afifarm
Basic User Manual

afisort
afiweigh
afiact
afifeed

afifarm®

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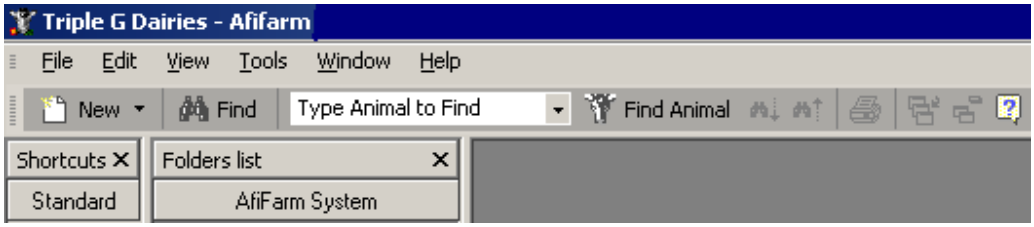
AfiFarm Basic User Manual

AfiFarm is a system that combines **Herd Management** tools and **Real Time data** to analyze the performance of your herd. This manual describes the main features of software version 3.04

What is AfiFarm?

AfiFarm is a Windows based program that combines a powerful database with information from real time modules to enable management of dairy herds.

Basic Package: AfiFarm



The basic module is a comprehensive database and interface that form the core of the **AfiFarm** program. The **AfiFarm** database includes not only daily cow data but also general herd information and genetic data, and functions as a herd management program.

Real time modules can be added to this basic package; these modules collect data automatically, and supplement what is already in the database. The combination of real time information and the **AfiFarm** database make possible the presentation of an overview of the herd (or parts of it) in terms of both performance and treatment. This cross-referencing of the data also improves the decision making process of the dairy farmer.

Real Time Modules

AfiMILK

On-line flow of data from the milking parlor: milk production, heat detection, conductivity, milking time and parlor alerts. Allows dialog between the parlor and the database as well as with the sorting stations. The data is immediately available in reports and graphs for daily and lactation information. In addition, the standard AfiMILK data integrates with data from other modules and herd management data.

AfiSORT

An automatic sorting system that separates cows from the herd and directs them into the treatment yard for veterinary examinations, insemination and so on.

AfiACT

A basic heat detection system for milking cows that can be installed either alone if the dairy has not purchased AfiMilk or as a supplementary system to AfiMilk to detect heat in virgin heifers.

AfiWEIGH

An automatic weighing system that collects body weight data in order to support decision-making and Herd strategy.

AfiFEED

An automatic individualized feeding system that controls most types of feeders. It calculates and dispenses a calculated volume of feed based on performance for each cow.

AfiPAINT

An efficient animal identification system that uses color to mark animals and make them easily identifiable even from afar.

Afi LDM

Large Display Module – displays up to 6 rows of 20 characters each for easy view of cow information in Milking parlor.

AfiClimate

The AfiClimate system monitors weather conditions (input) and, when needed, activates a cow cooling system (output), consisting of sprinklers and fans. The system is efficient and cooling is activated only when needed.

A Closer Look At AfiFarm

AfiFarm is a system that analyzes the quantity and quality of milk that the cows in your herd produce. Milk meters are connected to milking stalls in your parlor according to the parlor arrangement specific to your dairy. The milk meters send milk and activity data to the computer, monitor cow data in the milking stall and allow database interface to the milker.

Herd management data from the history of the herd, and new data which is entered on a daily basis, are integrated with the on line data. This data includes: Vet Visits and drugs, animal characteristics such as BCS and milk components, fertility and inseminations, cow events and genetic data.

A database is formed from this information to assist in the management of the herd. This data is accessible in the form of tables, lists and graphs that can be viewed on the computer and/or printed out.

Milk Production	**Health**	**Fertility**
Milk Test	Mastitis Detection	Heat Detection
Milk Shipments	Health Reports/Graphs	Breeding Reports/Graphs
Milking Efficiency	Vet Visit	Fertility Reports
	Drug Inventory	
Animals	**Stations**	**Maintenance**
Animal Reports	Milking Parlor	Database
Herd Reports	Sort/Weigh	Backup/Restore
User	**Individual Feeding**	**Management Tools**
Reports & Graphs	Feed Menus	Summary Reports
		Herd & Yield Planning
		Cull Planning

Basic Concepts

Management by exception

The system enables on-line, accurate monitoring of each individual cow in the herd. Utilizing system parameters such as milk production, conductivity, activity and other properties, allows the farmer to focus on cows that require special treatment.

Routinely, in any herd all the cows are milked and fed on a daily basis, whether the herd has 4500 cows or 100 cows.

Every day, on an individual basis you are paying special attention to between 2% and 5% of your cows. You deal with calving, breeding, mastitis, feet problems and drying. Periodically, on Vet Visit days you handle a slightly larger number of animals.

Understanding deviation

AfiFarm recognizes acceptable rates of performance, and generates reports (attention lists) for cows whose performances deviate from the norm. In the AfiFarm system, the concept of deviation is central to the working of the program.
With AfiFarm, you no longer have to search through the entire database for significant changes. AfiFarm indicates automatically which cows need extra attention and alerts you to potentially dangerous or significant changes in cow health and milk production as well as cows that need to be bred, dried or are close to calving.

These changes can then be further evaluated in the context of factors such as the conditions on the farm, the nature of the work routine, and the overall condition of the cows.

Health - Deviation Reports

These reports help identify cows with suspected health problems. AfiFarm uses production rate, conductivity and activity data, obtained during the most recent milking sessions, to identify potentially sick cows. If the data gathered deviates from the parameter thresholds defined in the **Health Parameters** window, the cow in question appears in the Health Report.

The data needed for building these reports is a combination of data collected from the sensors and from animal events data (DIM, days pregnant…).

Breeding - Deviation Reports

Estrus reports are daily worksheets for **Heat detection** and daily decisions on which animals to inseminate.

A cow automatically enters the **Estrus** report if it deviates from the parameters set for breeding, excessive activity, and/or insemination in the Estrus Parameters window. These deviations may indicate that a cow is in heat, is a candidate for insemination, or has irregular cycles.

The data needed for building these reports is a combination of data collected from the sensors and from animal events data (DIM, days since last heat or breeding…).

Whether you are looking at a **Health** or an **Estrus** Report, a herd or individual cow report, certain terms are central to the understanding of that report, and to an accurate analysis of herd performance. These concepts are the basis of how AfiFarm collects data and builds a database of information with which you manage the herd. AfiFarm registers each cow number, ID tag number, and breeding dates. Once the database "recognizes" a cow, it works with the data that is sent to it from tags and sensors within the system

The milk meters send milk and activity data to the computer, monitor cow data in the milking stall and allow database interface to the milker.
Herd management data from the history of the herd, and new data which is entered on a daily basis, are integrated with the on line data. This data includes: vet visits and drugs, animal characteristics such as BCS and milk components, fertility and inseminations, cow events and genetic data.

A database is formed from this information to assist in the management of the herd. This data is accessible in the form of tables, lists and graphs that can be viewed on the computer and/or printed out.

Milk Yield

In **AfiFarm**, the quantity of milk produced by individual cows and groups per day and per session is measured and recorded. This **milk yield** data is used to reach conclusions about the productivity and health of individual cows and the herd as a whole.

Milk Production Rate

Milk production rate is the amount of milk produced per hour, up to and including the last time the cow was milked. Changes in milk production rates can be attributed to factors such as feeding changes, water problems and health problems.

Conductivity

Conductivity refers to the conductivity of the cow's milk as measured by the milk meter. This measurement is critical as a rise in conductivity can indicate the presence of mastitis.

Activity

Activity is measured by the number of steps per hour recorded by the pedometer in the cow's leg tag. An increased step-count may indicate that a cow is heat; alternately, increased/decreased activity may indicate changes in the cow's health, or regular routine.

Milk Components

Milk components refers to the relative quantities of fat, protein, lactose, somatic cell count (SCC) and urea in the milk.

AMT

AMT = Actual Milking Time or as it is often called: Machine ON time.

Stations

Track - The route that a group of cows follows at specific times during the day from one station to another.
For example, milking cows leave their enclosure to be milked at the parlor. After milking, they are sorted into cows that need treatment and cows that return to their enclosure. This route is called a track.

Stations - A Station is place where an activity occurs that uses AfiFarm hardware. These are the modules you have purchased and which make up your working environment in AfiFarm.

Modules	
AfiMilk **AfiSort** **AfiWeigh** **AfiFeed** **AfiAct** **AfiPaint** **AfiClimate**	The various modules are explained in the Introduction section of this document.

Sessions

The hours of the day that a track is active.
Stations on a track are only activated during session times.

Milking Sessions per day = the number of milkings per day.
3 milkings per day = 3 Sessions.
Session 1 = morning
Session 2 = afternoon
Session 3 = night
In definitions and reports the **current Session** is referred to as **"0"**.
Example: From Session "0" to Session "5" = 6 Sessions including the current Session. The same is true for Day, **Day "0" = today**.

Basic Concepts - Parameters

When AfiFarm is installed, a default library of parameters is provided so you can start using the system immediately. However, as you learn more about the system and the behavior of your herd, an experienced farm manager can customize these parameters.

Deviation Parameters

The system deviation parameters suit most dairies. They can be fine tuned to reflect your individual farm setup. Setting correct and meaningful deviation parameters is of the utmost importance to the accurate working of the system.

These parameters affect at which levels of milk production, conductivity or activity cows will appear on Health or Breeding reports.

Data Entry Parameters

These parameters affect the levels of mandatory data to be entered for Events – *Example*: Bull ID (Yes/No) in Breeding Event.

Logic Controls

Logic Controls affect the limits of data entry – *Examples*: minimum age for breeding, minimum days after insemination for pregnancy confirmation.

NOTE: Any change in parameter settings affects the way data is processed and displayed by AfiFarm. Change parameter settings only if you are fully convinced that they are necessary. Do not make drastic changes.

In all parameter and data entry windows specific on line Help is available.

Reports

Types of Report

An AfiFarm report is a table designed of columns and rows consisting of calculated information. Each column of the report is designated with a title, defining the data that appears in the column below it.

The Type of report defines the data that appears in each row of the report.

Thus, by selecting **COW** you define that a single cow data is listed in each row of the report. As a result, when designing the columns of the report (titles), only titles suitable for single cows will be available for you to use.

The AfiFarm user report generator offers a few types of reports.

1. **Cow** –By selecting "Cow Type" of report, you create a cow list for selected cows. This list displays information as per your selection for each cow.
2. **Period** - this type of reports display multiple data gathered during a definable period of time. These reports are used mostly for events' follow-up, displaying information per date in each row. Thus, if a report listing insemination events during a certain month is built; two insemination dates (Two rows) will be displayed for a cow that was inseminated twice during that period.
3. **Stall** – a stall is a part of AfiFarm station (Parlors' milking points, Individual Feed stations, Sort gate…) from where data is collected. In this type of reports each row in the report displays information for a single stall.
4. **Bulls** - "Bull Type" creates a bull list. This list displays information as per your selection for each bull.
5. **Summary** – This type of report is generally used to summarize long period performance or events in the dairy. This option allows you to build reports that calculate a "total" for specific cows' specific events in any given period of time. The main difference between "Summary" and other type of reports is that all other reports lists cows, events, stalls (one line = one cow/event)… whereas here you get the total number of cows, events etc. . in each row.

AfiFarm Tools

Graphs

Last 10 Day Graph to monitor deviation & Lactation Graphs

Malfunction Reports

Reports to identify hardware problems (faulty milk meters…).

Database Tools

To Backup/ Restore Data.

Import/ Export

To import/ Export data from other Herd management program, to receive Milk Test data and to send data to Dairy associations.

Scheduler

To Print or activate reports automatically at preset times and frequencies. The scheduler can perform automatic updates of data from another Herd management program, Backup automatically to any destination drive or directory.

Wizards

Intuitive Wizards guide you through the steps of building User Reports, Graphs and Codes. Within the Wizards you also build Triggers for further defining the criteria of the content of the report (DIM, lactation, production levels ranges…).

Codes

Codes are a very powerful AfiFarm tool. Codes are one or two alphanumeric digits, assigned to cows that need special attention, thus pinpointing them among other cows in the herd.

Codes may be set to perform different operational tasks :

1. To alert for cows needing attention in the milking parlor. Please refer to your milk meter user manual for further instructions regarding parlor health codes
2. To sort cows for a veterinarian Visit.
3. To sort cows out for insemination.
4. To bring cows into attention lists or specific reports.
5. To bring cows up for periodic Visits or treatment.

And more.

Codes may be assigned to cows in three different ways.

- Manually – by selecting the cows from a list and assigning the code to them.
- Automatically – By setting conditions (Trigger) to the code. By activating an automatic code you assign the code to all the cows that comply with the conditions set in the trigger.
- From the milking parlor – By sending the appropriate message via the milk meter control unit.

Codes may also be set to be active at specific times and/or have a preset life span. Before assigning a code to cows, you should first set it in AfiFarm. The Codes wizard helps you to create such codes, step by step.

Start Up

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Basis for Building a Working Database

Creating Cow Database

AfiFarm is a system that combines **Herd Management** tools and **Real Time data** to analyze the performance of your herd and to optimize the management of your herd. For this analysis to take place, AfiFarm requires data.

Cow and farm information should be entered prior to system startup.

This procedure includes:

1. Attaching **ID Tags** to the cows and associating the Tag# to cow ID#.
2. **Entering cow data** in the system

   2a- Data collected from sensors (antennas, milk meters etc.) in the various modules (Milk, Afiact, Sort, Weigh, Afifeed) you may have set up in your dairy.

   2b- Basic & historic data – Number, name, and Events (breeding, treatments, calvings, diagnoses, drug applications…). This data may be entered manually via the data entry screens or **imported from another source (other Herd Management program**, local association and others sources).

   2c- Milk Test Data – May also be imported or manually entered into AfiFarm database.
3. **ID tag** data should be entered manually.
4. **Parameters** screens should be updated (reports, automatic procedures etc.) Some of those will be updated later when the dairyman learns about the system.

After the configuration is built, the milking sessions defined and the database is created, the system is ready to work.

