the displays and data entry. Sixteen groups are available:

   Group 0: Generally for dry cows.
   Groups 1..12: Calving months where
   Group 1=January, Group
2=February... etc.
   Groups 13..15: User groups defined by   the farmer. Used for 3-stage steaming   up, for example.

The Edit Groups Screen: Please see section 12 for more information on the M+ ratio calculations.

Display the Group Arrangements and Totals
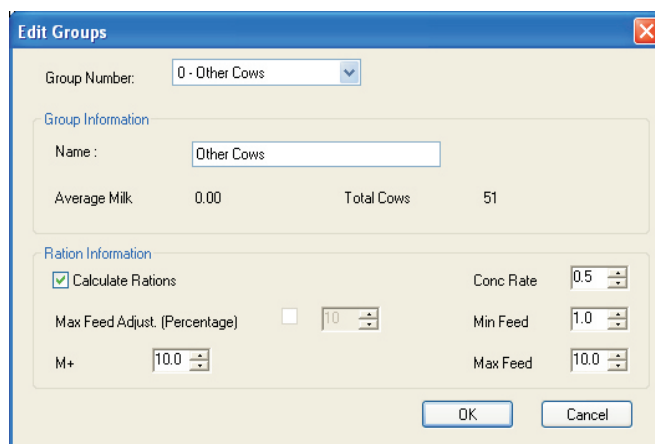From the Configure menu select the edit groups

To display the Cows Assigned to a Group Click edit groups:
For a complete listing of all the cows in a group together with their essential details:

   Simply use the find side bar.

To use the find side bar select the   icon select the group option and type in the group number and click search.

The Find Cows Sidebar
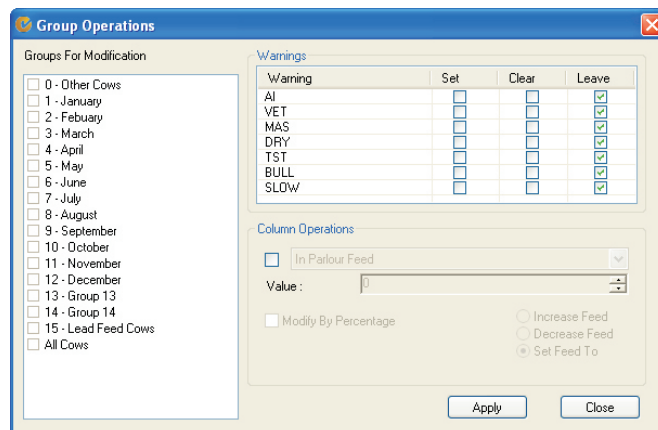
Group Operations

The group operations screen allows the user to change values for an entire group. The values that can be changed are:

- Warning flags
- In parlour feed
- Out of parlour feed A & B
- Total out of parlour feed A & B
- Total feed
- Total milk yield
- Out of parlour days
- Out of parlour adjust

To access the group operations screen click the icon.

The Group Operations Screen
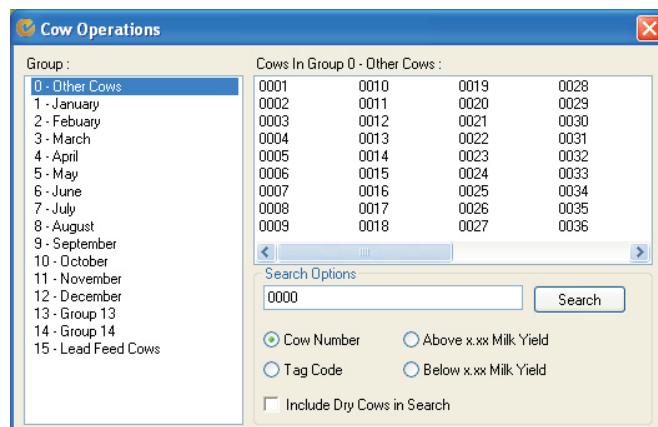
Cow Operations

The cow operations screen allows the user to move multiple cows from one group to another.

To access the cow operations screen click the icon on the toolbar.

To move a single cow simply right click on the cows number and select the group from the menu. To select multiple cows, the shift key will allow the selection of an entire block, to do this hold down the shift key, click the first cow in the block then click the last cow and let go of the shift key, then right click the block to open the groups menu.

To select multiple cows in a non-block method hold down the control key and select all the cows then release the control key and right click on any selected cow to show the groups menu.

The Cow Operations Screen

Deleting a Group or the Herd

Deleting a whole group of cows or the entire herd can be performed with the delete cows option.

Selecting delete cows from the edit menu.

The Delete Cows Screen

Ration Calculation Using the M+ Method

The parameters for using automatic ration calculation are entered in the Edit Groups Information screen. Four pieces of data are required and they may be different for each group.

M+: This is the Maintenance value which represents the amount of milk (in litres) that the cow would produce naturally without any additional protein, her nutrients supplied purely from grass, hay or silage. The actual value will vary depending upon calving date and position in the lactation cycle.

Min Feed: Is the *minimum* amount of cake that will be provided as a ration.