NOTE	Obviously, in order to generate true analysis and to present true information, the data of your cows MUST be up to date and maintained regularly.

Data Entry

As mentioned above, cow information is the basis for the operation of AfiFarm. Therefore, cow data must be entered into the AfiFarm database prior to the operation of the system. This may be done in advance, before the entire system is operative.

Cow Data

Cow information includes many aspects of each cow's life and events. AfiFarm distinguishes between two types of data:

Mandatory Data

All the information that MUST be entered into the system if an animal is to be included in the database. Mandatory data

Mandatory data includes:

- Cow Number
- Birth Date
- Group Number

AfiFarm will remind you if you have left out any of this information, and **you will not be able to save information entered in the window unless the yellow boxes are completed**. Yellow boxes are a function of the level of settings you have chosen as Parameters.

Optional Data

Examples of Optional Data:

- Previous lactation events
- Bull ID in Insemination Event
- Exit reason, exit price in Exit Event

Entering Cow Data

Basic information about the cows may be entered in two ways.

1. **Import the data** from an existing database (Herd Management, Local association…) This method is an easier way and may be used if a proper data exchange protocol between the provider of the database (Herd Management, Local association…) exists. Ask your dealer about this option and ways to set it up. If this option is valid, Import the cows data into AfiFarm. Click here to see a detailed explanation of Importing Data.

2. **Manual entry of cow data** – Use the cow data entry windows to type in cows data into AfiFarm database. Click here to see a detailed explanation on Manual Data Entry.

Milking Parlor Operation

AfiMilk Components

1- **Milk Meters** measure milk, conductivity and AMT. The Meters activate milk stall devices: cluster removal pistons, vacuum shut off valves and pulsators. The **Milk Meter Control Panel** displays data and alarms in the parlor.



2- **ID Tags** (Pedometers) on the cows' legs – Tags store ID# associated with cows and measure cow activity.

3- **Antennas** transmit and receive info from Tags. Antennas are placed at each ID point or at parlor entrance connected directly to the **IDeal** or via a **Switch Box**.

4- **IDeal Controller** initiates Tag reading procedure and sends the ID to the PC. It communicates with the PC via an **Aficom** communication card.

5- **Real Time Software** installed on PC which controls the ID procedure.

Real Time Monitor

AfiFarm includes two main elements that are automatically loaded when the computer starts up.

The main element is the user interface, the AfiFarm program – Reports, database, etc…

The second is the **Afimen** "**Real Time**" module – communicating with the sensors.

Both are working in conjunction but can work independently as well.

The real time module is the program that interfaces with the AFIMILK components, collects the data and writes it into the database.

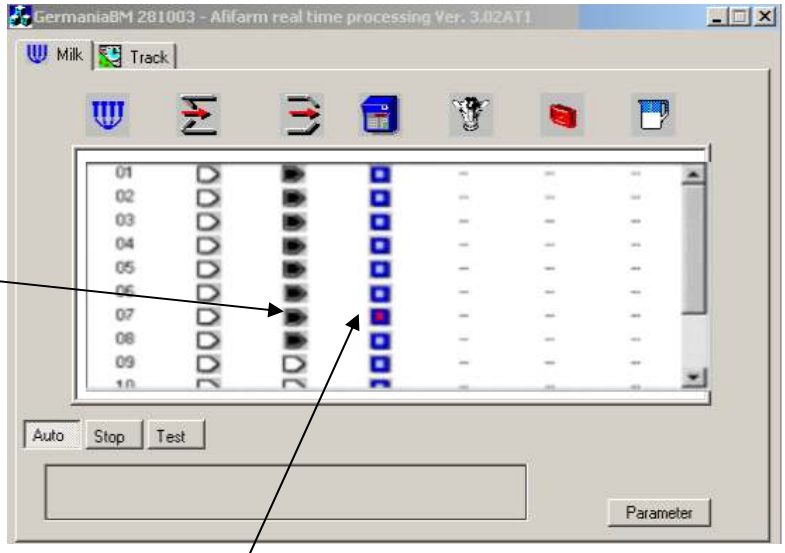
The **Real Time monitor** works in the background.

To open the main window of this program you click on the **Real Time Icon**, open it on the tasks bar only if it is **flashing red** = problem  .

Normal operation  = **blue** = OK

The main tab shows the **Milking Parlor**.

Columns
- **Stall** number
- **Entry Gate**
- **Exit Gate** (gate closed – black)
- **Milk Meters** (Stall number 7 not communicating)
- **Cow ID**
- **Tag number**
- **Milk Yield** – displayed when Exit Gate opens



Milk tab = **red** – communication problem

TO EXIT: MINIMIZE ONLY = _ --- DO NOT CLOSE = ×, as this will suspend Real Time Data Collection.

Milking Session

AfiFarm calculates the information collected about the cows according to milking sessions therefore milking session times should be defined. Please note that data is collected and stations (milk, sort, weigh…) are activated only during the period defined as a session

Session Start

Milking Sessions start automatically according to pre set times. Usually the times for beginning and end of a session are set to allow earlier start and later finish of the milking session, however in some situations you need to start the session earlier than its defined time or continue…

How to start milking

Power up the Parlor
Remove clusters from jetters
On the **Control Panels** of the Milk Meters **Transfer to Milking Mode**

Stalls display flashing zeros 
The parlor is ready for milking

ID (Identification) process in Milking Parlor

Exit gate closed

ID request begins at 1st antenna
The process advances as each animal is ID'ed

Entry gate closed

The process advances as each animal is ID'ed – ID, codes and Data are received from the PC
Skips non ID'ed stalls
ID request continues at non ID'ed stalls

Milk Meter Display and Operation

- The display enables milkers, in the parlor, to **monitor information** about the cows. Based upon up-to-date information, milkers and herd managers can make immediate decisions pertaining to milking and treatment of a cow.

  ID'ed stalls display cow# on control panel

  Non ID'ed stalls display flashing zeros  , identify non ID'ed cows manually by entering their ID# on the control panel

- **Alerts milkers** to irregularities in milking performance. Significant deviations in milking performance also help provide an early alert for mastitis.

- **Displays Codes**. Some codes alert milkers to divert milk from the main milk line. Other codes are reminders for cow treatments. Codes 5 & 8 are *system* codes assigned automatically to specific cows. Other codes may be used by the farm manager to alert for specific treatments the cow needs.

  System **Code "05"** will be displayed for a dry cow
  System **Code "08"** will be displayed for a colostrum cow
  Code "07" is recommended for antibiotic cows

  Codes 05, 07, and 08 also deactivate the **Start key**. This alerts the milker to cows requiring special action and prevents the milker from milking colostrum or antibiotics into the milk line or from attaching the cluster to a dry cow. To reactivate, press the Start key ***twice rapidly***. If an external start button is used, this button will be deactivated for cows assigned with codes 5-8. To start milking press the start button on the keyboard!

  Alarm Codes entered manually on the PC or in the parlor

  A Code is a very powerful AfiFarm tool. Codes are one or two alphanumeric digits, assigned manually or automatically to cows that need special attention, thus pinpointing them among other cows in the herd.

- Enables milkers to send **messages to the PC**. Messages can serve either as a personal reminder or as communication to the herd manager.

  Automatic Cluster Removal (**ACR**) detects low milk flow rate or no milk flow and removes cluster from cow's udder..

Basic Reports

AfiFarm offers a wide range of reports. For daily basic use you need to be familiar with a few of these reports:

Health reports

These reports help identify cows with suspected health problems. AfiFarm measures deviations in production rate, conductivity and activity, obtained during the most recent milking sessions (as compared to last 10 day performance), to identify potentially sick cows:

Early warning on Mastitis, before it is clinical
Drop in milk production
Drop in activity – potential leg problems

The data needed for building Health reports is a combination of data collected from the sensors and from animal events data (DIM, days pregnant…).

Breeding reports

Estrus reports are daily worksheets for **Heat detection** and daily decisions on which animals to inseminate.

A cow automatically enters an **Estrus** report if it deviates from the parameters set for breeding, excessive activity, and/or insemination in the Estrus Parameters window. These deviations may indicate:

A cow is in heat
or is a candidate for insemination
or has irregular cycles
or has possibly aborted

The data needed for building Fertility reports is a combination of data collected from the sensors and from animal events data (DIM, days since last heat or breeding…).

AfiFarm Today

AfiFarm Today is a day-to-day working environment. It contains a summary of all the daily tasks in the dairy, thus allowing quick and easy access to lists of cows needing attention, and summarizes herd production over the last 24 hours. **AfiFarm Today** allows you to customize the screen according to your specific needs in order to personalize your basic working platform in **AfiFarm**.
The default **AfiFarm Today** screen includes four groups of data.

- Summary of the herd production over the last 24 hours.
- General (number of events): in Daily Agenda, Vet Visit and Today's Tasks.
- System Animal Reports – Breeding, Health
- Animal Distribution

\+ Any Reports added by the user

In a quick glance you can see the Tasks you need to perform today and amounts of cows on attention lists.

Station reports

The **Station** reports supply daily and per session information for each station. Using the Station report, you can make comparative Visits of milk yields between days and sessions.

The **Milk** Station report gives information on total yields, milking times, unidentified cows, cows milked in the wrong group, a log of all information on all cows per session. A significant decline in milk may indicate a general health problem, a general feeding problem or a problem in workers' performance. .

The **Sort**, **Weight**, **Act**, and **Feed** station reports provide similarly significant information.

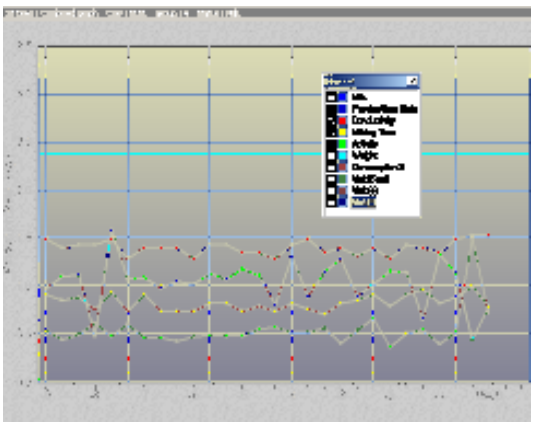
Animal reports

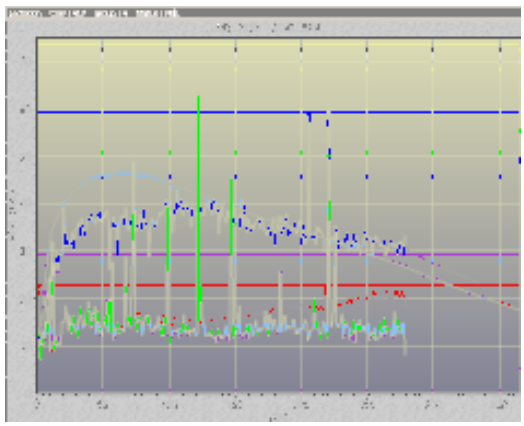
AfiFarm generates default reports for animals in different statuses and stages in lactation. Each report displays relevant data to the specific status.

Milk cows report – yield, DIM, lactation #, gynecological status
Dry cows report – dry days, days pregnant…
Heifers report – age, breeding info…

Graphs

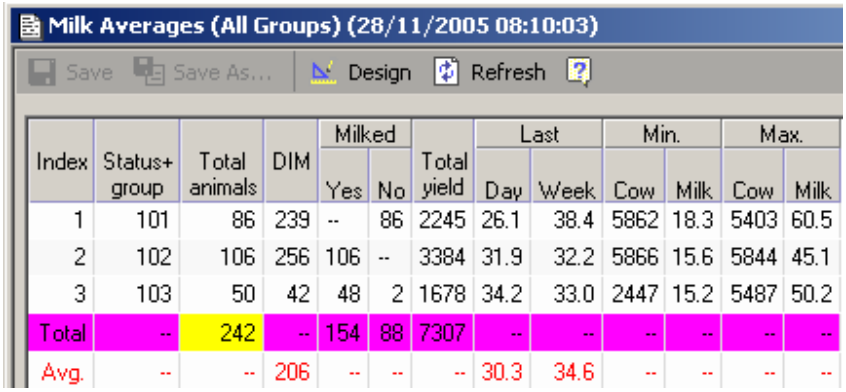
Lactation graphs and **Last 10 Days** graphs are automatically generated for each cow. These graphs can be accessed easily from icons on the Shortcut Bar, any animal report (double click on any highlighted row of cow data) or from a cow's data sheet.





NOTE **AfiFarm** also contains **Summary reports** for monitoring overall herd performance for **Milk Production**, **Fertility** and specific events. These reports can be generated within user defined periods.

The **Milk Averages (All Groups) report** reflects today's Milk Production.



Milk Averages (All Groups) (28/11/2005 08:10:03)

Save | Save As... | Design | Refresh

Index	Status+ group	Total animals	DIM	Milked		Total yield	Last		Min.		Max.	
				Yes	No		Day	Week	Cow	Milk	Cow	Milk
1	101	86	239	--	86	2245	26.1	38.4	5862	18.3	5403	60.5
2	102	106	256	106	--	3384	31.9	32.2	5866	15.6	5844	45.1
3	103	50	42	48	2	1678	34.2	33.0	2447	15.2	5487	50.2
Total	--	242	--	154	88	7307	--	--	--	--	--	--
Avg.	--	--	206	--	--	--	30.3	34.6	--	--	--	--

Sorting cows

Every day, on an individual basis you are paying special attention to between 2% and 5% of your cows. You deal with breeding, mastitis, feet problems and drying. Periodically, on Vet visit days you handle a slightly larger number of animals.

These animals need, first to be identified and then sorted from their groups in order to be tended to.

1- **Manual Sort** – Codes can be assigned to cows from the PC. The codes are displayed in the parlor and the milkers can separate the cows manually. For a large operation this process is not realistic.
2- **Automatic Sort** –
   - **a-** Using codes manually entered in the parlor and pre defined in the Sort Station.
   - **b-** Using the manual Send to Sort option from any animal list (report).
   - **c-** Sort animals by automatic codes:
     Examples:
     c1- all cows on the Cows for Insemination report receive an automatic code and are sorted in the morning.
     c2- cows with a drop in milk production > than 20% receive an automatic code and are sorted during all sessions.
     c3- cows on the Vet Visit list are sorted automatically on Vet day only.
3- **Define Sort Process** – sort processes for different sessions/ days are defined here, which codes sort when and in which sort direction.

Working with AfiFarm

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NOTE Most windows and functions in AfiFarm are supplemented with **Help windows**. More sophisticated procedures such as building new reports, Triggers, codes or user graphs can be performed with **Wizards** which lead you through the steps of the process.

Getting acquainted with the AfiFarm interface

Window Layout

AfiFarm's main window contains four main sections.

- A **Menu** and quick **Toolbar** at the upper section of the window.
- **Shortcut** column at the left side of the window. **Shortcuts** allows direct access to groups of reports/activities (Vet Visit Windows, Estrus Reports…) or single report/activity.
- **Folders List** are groups of activities gathered according to their characteristics. For example - HEALTH task is a folder containing all the health reports, and other activities such as Vet Visit tools and health parameters. **Tasks** folder list is a folders tree of all the activities in AFIFARM. It is located between the Shortcut column and the "Main Section" of the window.
- The **Main Section** is where work is actually done. Activities such as data entries and retrieving, graphs and reports generating, etc. Data appears on the main section when selected from the Folders List or one of the shortcuts. Note that some of the tasks contain multiple options (i.e. – Estrus Reports). On selection of such a task, a list of its options (in this example the list of Estrus Reports) opens in the **Main Section**. To open a specific report you double click on it in the **Main Section**.

The tasks folder list and the shortcut columns contain AfiFarm menus and tasks. These sections are the programs' navigation tools that help you find your tasks in the program. Another very important navigation tool are the Searching icons (See SEARCH below). Note that the **Folders List** includes all the tasks, reports and AfiFarm data. The **Shortcut** column only includes selected items from the Folders list which are used frequently.

Opening Multiple Windows

AfiFarm allows you to open multiple reports and/or windows. These windows cover each other, leaving the active window you are working with on top. To jump to a hidden window you use the  button. This opens a list of all the windows or reports which are currently open to select from.

To close all the open windows or reports click  .

Shortcut column

The Shortcut column contains a number of icons, allowing direct access to specific AfiFarm modules. This section enables quick and easy access to some of the programs' reports and tasks, which are in daily use, rather than accessing them via the menu bar or via the Folders list.
When AfiFarm is installed, a default shortcut column is opened automatically. This default set of shortcuts includes a commonly used items such as "Data Entry" icon, "Herd Reports" "Health Reports" etc. However, AFIFARM allows you to create your own tasks oriented shortcut tabs.
Example :

- Create a shortcut column for the fertility manager.
- Create a shortcut column for the health manager.

OR

- Create a manager shortcut column including the most frequent items in use.

Creating a new Shortcut Column

There are two ways to create a new shortcut column.

1. Open the "NEW" list by clicking its down arrow 

2. Select "Shortcut".
3. At the menu that opens select 

4. Note that an empty tab is opened at the bottom of the shortcut column (Left side of the window). Type the column name into the new tab (Example – Fertility OR Dave – for the fertility manager) and press <Enter>.
5. A new empty shortcut column is opened.
6. Now, items can be selected from the Folder List (Right section of the window) and dragged into the new column. You may drag a single report or a complete group of items (complete folder) into the new shortcut column. In the example shown here, a new fertility shortcut column was created; including the group of estrus reports as well as a number of reports from other folders.
7. Upon confirmation, the window is closed and a new shortcut column is created. Note that the new tab, carrying the name of the new column, appears beside the default column tab.

Another way to create a new shortcut column is by clicking the right mouse button when the arrow cursor is pointing at the shortcut column. This opens a small menu that allows you to select "Add New Page". The next steps are similar to the procedure described above with only one difference; the procedure is carried out on the main window itself, rather than via a unique menu.

Folder List

The Folder List is a folder tree sorted according to subjects. Each folder contains a list of activities or reports that are related to the subject of the folder.
The basic Folders List includes several tasks such as Health, Fertility, Animal View etc. These folders are the systems' default and cannot be deleted. Items, which are in the default folders are mandatory and cannot be removed. On the other hand, AfiFarm allows you to build new folders inside each of these task folders and add reports or other items to it. Note that all the items added to such folders can be changed or removed later.

Alternatively, you may build your own folders tree inside a specific folder called "My Folders". This folder is reserved for the user to organize his tasks at his convenience. **Note that if you install the AfiFarm Version 3 as an upgrade of Afi2000, all the old user defined reports will be placed inside the "My Folders" folder.**

Creating a new folder

To create a new folder you must first select its location inside the folder list.

- Open the destination folder (click the + sign next to it) and select the location of the new folder.
- Click the right mouse button to open the quick options menu.
- Select "Add Folder" inside the menu.
- A new folder is opened in the selected location. Note that the name "New Folder" will be highlighted in blue. This means that you may type in a name for the folder. If you missed this stage for some reason, highlight the new folder and click the right mouse button to open the quick menu again. Select "Rename" and type in the new name.
- Now you can fill the new folder with your reports.
- To bring a report and place it inside a user folder you must first locate it inside the Folders list. If you know the reports' location, open the folder containing the reports and highlight it in the "Main Section" of the window. Than, drag and drop it into your new folder. If you do not remember the location of the report, use the Search tool. Note that reports created by the user are transferred from their original location into the new folder, while system reports are being copied into the new location.

Opening & Closing the Folders List

Folders List column is a navigation tool used frequently by AfiFarm users who are familiar with the folder tree structure. However, the Folders List column consumes window space, thus reducing the Main Section space. This, in lower resolution type PC monitors, may leave some of the data of the Main Section, outside the monitor, to be retrieved by scrolling.

Closing the Folders List Column enlarges the data retrieving section.

To close the Folders List Column, Click the X button on the upper tab. Note that AfiFarm "remembers" the last status of the Folder List column and does not open it when reloaded.

After closing the Folders List column, a - 

button appears on the toolbar. Clicking this button reopens the Folders List column. Note that when you

reopen the Folder list, the button - appears on the upper tab instead of X. This means that opening the Main Section of the window (selecting an item) closes the Folder List. If you wish to leave the Folder List open on your window, click the button.

NEW Menu

The "NEW" menu enables you to create new items inside AfiFarm. Among the new items are :

- New Reports
- New Trigger
- New Vet Visit
- New Graph

Or enter new data such as

- New Cow
- Events

Etc.

The "NEW" icon 

opens an AfiFarm new item wizard. This Wizard helps you build the new item step by step. Note that the "NEW" button is location sensitive, thus opening the new report wizard if the main section displays reports, a new vet visit if the Vet Visit is on window etc. If you want to start a new item without bringing it up to the window, click on the down arrow beside the icon to open the list of new items that can be created.

Search Tools

The basic platform of AfiFarm includes many reports, task operations and tools such as triggers and more. These are sorted and placed in subject oriented folder trees. However, users can add reports or other tasks as per their needs, sorting these according to any local operational order. For a start-up user, finding a certain task or report may be somwhat difficult. Therefore, AfiFarm provides a few searching tools to assist you to locate items in the program.

Searching for Items

The main searching tool is activated by clicking the *Search icon* - . This icon is placed on the main toolbar; however, you may also find it on toolbar bars of specific "Main Section" windows.

The main toolbar Searching tool is used for searches inside the Folders List tasks. It allows for quick and easy access to reports and tasks which names or part of name are known.

When you click the *Search icon*, a search dialog box opens. This box includes two fields. At the "Search What" field you select the type of item to search for (Report, Vet Visit ...). Select the suitable item from the drop down list.

At the upper – text field, type the text you are looking for. Note that partial text strings are also optional. After typing the text, AFIFARM search opens and highlights the first item containing the text typed on the "Main Section". If the item highlighted is the one you were looking for click OK. Otherwise you should click the NEXT icon to continue the search.

"Main Section" Searching tool – is used to locate items inside a list or tasks displayed on this section of the window. A very good example for the use of this tool is when entering an event to cows. When you select this type of operation, a folder tree of events, sorted by subjects, is opened on the "Main Section". To locate a specific event inside this folder tree, use the local searching tool. Note that the searching procedure

inside local tasks is similar to the one described above, but here, the found items are opened and highlighted inside the events tree.

Searching for Cows

Another searching tool provided by AfiFarm is the *Cow Search* text box. This text box is located on the main toolbar, to allow you a direct access to specific cows where numbers are known.
By typing in a cow number, you automatically open the cow data and graphs windows on the "Main Section".

Cows searching tool allows you to find a cow by typing only part of it's number. To find a cow whose first digits are known to you type the first digits followed by the asterisk sign i.e. **21***
To find a cow whose last digits are known to you type the asterisk sign followed by the last digits i.e. ***21**
To find a cow whose middle digits are known to you type the asterisk sign followed by the middle digits and asterisk again i.e. ***21***

Scrolling Through Cows

Two buttons on the toolbar are used to scroll between searched cows. The buttons  are used to scroll down or up in the list, in search for the next cow number specified. When looking for cow number that ends with 21 (see above), the first cow on the list that matches these numbers is highlighted. To scroll down to the next cow you click the  button.

Setting Parameters

When AfiFarm is installed, a default library of parameters is provided so you can start using the system immediately. However, as you learn more about the system and the behavior of your herd, an experienced farm manager can customize these parameters.

In all parameter and data entry windows specific on line Help is available.

Farm Information & General Parameters

NOTE: For farms **Updating from another Herd Management** program or **Importing/ Exporting data from/ to a Dairy Association**, the steps described below are essential.

In **Parameters > Farm information**, fill in your farm's information. **Farm code** and **Farm code 1** information is important for farms importing/ exporting data with file names which include these codes.

Import/Export Protocol

A protocol is a set of rules that governs the format of data that is exchanged between AfiFarm and Dairy Associations in various countries or regions, or between AfiFarm and other herd management programs. Select the appropriate protocol in this window.

Examples of Parameter Settings

Data Entry Parameters

Insemination – you can choose whether Bull ID is mandatory or not.
Calving – you can automatically assign calving cow groups, set a counter for offspring ID numbers.
Exit –

- **a-** automatically change Exit cow numbers to make original numbers available for new animals.
- **b-** Automatically remove Tag number to make it available for new animals.

Entry – choose which data is mandatory for entry of new animals (Breed, Sire and Dam…).

Data Entry

Data Entry general tips

AfiFarm produces documents that focus on different aspects of herd management. The system offers easy access to accumulated data, as well as customization and personalization of the display of this data.

AfiFarm maintains a current record of all the events in a cow's life. A record of data (milk production, activity, weight, etc.) is received and entered automatically by AfiFarm. This allows you to produce relevant reports that will aid you in decision making on the dairy farm.

Some information is mandatory, and other information can be entered at your discretion. In any window, you must enter information in the **bright yellow boxes**. The information required may change, depending on the characteristics of the animal being entered into the system. AfiFarm will remind you if you have left out any of this information, and **you will not be able to save information entered in the window unless the yellow boxes are completed**. Yellow boxes are a function of the level of settings you have chosen as Parameters.

Optional information can be entered in white boxes. While you do not have to enter the information requested in these fields, it is recommended to enter as much data as possible to aid the system in optimizing the decision making process.

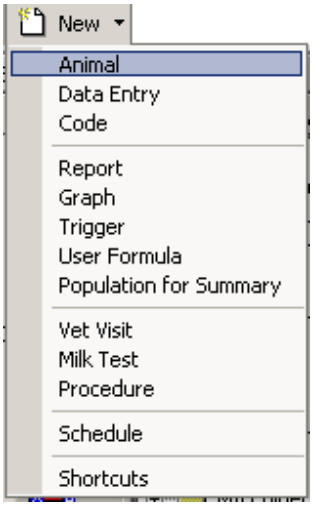
Finally, keep in mind that any data that is not entered in an accurate format or which creates a conflict with your **Data Entry Parameters** or **Logical controls** appears in **red (Error)** or you receive a **blue Warning** message . When the correct format is used, it turns black and you can save the information in the AfiFarm system. For example, if a date is not entered in the correct format, it will appear in red until it is correctly entered.

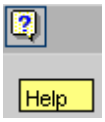
New Animal Data Entry

Manual Entry

To enter new animals in your AfiFarm database:

1- On the **Tool bar** click on the arrow to the right of the **New** button.
2- Click **Animal** from the pull down menu.



The **Entry Animals** window opens. Start entering data, for assistance click the 

button in the open window.

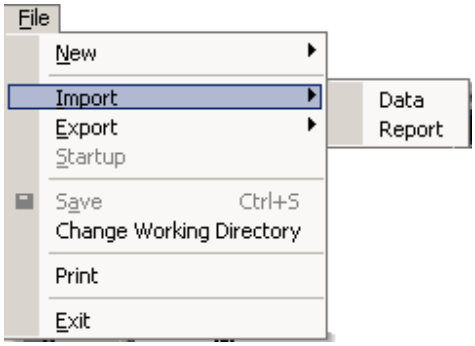
Updating from an other Herd Management Program

If you use another Herd Management Program, for example PC Dart or DairyComp, you can import data from those programs on a daily basis. **New users can import a Startup file which will transfer all the data to AfiFarm**.