Max Feed: Represents the maximum ration that the calculation will be allowed to set against any cow in that group. Min and Max Feed together are **the span of allowable rations.**

Conc Rate: Concentrate Rate is the amount of cake (in kilos) that is required to result in a milk yield increase of 1 litre. For 'bought in' feedstuff the value will be available from your supplier; 'homemix' requires a special analysis or an educated intuitive 'guess'!

The Edit Groups Screen

Max Feed Adjust (percentage): The max feed adjust is a safety lock to stop a cows ration from being modified to much. The method employs a maximum percentage whereby if a cows ration is modified by a value during ration calculations. And if that new value is different by greater than the maximum percentage the value will be set to the maximum percentage.

Performing Ration Calculations

The M+ facility operates on either In-Parlour or Out of Parlour rations *but not both at the same time.* However, rations already set for In- or Out of Parlour feeding are taken into account when the calculations are made. So, if In Parlour rations are being calculated using M+, any pre-set rations for Out of Parlour will be subtracted from the In Parlour result.

Given that the four parameters and a current daily milk yield have been entered, the program can calculate the *minimum* rations required to sustain that yield. Proceed as follows:

> *Click the edit groups menu item and the information screen will appear.*
> *Make the changes in M+, Min Feed, Max Feed and Conc Rate as required using the standard editing procedure (see previous page).*
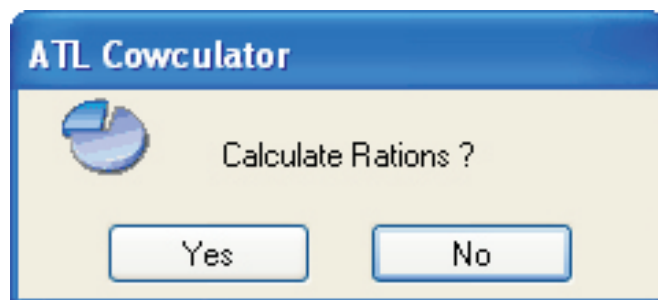> *Click OK*
> *Click the* [IP] *for the In Parlour (IP) or* [OOP] *for the Out Of Parlour (OOP).*
> *On the main screen,*
> *The message 'Calculate rations appears bottom left. Left click 'YES' to continue. The feed calculations are performed and the screen refreshed to show the new values.*
> *Or left click 'No' to cancel the operation.*

Calculate Rations Message Box

Lead Feed Functions

From version 4.13 the MicroMarque 3S can perform a lead feed function. There are 6 settings for the function:

- Enable: Global enable the default is disabled.
- Group: The lead feed group
- Daily Increment: The number of kilos to add per day.
- Maximum: The maximum value
- Enable Group Migration: If enabled when a cow has reached the maximum she will be moved to the migratory group.
- Migratory Group: The group that the cows are moved to.
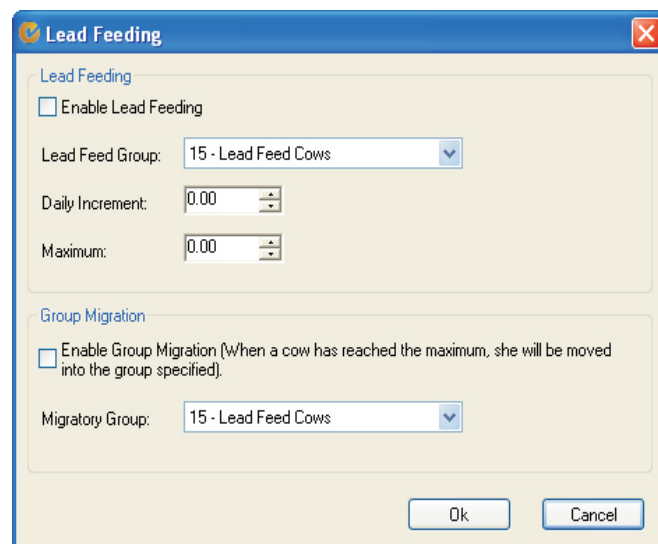
The Lead Feed Screen

THE FILES MENU:

Down-loading, getting data *from,* and Up-loading, sending data *to,* In-Parlour and Out Of Parlour installations is simply achieved from the files menu or from the icons on the toolbar ( ). Before data exchange can occur, the Micro Control and/or Meridian Out Of Parlour console must be connected to the correct serial port of the personal computer using the proper PC-Interface supplied by ATL. The Control or Console must be powered up.

It is important to use the correct sequence of events before moving data from one part of the system to another:

● *The Micro control is master. It is the front line data collection point so information stored in its memory should be the most recent and up to date.*

● *Before making any changes to the herd data, ALWAYS upload (from the Micro) to the PC first. In this way you will be sure the data is current.*

● *Make a Backup Disk (Floppy) of the data.*

● *Make your changes at the PC and immediately down load (to the Micro). This process overwrites the data that is stored on the Micro and it can only be restored from the Backup Disk.*

Cows deleted in Cowculator are not deleted in the Micro. The procedure must be carried out at the Micro as well. This arrangement protects against accidental deletion at the PC. To avoid having to repeat the operation, make any deletions at the Micro before uploading.