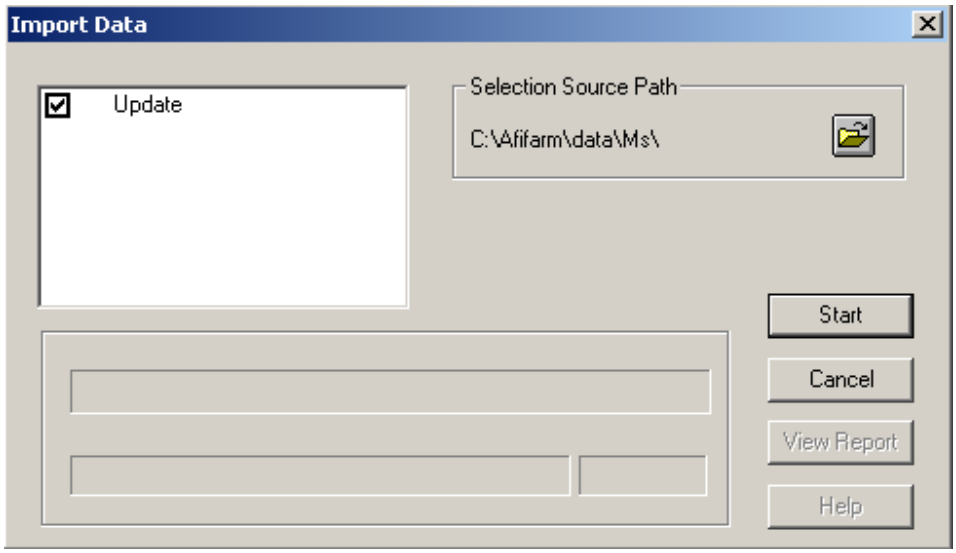
This can only be done with Herd Management Programs which have a **communication protocol** with AfiFarm. Check with your Herd Management provider or with an SAE Afikim dealer.

Some programs have different communication protocols for different versions of Afi Software (Afimilk, Afi2000 or AfiFarm), you will have to change the defined protocol in the Herd Management Program according to the Afi Software.

1- On the **Menu bar** click **File** button
Click **Import > Data** from the pull down menu



2- Click **Start** to import data.



Routine Daily Data Entry

Updating from an other Herd Management Program

If you use another program as your main Herd Management Program, you can update the AfiFarm database from those programs on a daily basis. See previous section for communication protocol compatibility.

Manual Cow Data Entry

Cow data can be entered from a large variety of windows. **Data Entry** is available from:

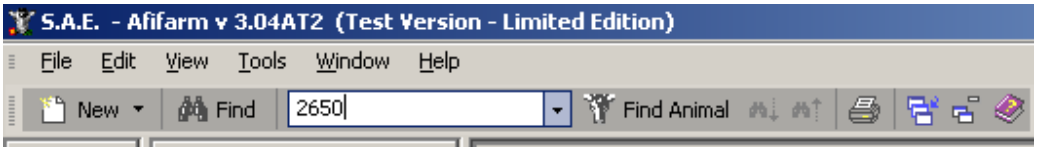
1- An icon in the standard **Shortcut Column**. 

2- **Data Entry** is one of the options in **Folders List > Animals**

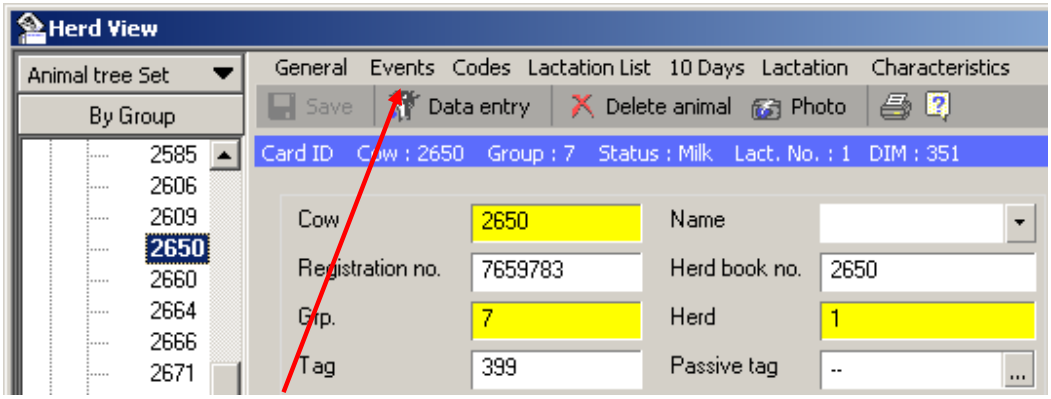
3- In **Herd View**, while displaying general animal data in the **Work Area**.

4- From any AfiFarm report: **Highlight a row** and right click for a pop up menu which includes **Data Entry**.

For single animal Data Entry, type the animal ID in the dialog box on the Tool Bar and Enter on the keyboard.



This will lead you straight into the animal's **Data sheet**.



In the individual animal Data sheet click **Data Entry**.

For multiple animal Data Entry, click on the Data Entry icon.

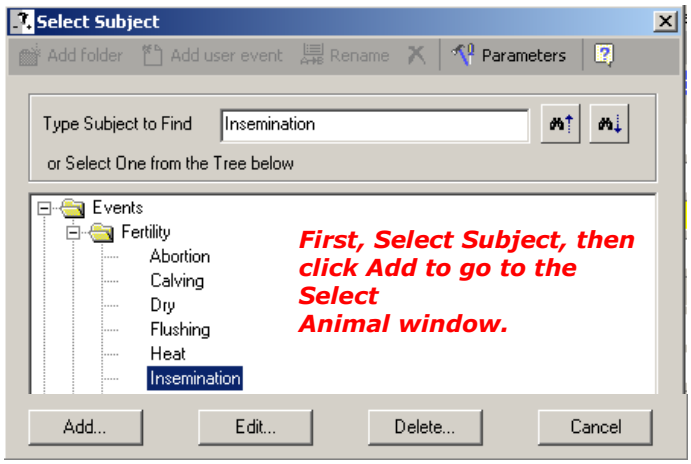
1- The **Select Subject** window appears. Data entry starts from this window.

2- Click on a Subject: **Insemination**.

You have the options:

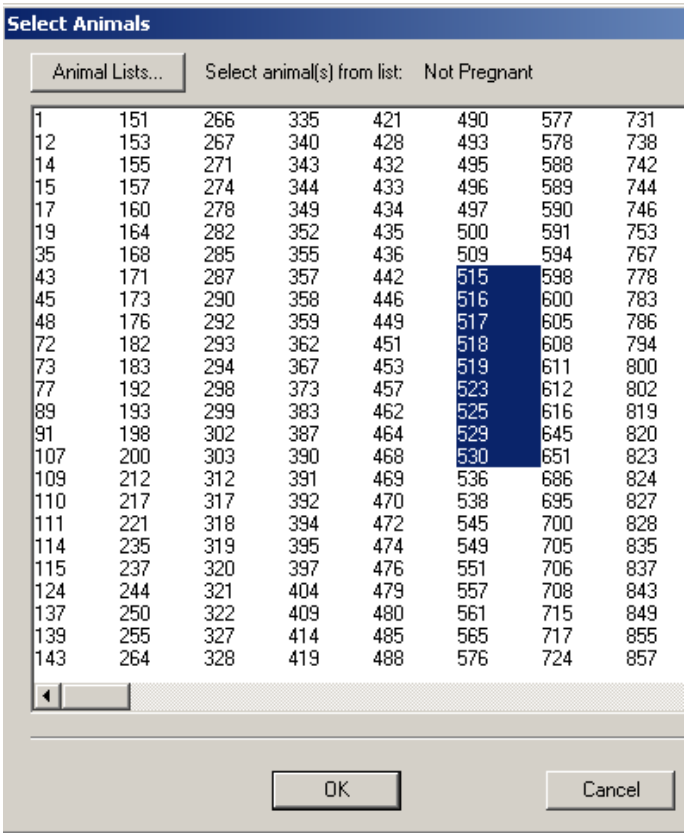
a- to browse through the **folders** to choose the **Event**.

b- Or you can **Type the Subject** to find. the system begins its search as you type in text.



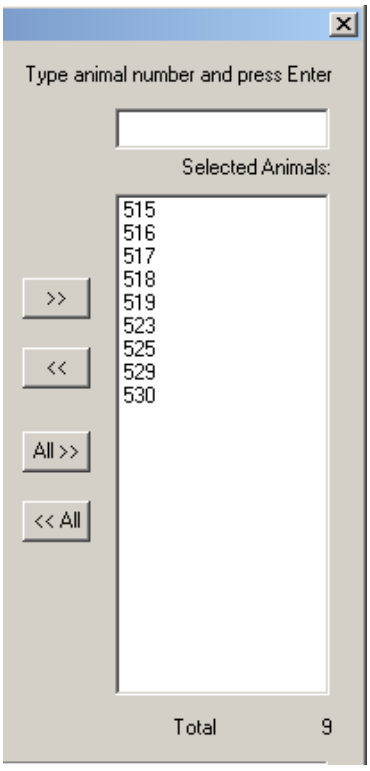
3- Click the **Add** button.

4- The **Select Animal** window opens



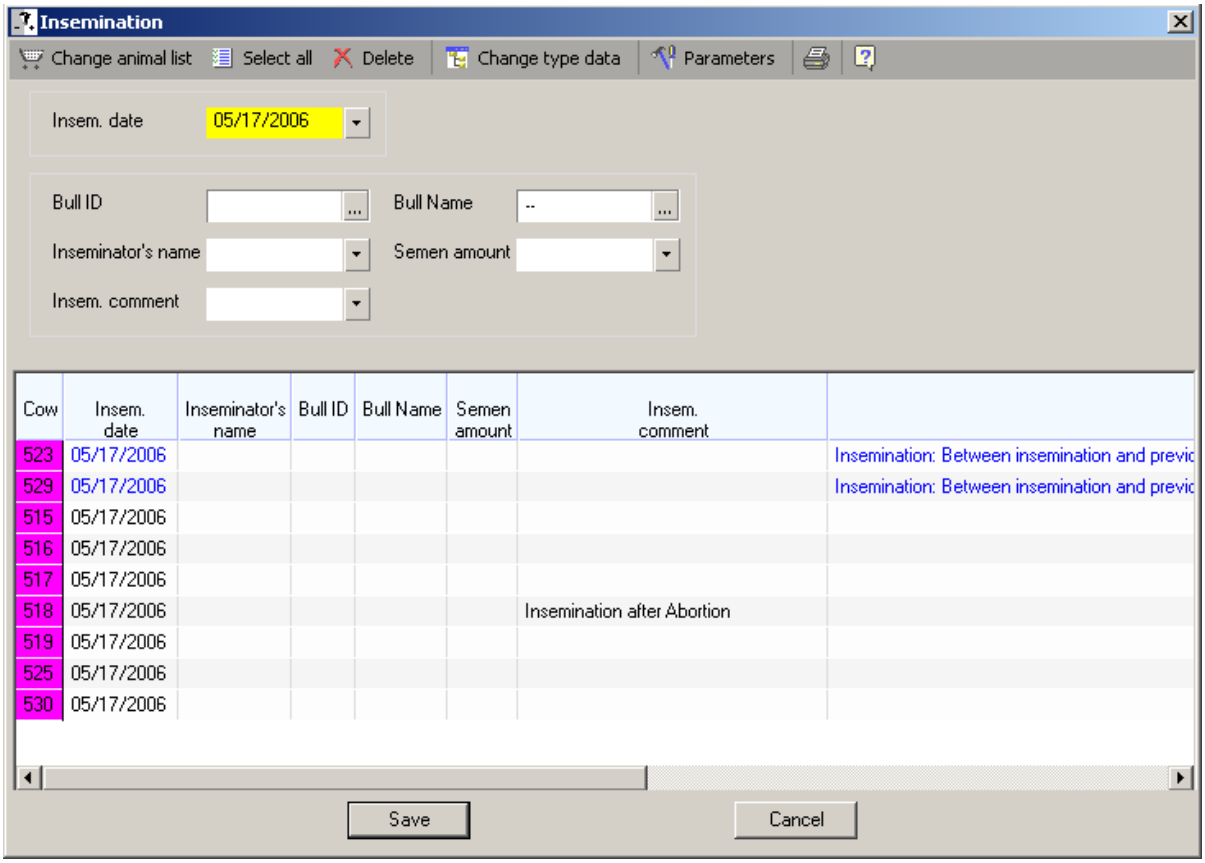
Animals can be selected by either clicking on the Cow ID numbers in the **Select Animals** window and then clicking the Select button >> or by typing in Cow #'s and Enter.

Click << to Unselect Cows



5- After selection, click **OK**

6- The **Event** window opens.



7- Fill in the data. (Use the button in the window for assistance).

Working Environments

AfiFarm Today

AfiFarm Today is a day-to-day working environment. It contains a summary of all the daily tasks in the dairy, thus allowing quick and easy access to lists of cows needing attention, and summarizes herd production over the last 24 hours. **AfiFarm Today** allows you to customize the window according to your specific needs in order to personalize your basic working platform in **AfiFarm**.
The default **AfiFarm Today** window includes four groups of data.

- Summary of the herd production over the last 24 hours.
- General (number of events): in Daily Agenda, Vet Visit and Today's Tasks.
- System Animal Reports – Breeding, Health
- Animal Distribution

\+ Any Reports added by the user

Please note that the figures in this report are totals (number of cows, number of events, quantity of milk..). Some of the value boxes include a small blue triangle on the upper right hand side corner.

By clicking in such a value box  , you open the corresponding report.

In a quick glance you can see the Tasks you need to perform today and amounts of cows on attention lists.

Customizing the AfiFarm Today window

AFIFARM allows you to add and remove items from the *AfiFarm Today* window, thus customizing the working platform according to your needs.
To customize the window open the design window by clicking the design button at the top of the window 

.
This window has two sections. The left section "Report List" includes a list of all the items you may insert into **AfiFarm Today**. The right section "Task List" includes the items in the **AfiFarm Today** window.
To add a report summary into **AfiFarm Today** find it in the "Report List" section and drag and drop it into one of the folders of the "Task List" section.

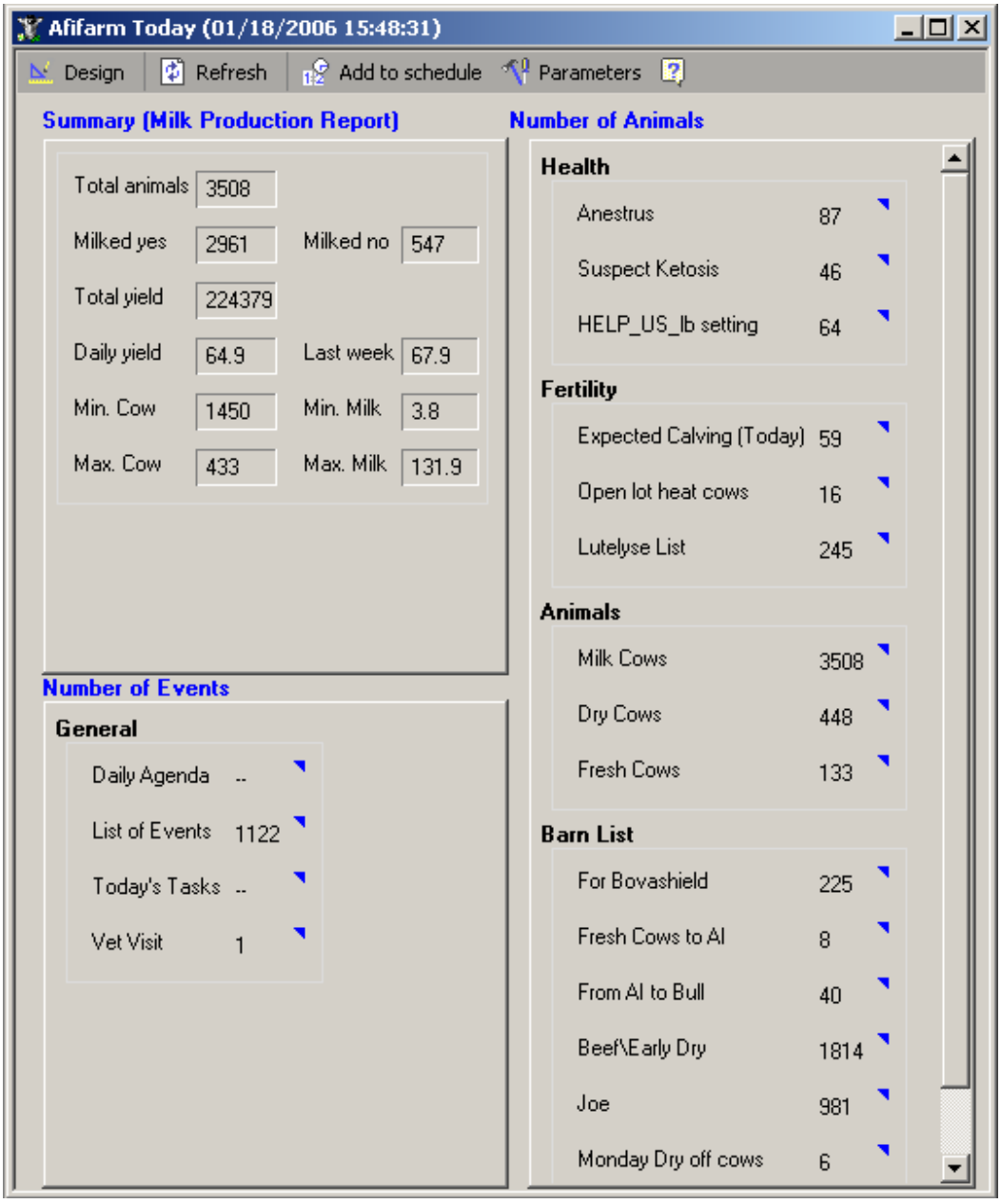
AfiFarm Today Parameters

AFIFARM allows you to set **AfiFarm Today** as the default main window loaded automatically whenever the program is opened.
To set **AfiFarm Today** as a default main window click on the "Parameters" button at the top of the window. The parameters window opens with the **AfiFarm Today** option highlighted. Click on the NO box in the value column and select YES to show the report on start up.

Refreshing the data

AfiFarm Today data is NOT refreshed during the operation of the system. To refresh the information on the window click "Refresh" at the top of the window.

Customized AfiFarm Today



Herd View

Herd View is not simply a tool for viewing information about the herd, groups and individual animals.

In **Herd View** you can do all your **Data Entry** and **Data editing**.

Herd View Design Menu option allows you to add reports or folders to the **Herd View Menu Bar** (**Farm**, **Herd**, **Status** or **Group**).

Access any existing report with the added feature of specifity for the group you are viewing. *Example*: If Milk Group 1 is highlighted and you have added the "Cows to be Bred" report on the Menu Bar, it will open displaying only cows from Milk Group 1.

In **Animal ID Card View** you can choose which data is displayed.

Herd View Design is an option available for Heifer and Male Status.

It allows you to change Age Distribution and create an age breakdown according to your specific management needs.

These feature makes **Herd View a Working Environment** from which you can view and edit most data in **AfiFarm**.

AfiFarm makes different ways of viewing information available to the new and experienced user. Information about individual cows or the entire herd can be viewed in table or graph form, separately or simultaneously. All reports can be printed out in hard copies as well. As you work with AfiFarm, you will find the mode of viewing information which best suits your needs.

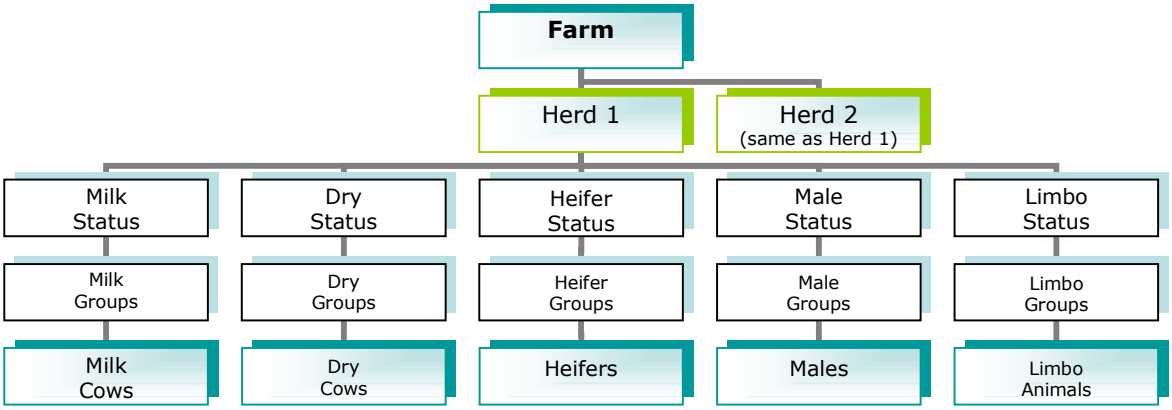
Using the **Cow Data** and **Graph** windows, you can view and analyze data in different ways (based on parameters set in the Health and Estrus Reports). Cow data is registered automatically during lactation, and from events that you manually enter. AfiFarm updates the database automatically as data flows from the various Afi modules and from manually entered events.

Viewing information by Herd, Status and Cow Group

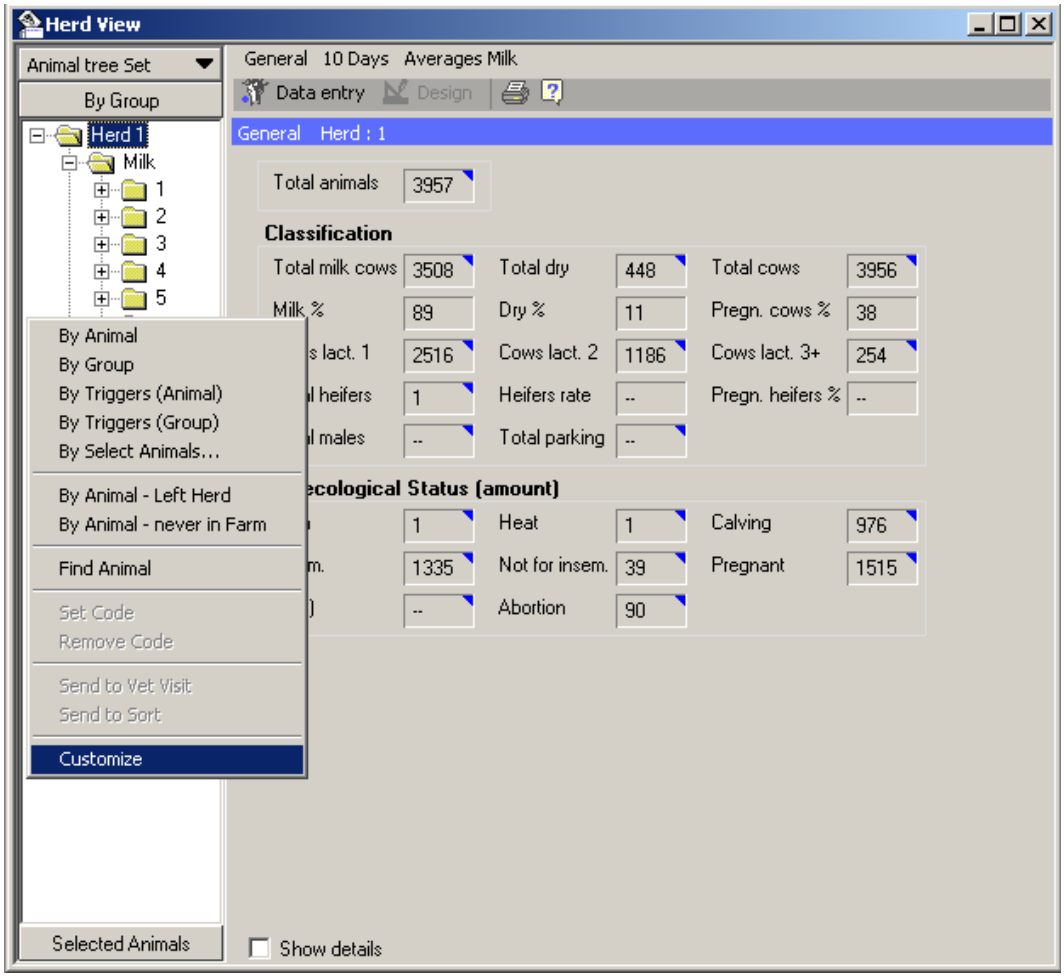
The **Herd View** window opens to the **General** tab, which contains current general data about the Milk Status.

Using the Menu Design button, we added the Cows for Insemination and Health for 2 Deviations reports on the Menu Bar. This will allow us to view the reports, accordingly enter events for animals and if there is a need send them to to the Vet Visit or send them to the Sort Station at chosen times.

The Animal Tree in Herd View is built according to a constant hierachy



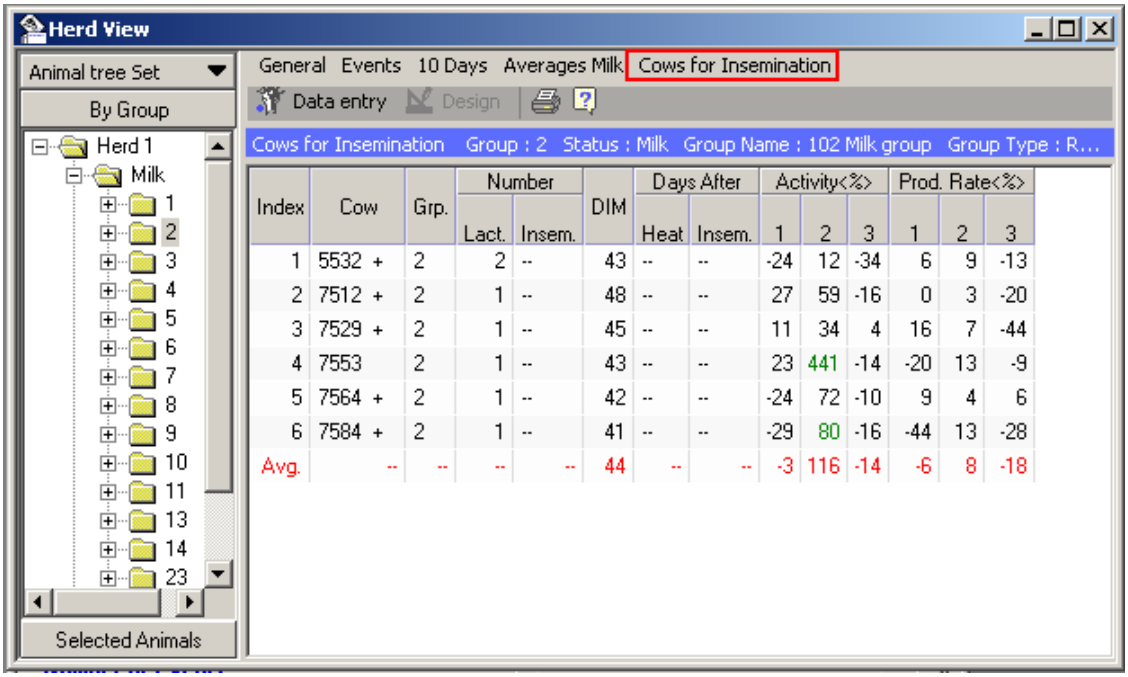
Herd specific Reports can be generated. *Example*: Milk Report for the whole Farm + Milk Reports for Herd 1 and Herd 2



In the above example, we Checked ✔ the **Show Details box** at the bottom of the window and in the **PD-** box 5 to display detailed information about the **PD- Cows** at the bottom of the window.

Customize – Add different reports to each Type of Menu.