Communications

The upload time is important to maintain a current 'picture'. Daily milk yields are calculated by the parlour control at 11.00am and will generally include the morning milking. This is added to the previous day's afternoon milking(s), so the daily total encompasses the 24 hours starting from 11.00am on the previous day. For the information shown in Cowculator to be meaningful the upload (from parlour to PC) must occur *after 11.00am but before the afternoon milking.* If this is the case, the figure in the Daily Total column will equate to the sum of Rec2 plus

Rec3 for two milkings each day, or Rec1 plus Rec2 plus Rec3 for three milkings per day. If the columns do not add up then either the system clock is wrong or the upload has occurred at a different time. The upload can be performed at any time but the 'Rec' columns may not always add up although the data is still valid and correct.

The Download from In Parlour Control Screen

Getting In-Parlour Data from the Micro:

The screen display (above) will appear and Cowculator will try to establish a data connection with the Micro. If the connection is successful, each cow record will be accessed, the data extracted and the cow number displayed on the screen.

When all data has been sent, the connection is cleared and the information is available to Cowculator.

To access this screen use the icon.

Sending In-Parlour Data to the Micro:

Data modified in the Cowculator program can be sent back to the Micro to *overwrite the data already held there*.

The uploading process is fully automatic with Cowculator establishing a connection, sending the records- the cow record currently being sent is displayed on screen- and terminating the session when it is complete.

Click the icon to upload.

Getting and Sending Out Of Parlour Data to and from the Meridian Console:

The process of data exchange with Meridian Out Of Parlour system is almost identical to that for In-Parlour- only the screen headers change to show that this is an Out Of Parlour exchange. The connection, data transfer and termination are completely automatic.
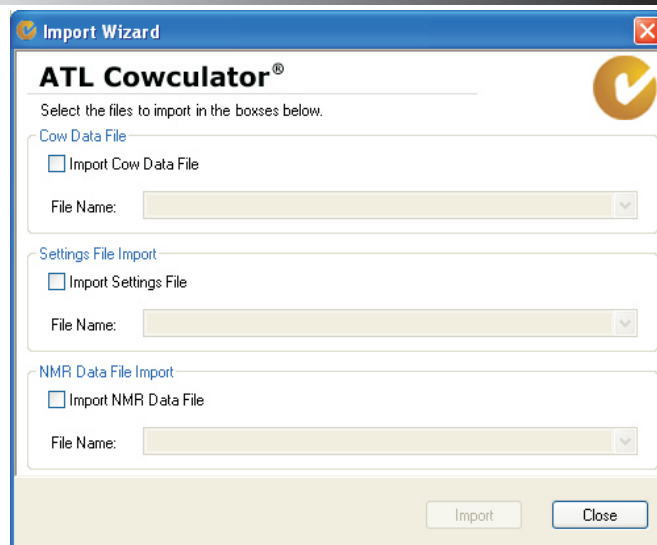
Importing NMR data

NMR disks contain important information concerning milk yields which can be extracted by Cowculator and written to cow records. The yield data can then be used to calculate new rations. ATL Cowculator, supports the NMR datastream disk format.

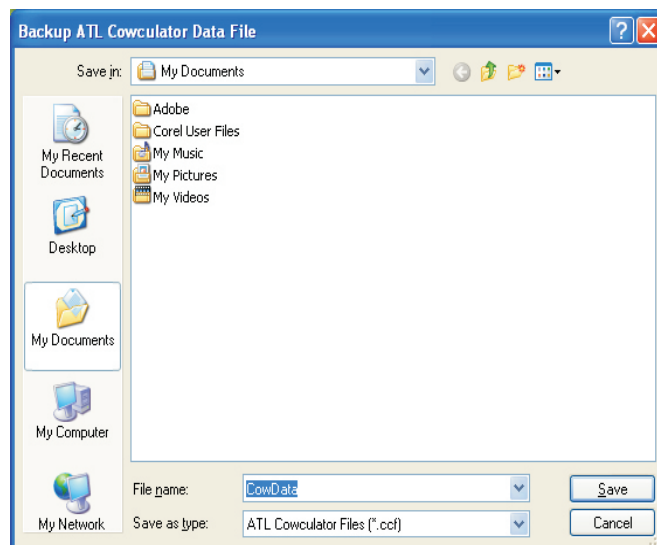Select NMR import from the import data screen to import the data.

The Import Wizard Screen

Backup Cow Data:

This function copies the current cow records stored on the hard disk onto a 3.5" floppy disk. You will be asked to insert a blank disk in drive 'A' and then press any key. If the Cowdata file already exists on the disk it will be overwritten with the current data. Floppy disks are very inexpensive so a good idea is to have a separate disk for each day of the week labeled Sunday through Saturday and use it exclusively for backups on that day.

Restore Cow Data:

A 3.5" floppy disk holding cow data must be present in Drive A. The data is copied from the disk onto the hard drive and **overwrites any Cowdata which may be located there.**

The Backup Cow Data Screen