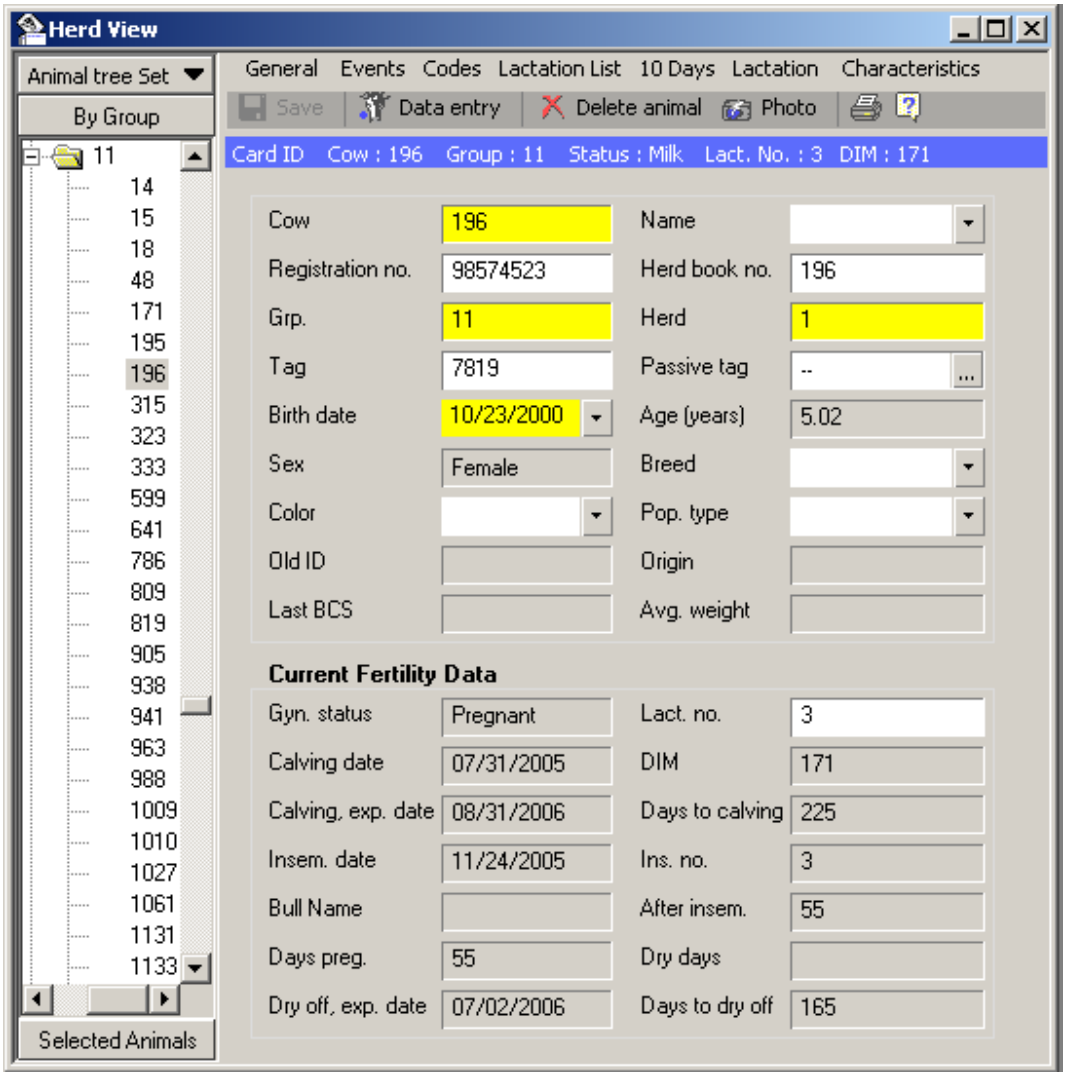
Make any Report the default report for each Type of Menu. *Example*s: Cows for Insemination in Milk Group Menu, Heifers to be Bred in Heifer Group Menu.



Index	Cow	Grp.	Number		DIM	Days After		Activity<%>			Prod. Rate<%>		
			Lact.	Insem.		Heat	Insem.	1	2	3	1	2	3
1	5532 +	2	2	--	43	--	--	-24	12	-34	6	9	-13
2	7512 +	2	1	--	48	--	--	27	59	-16	0	3	-20
3	7529 +	2	1	--	45	--	--	11	34	4	16	7	-44
4	7553	2	1	--	43	--	--	23	441	-14	-20	13	-9
5	7564 +	2	1	--	42	--	--	-24	72	-10	9	4	6
6	7584 +	2	1	--	41	--	--	-29	80	-16	-44	13	-28
Avg.		--	--	--	44	--	--	-3	116	-14	-6	8	-18

Selecting a cow

The cow numbers are selected from lists on the left side of the window, and information about the cow is displayed in the right side. Additional information and views are accessible through the options in the Herd View menu bar.

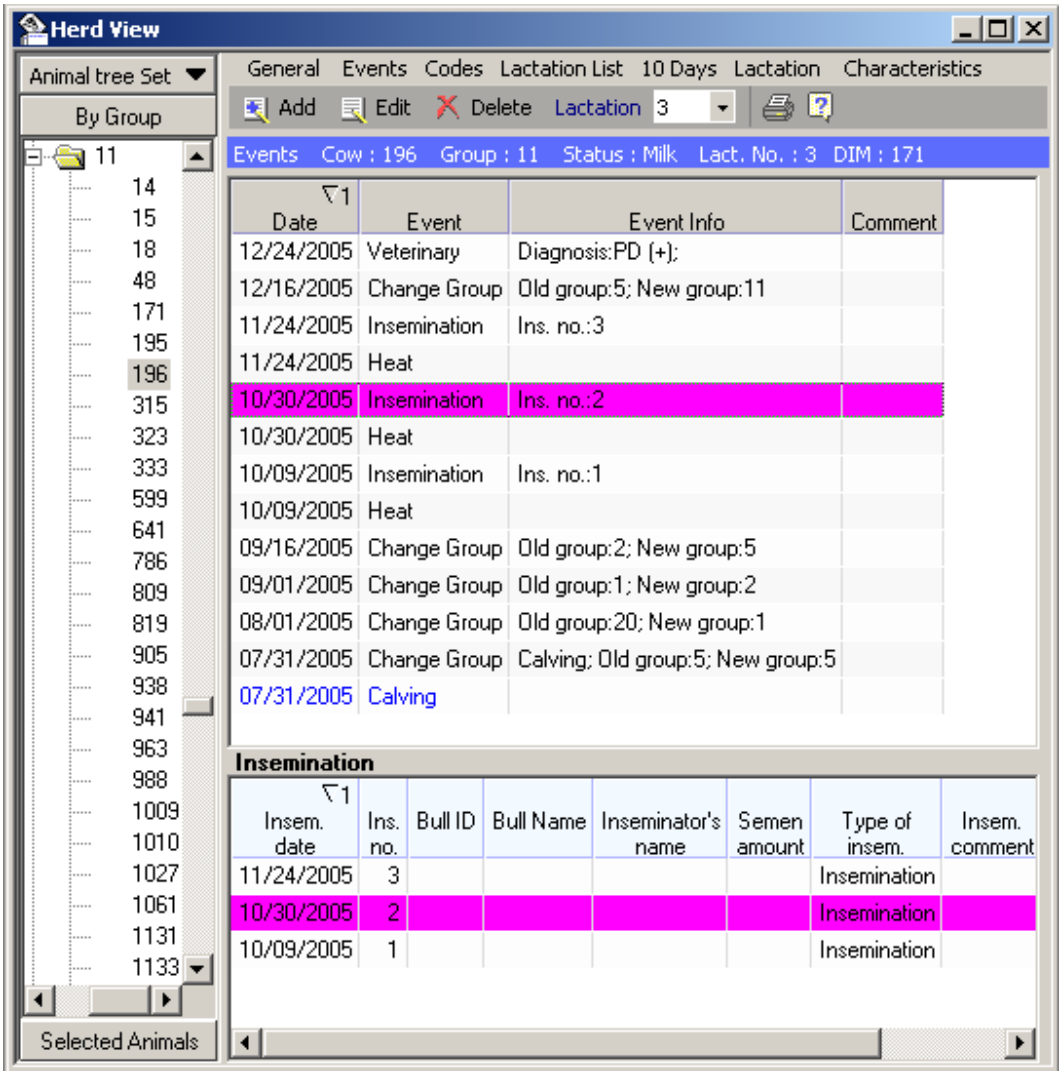


To view information about a specific cow

- Click the number of the cow in the list (for example, cow #**196**)
  The window displays the most recent data for the selected cow across the top of the window, and remains there until information about a different cow is requested.

NOTE: All the information has been filled in for this particular cow. As you enter information in AfiFarm, you will see that only some information is mandatory (for example, lactation number or calving date). Additional information can be entered according to your specific needs.

Click **Events** on the Herd View **Menu bar**.
You can **View**,**Add** or **Edit Events** from this window.



The top part of the window displays all **Events** for the current lactation. The bottom part displays only Events of the same type as the highlighted row. In the example above Veterinary Events.

To view information about a different lactation period

Click the lactation number arrow , and select the number of the lactation you wish to view (e.g., lactation 5).

The new data is displayed in the event window.

Station Reports

The **Station** report supplies daily and per session information for each station. Using the Station report, you can make comparative checks of milk yields between days and sessions.

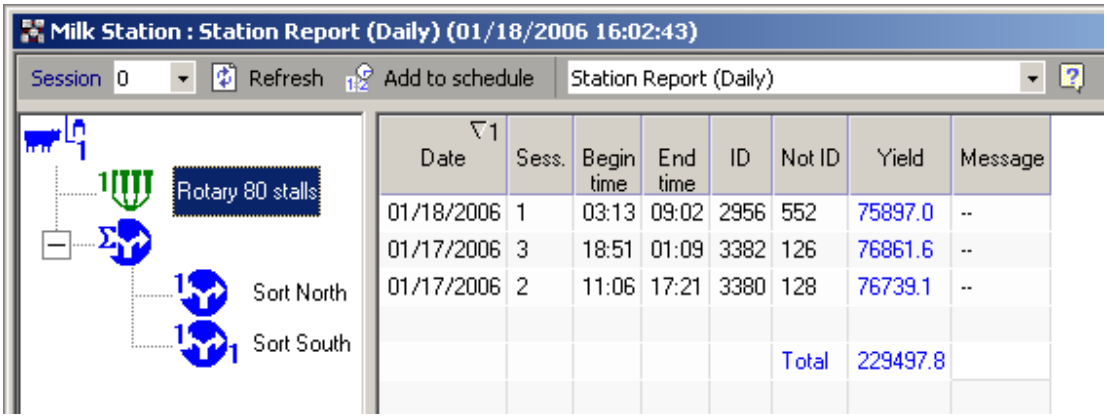
The **Milk** Station report gives information on total yields, milking times, unidentified cows, cows milked in the wrong group, a log of all information on all cows per session. A significant decline in milk may indicate a general health problem, a general feeding problem or a problem in workers' performance.

The **Sort**, **Weight**, **Act**, and **Feed** station reports provide similarly significant information.

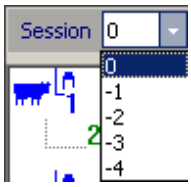
To open the **Station Reports** window:

On the AfiFarm Shortcut bar, click  , -or-
from the **View** menu, click Go To > **Stations** >**Station reports**.
The **Station Report** window opens. Or- click **Stations** in the **Folders List**

The **Station** report opens by default to the **Station Report (Daily)** of the most recent session (**0**) of the **Milking Station** report.

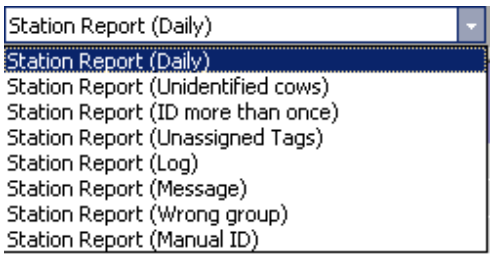


Data is displayed for the day's last milkings (2,3 or more, according to your configuration.

The **Session** dialog box 

allows you to view data for the last 3 days.

The **Station Reports** dialog box:



Unindentified Cows report
Cows in the wrong group
A **log** of all the activities in the Station, …

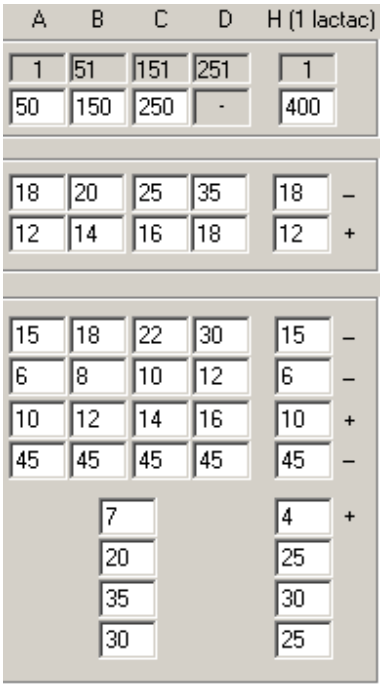
Health

Table of Contents

Health Parameters

In the **Health Parameters** window, population types, parlor alarms and health report parameters are set.

Cow Populations



Cow populations

Cows are divided into 5 populations, according to their days in milk: **A, B, C, D,** and **H (Lact=1).**

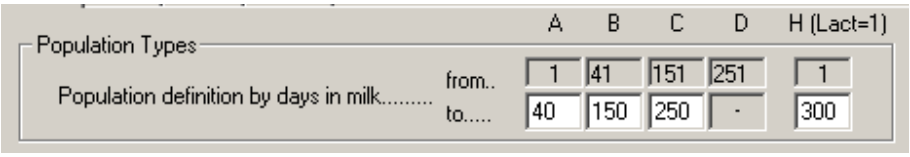
For example, column A refers to cows that are from 1 to 70 days in milk (DIM). Column B refers to cows that are from 71 to 170 days in milk, and so on.

Cows in their first lactation are automatically placed in population **H (Lact-1)** because their production levels differ from cows in later lactations.

There are several types of parameters whose values are set in the **Health** tab: population types, parlor alarms, health reports and calving parameters. These types of parameters are explained below.

Population definition by days in milk

When values in the **to** Each population (A, B, C, D, and H), is defined as a range of days in milk. **from:** refers to the lower limit of the range, and **to:** sets the upper limit of the range.
Population definition is important because the behavior of cows varies during stages of lactation. Production of population A is expected to increase, or at least be stable. Whereas, production of population C, by nature, is expected to decrease.
to: boxes are changed, the **from:** values adjust automatically.



Example: If the number 70 (highlighted) in the **to** box in column A is changed to 75, the number 71 in the **from** box in column B will automatically change to 76.

Parlor alarms

In herds where the milking personnel is allowed to decide whether or not to send cows to the sick pen or to administer medicine, the parlor alarms parameters should be set similarly to the Health Report parameters. In herds with less professional manpower, it is recommended that the parameters be less stringent.

Expected Yield

The maximum acceptable decrease in milk yields (in percentages) when compared to the average for every milking. If a reduction exceeds the value set, the parlor alarm is activated.

Example: If you set a -15% deviation as the threshold for the expected yield for population A, you are alerted if the yield is less than 85% of the average.

Expected Conductivity

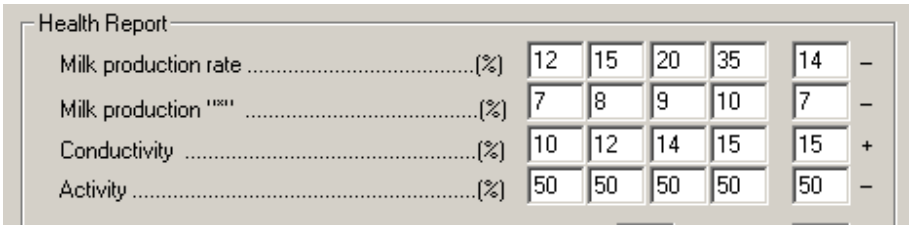
The maximum acceptable increase in milk conductivity (in percentages) when compared to the average conductivity obtained for every milking. If an increase exceeds the value set, the alarm is activated.

Example: If you set a +12% deviation as the threshold for the expected conductivity for population C, you are alerted if the conductivity is more than 112% of the average.

Health Report parameters

Parameters for **Milk Production rate**, **Milk Production**, **Conductivity**, and **Activity** are set here. These parameters are compared to average values taken over the last 10 days. Cows with deviations exceeding the percentage values listed here are included in the Health Report (i.e., suspected to be unhealthy and referred to the veterinarian for examination).

Population group: **A** **B** **C** **D** **H** 1st Lactation cows



Milk production rate

The acceptable decrease limit in milk production rate (in percentages).

Example: If you set a -20% deviation as the threshold for the expected milk production rate for population C, a cow in this population will appear in the Health Report if milk production rate is less that 80% of the average.

Milk production

Sometimes cows will experience a gradual decline in milk over a 24-hour period, indicating a possible health problem. In the **Milk Production** area of the Health parameters tab, you enter a limit for the acceptable decrease in milk *per session*. An asterisk (*) appears next to the number of a cow whose accumulated decline in milk over *24 hours* exceeds the threshold set here.

Example: If you set a -4% deviation as the threshold for the expected milk production for population H, and the cow has four milking sessions a day, the cow in this population will appear in the Health Report if milk production is less than 84% of average.

Conductivity

An increase in conductivity may indicate illness. The maximum acceptable increase in conductivity (in percentages) is entered here.

Example: If you set a +7% deviation as the threshold for the expected conductivity for population C, the cow in this population will appear in the Health Report if conductivity is more that 107% of the 10 day average.

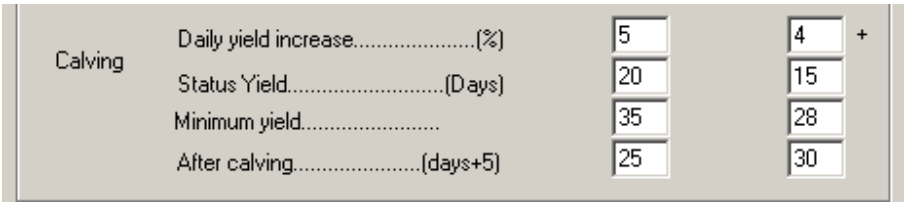
Activity

A decrease in activity may indicate a medical problem. The limit for an acceptable decrease in activity level (in percentages) is entered here.

Example: If you set a -80% deviation as the threshold for the expected activity for population C, the cow will appear in the Health Report if activity (steps-per-minute) is less than 20% of normal.

Calving

This section of the Health Report parameters window is only relevant to cows in the first few days after calving. Therefore only two populations are listed, population A and first lactation cows. These cows, when healthy, show a daily increase in milk production and achieve a predictably higher yield. If milk production does NOT increase, the cow should appear in the Health Report.



Daily yield increase, status yield, minimum yield and days-after-calving parameters are set here.

Daily yield increase
The minimum acceptable percentage increase in the daily milk yield.

Status yield
The number of days after calving for which **daily yield increase** is expected.

Minimum yield
The minimum acceptable yield a cow is expected to reach within the days defined in the Status yield after calving.

After calving
The expected number of days after calving to reach the minimum yield value specified above.

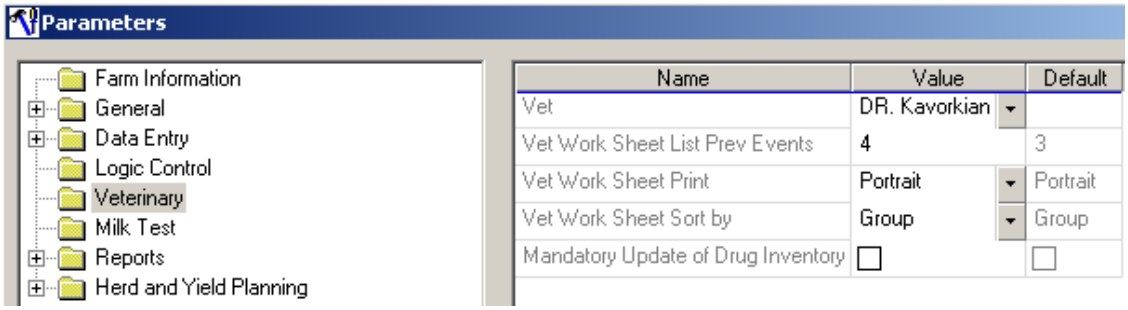
Examples: A cow in population H (1st lactation) who has just given birth to a calf is expected to have a 5% increase in milk production every day, for the first 25 days after calving. At day 25 (after calving), the cow is expected to have reached its minimum yield value of 30 liters per day.
A cow in population A (1st period after calving) is expected to have a 7% increase in milk production every day, for the first 25 days after calving. At the 35th day after calving, she is expected to produce a minum of 35 liters a day.
(These examples are production expectations of a high yielding herd.)

To save the new parameters, and exit:

Click **OK**.

The parameters are saved, and the **Health Deviation Parameters** window closes.

Veterinary (General Health) Parameters



Here you choose the default **Vet name** for Vet Visits, how many previous events are displayed on the **Vet Worksheet** (Health > Vet Reports> Vet Worksheet) and whether it is printed in Landscape (Horizontal) or Portrait (Vertical) format.

Mandatory Update of Drug Inventory, if ✔ you must work with the new Drug Management function and update drug movements such as purchases and usage.

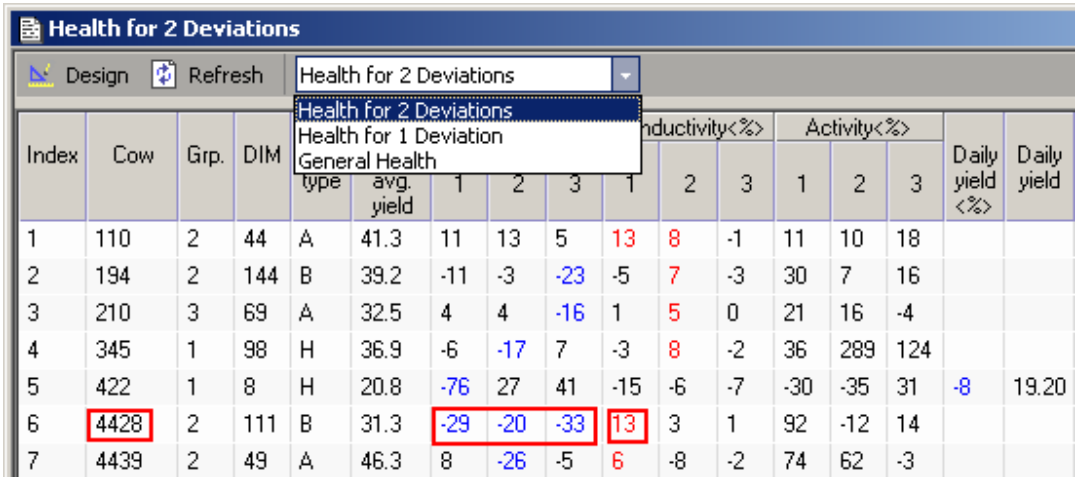
Health Deviation Reports

Information is displayed in the **Health Reports** in one of 3 ways, depending on the option chosen from the list in the **Reports List** window.
The three display options are:

- **Health for 1 deviation:** Displays health information for cows where only one deviation from any of the parameters occurred during the last three sessions. Good for general information.
- **Health for 2 deviation:** Displays health information for cows where at least two deviations from any of the parameters occurred during the last three sessions. **Recommended Report for analysis and decision making.**
- **General health:** Displays health information for two categories of cows:
  - **Cows** in the Deviation 1 category.
  - **Cows** with no data from the last three milking sessions.

Rows and columns in Health reports

All **Health** reports are tables, in which cow numbers are listed in a column at the left, and information for each cow appears in subsequent columns. If there are more than three sessions per day, columns at the far right are not visible. Scroll to view them. All three reports can be viewed from any of the reports, using the pull down menu listing all three reports.



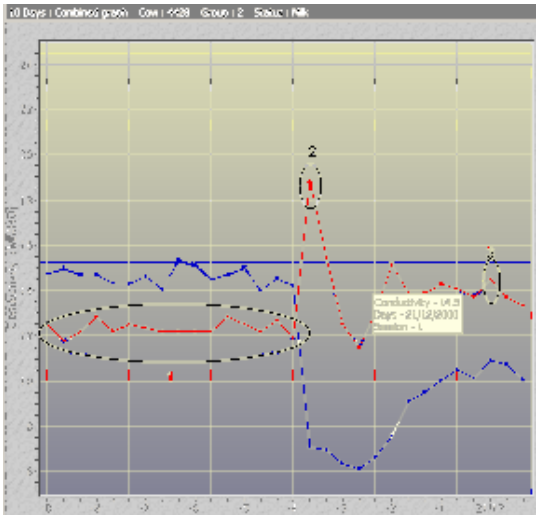
Health for 2 Deviations

Design | Refresh | Health for 2 Deviations

Health for 2 Deviations
Health for 1 Deviation
General Health

Index	Cow	Grp.	DIM	type	avg. yield	nductivity<%> 1	2	3	1	2	3	Activity<%> 1	2	3	Daily yield <%>	Daily yield
1	110	2	44	A	41.3	11	13	5	13	8	-1	11	10	18		
2	194	2	144	B	39.2	-11	-3	-23	-5	7	-3	30	7	16		
3	210	3	69	A	32.5	4	4	-16	1	5	0	21	16	-4		
4	345	1	98	H	36.9	-6	-17	7	-3	8	-2	36	289	124		
5	422	1	8	H	20.8	-76	27	41	-15	-6	-7	-30	-35	31	-8	19.20
6	4428	2	111	B	31.3	-29	-20	-33	13	3	1	92	-12	14		
7	4439	2	49	A	46.3	8	-26	-5	6	-8	-2	74	62	-3		

Double click on any row of a **Health Deviation** report (or any other type of Cow report), to display a **10 Day Graph**. Graphs illustrate the deviations and for most people are more evident than the numbers in the report. In the example above, **cow #4428** had a sharp rise in **conductivity** and a sharp drop in **Milk** 3 days ago **(2)**. The cow was identified and treated. The conductivity has since gone down **(3)** and milk has gone up but still not returned to their previous levels **(1)**. The cow is still on the report and is attended to.



COLUMNS IN THE HEALTH REPORT

Column	Information
Index	The number of the row in the table.
Cow	The cow number. If the cow number appears in **blue** with an asterisk, a gradual decline in yield has occurred. The yield over the three most recent sessions has dropped by an amount defined in the **Health Parameters** screen.
Group	The number of the group the cow is assigned to.
DIM (Days in Milk)	The number of days the cow has been lactating. Data appears only if a date of calving has been entered in the Cow Data screen.
Population Type	Indicates cows in different stages of lactation, 0-70 for population A or H for cows in first lactation. (Parameters established in the **Population Parameters** screen. (Tools > Parameters > Reports > Deviation > Health)
Daily Avg. Yield	The average daily milk yield of the cow.
Production Rate (%): Sessions 1-3	Rates of milk production in the last three sessions. These figures compare the data obtained for a session, with the average production rate over last 10 days. If the decrease is greater than the threshold defined in the Health Parameters window, the production rate number is shown in **blue**.
Conductivity (%): Sessions 1-3	Conductivity of milk in the last three sessions. These figures compare the data obtained for a session, with the average conductivity over the last 10-day period. If the increase is greater than the threshold defined in the Health Parameters window, the production rate number is shown in **red**. An increase in conductivity may show the presence of udder disease (which can be accompanied by decline in milk production).
Activity (%): **Sessions 1-3**	Cow activity in the last three sessions. These figures compare the data obtained for a session, with average activity over the last 10 days. If the decrease is greater than the threshold defined in the Health Parameters window, the activity is displayed in **green** to indicate a health problem, or a cow with a limp.
Daily % yield	Relevant to those cows that have calved and have not reached the **Daily yield increase** specified in the **Calving** section of the **Health Parameters** screen.
Daily yield	Relevant to those cows that have given birth and have not reached the **Minimum Yield** in milk production specified in the **Calving** section of the **Health Parameters** screen.

Other Health Reports

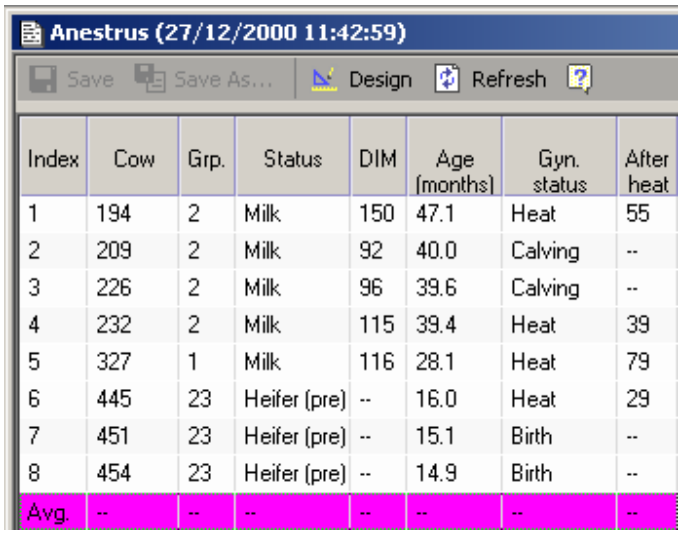
Anestrus Report

The accurate and efficient detection of heats in dairy cattle is an important component of a good reproductive management program. Individual cows may not be observed in estrus for one of two reasons. First, the ovaries of the cow are not functioning properly and the cow is anestrus (failure to have an estrus cycle). The second reason is that the Herdsman misses seeing a cow that actually is in estrus – the second reason has been eliminated through your purchase of AfiMilk.

The percentage of cows in a herd without a normal estrus cycle by 60 DIM can range from less than 5% to over 20%.

The **Anestrus report** displays a list of cows which have not displayed heat symptoms according to a set of **Parameters** (flexible parameters which can be changed by the user to suit his breeding policy) which make up the **sets of the Anestrus Trigger** (this same Trigger is used to automatically put certain animals on the **Vet Visit** – see **Reasons for Vet Visit** later in this chapter).

- Any heifer above the age of 427 days which has no recorded heat or is not within the range of 0-25 days since last heat will appear on the report.
- Any 1st lact cow above 70 DIM which has no recorded heat or is not within the range of 0-25 days since last heat will appear on the report.
- Any 2nd lact cow above 52 DIM which has no recorded heat or is not within the range of 0-25 days since last heat will appear on the report.
- Any 3rd or more lact cow above 52 DIM which has no recorded heat or is not within the range of 0-25 days since last heat will appear on the report.
- Any animal after 30 or more days after abortion which has no recorded heat will appear on the report.
- Any animal found negative at preg check which has no recorded heat since the PD-.



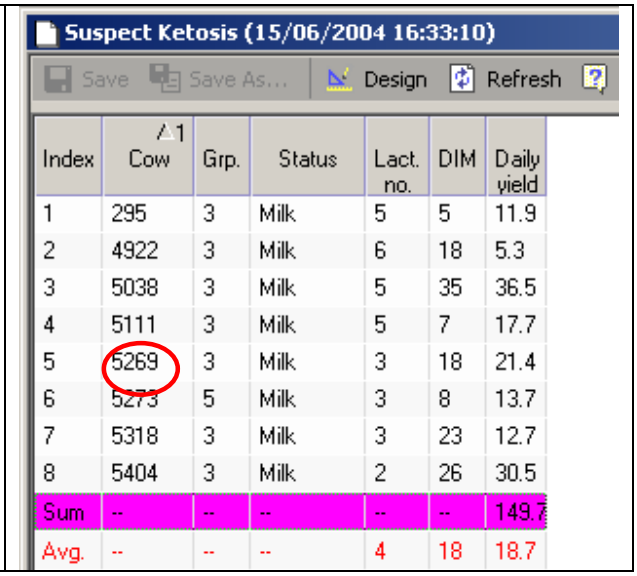
Index	Cow	Grp.	Status	DIM	Age (months)	Gyn. status	After heat
1	194	2	Milk	150	47.1	Heat	55
2	209	2	Milk	92	40.0	Calving	--
3	226	2	Milk	96	39.6	Calving	--
4	232	2	Milk	115	39.4	Heat	39
5	327	1	Milk	116	28.1	Heat	79
6	445	23	Heifer (pre)	--	16.0	Heat	29
7	451	23	Heifer (pre)	--	15.1	Birth	--
8	454	23	Heifer (pre)	--	14.9	Birth	--
Avg.	--	--	--	--	--	--	--

Suspected Ketosis report

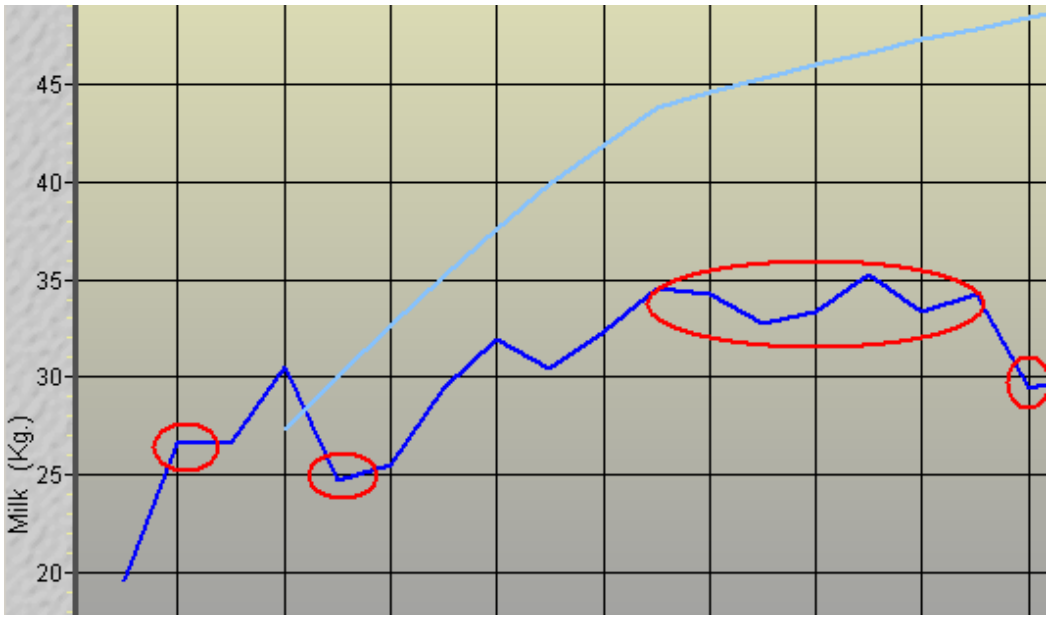
This report uses a Trigger with pre-set (but flexible) Parameters to identify Ketotic cows.

Identifying these animals is critical and early treatment and/ or changes in feed strategy can save you large sums of money.

Cow 5269 is on the report, her Milk Yield = 21.4kg, which is low for a cow 18 Days in Milk. If we view her **Lactation Graph** (**dark blue line**), we see that the drop in milk at DIM 2, DIM 5, the flattening curve between DIM 11-16 and the drop from DIM 17 indicate that there is a problem. The earlier the cow is checked for Ketosis and treated, the sooner the lactation curve will return to normal.
The **light blue line** displays **Milk Prediction** for this cow. Ketosis did not let her reach her potential.



Index	Cow	Grp.	Status	Lact. no.	DIM	Daily yield
1	295	3	Milk	5	5	11.9
2	4922	3	Milk	6	18	5.3
3	5038	3	Milk	5	35	36.5
4	5111	3	Milk	5	7	17.7
5	5269	3	Milk	3	18	21.4
6	5273	5	Milk	3	8	13.7
7	5318	3	Milk	3	23	12.7
8	5404	3	Milk	2	26	30.5
Sum	--	--	--	--	--	149.7
Avg.	--	--	--	4	18	18.7



Failure to provide a sound feeding transition program will affect both production and health. Problems during the transition period can result in the loss of 10 - 20 lbs of peak milk, which is equivalent to an economic loss of $400 - $900 per lactation. Metabolic disorders are also more prevalent with an inadequate transition program. These are costly in terms of lost milk production, vet and drugs and discarded milk. Estimates from the U.S. place the economic loss from milk fever at $334, $285 for retained placentas and $145 for ketosis (U.S. dollars).

Occurrence of one metabolic disease also predisposes cows to other metabolic diseases. A U.S. study of 31 dairies during the first 30 days after calving showed significant relationships between various metabolic diseases. Cows with milk fever were 4 times more prone to retained placentas and 24 times more prone to ketosis. Cows with retained placentas were 16 times more prone to ketosis and six times more prone to metritis. Cows with displaced abomasums were 54 times more likely to develop ketosis.

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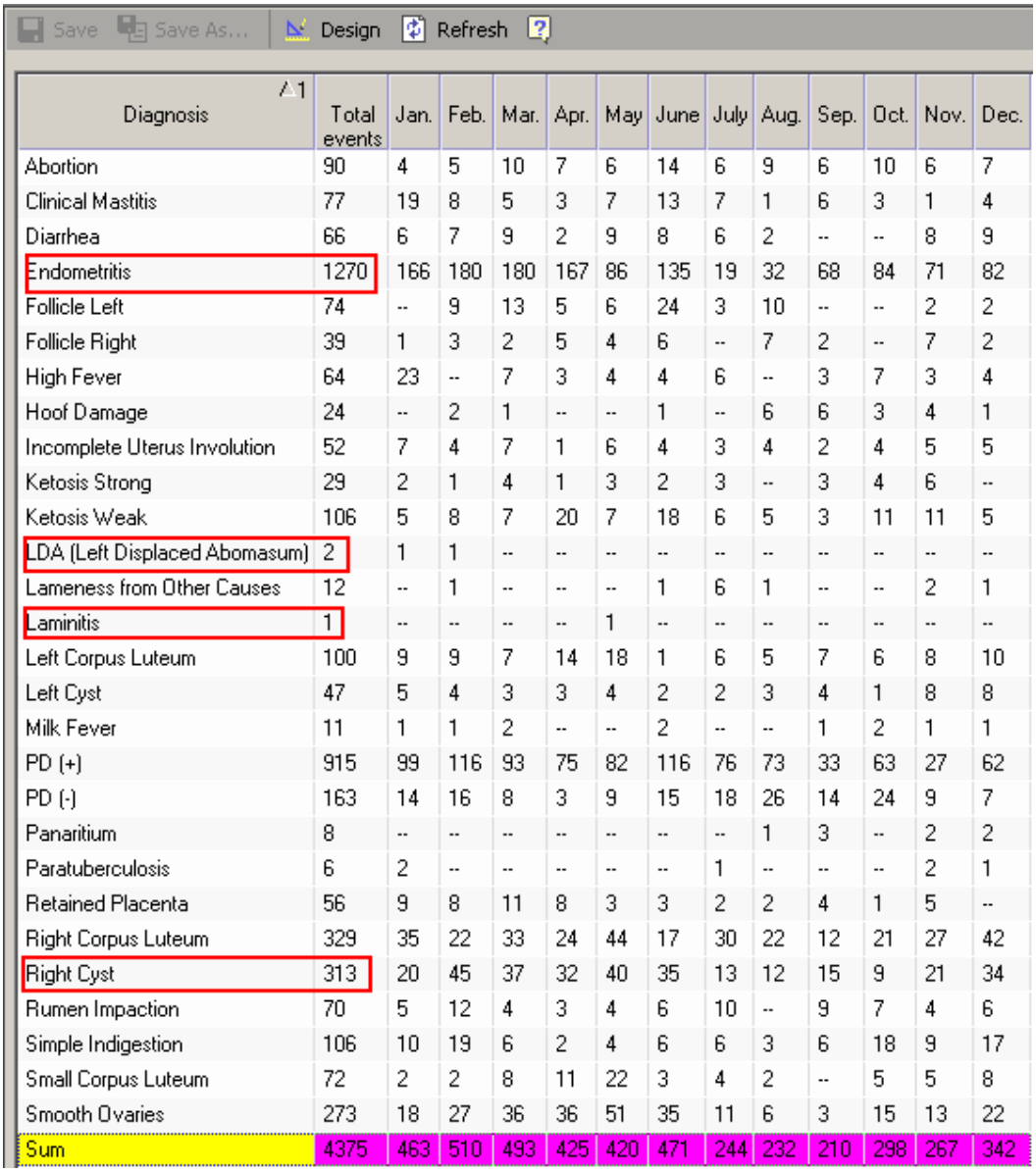
Diagnosis Summary Report

In the example below we can see that the distribution of **Endometritis** is very high from January to June . With this in mind we can analyze behavior, weather and work routines. which During those months it rained a lot, the bedding was poor and the barns for dry and fresh cows were overcrowded. We now know to avoid repeating the same mistake next year.

LDA's are practically non existant (850 cows in the herd).

Laminitis as well.

On the other hand there are many **cystic cows.**



Diagnosis	Total events	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
Abortion	90	4	5	10	7	6	14	6	9	6	10	6	7
Clinical Mastitis	77	19	8	5	3	7	13	7	1	6	3	1	4
Diarrhea	66	6	7	9	2	9	8	6	2	--	--	8	9
Endometritis	1270	166	180	180	167	86	135	19	32	68	84	71	82
Follicle Left	74	--	9	13	5	6	24	3	10	--	--	2	2
Follicle Right	39	1	3	2	5	4	6	--	7	2	--	7	2
High Fever	64	23	--	7	3	4	4	6	--	3	7	3	4
Hoof Damage	24	--	2	1	--	--	1	--	6	6	3	4	1
Incomplete Uterus Involution	52	7	4	7	1	6	4	3	4	2	4	5	5
Ketosis Strong	29	2	1	4	1	3	2	3	--	3	4	6	--
Ketosis Weak	106	5	8	7	20	7	18	6	5	3	11	11	5
LDA (Left Displaced Abomasum)	2	1	1	--	--	--	--	--	--	--	--	--	--
Lameness from Other Causes	12	--	1	--	--	--	1	6	1	--	--	2	1
Laminitis	1	--	--	--	--	1	--	--	--	--	--	--	--
Left Corpus Luteum	100	9	9	7	14	18	1	6	5	7	6	8	10
Left Cyst	47	5	4	3	3	4	2	2	3	4	1	8	8
Milk Fever	11	1	1	2	--	--	2	--	--	1	2	1	1
PD (+)	915	99	116	93	75	82	116	76	73	33	63	27	62
PD (-)	163	14	16	8	3	9	15	18	26	14	24	9	7
Panaritium	8	--	--	--	--	--	--	--	1	3	--	2	2
Paratuberculosis	6	2	--	--	--	--	--	1	--	--	--	2	1
Retained Placenta	56	9	8	11	8	3	3	2	2	4	1	5	--
Right Corpus Luteum	329	35	22	33	24	44	17	30	22	12	21	27	42
Right Cyst	313	20	45	37	32	40	35	13	12	15	9	21	34
Rumen Impaction	70	5	12	4	3	4	6	10	--	9	7	4	6
Simple Indigestion	106	10	19	6	2	4	6	6	3	6	18	9	17
Small Corpus Luteum	72	2	2	8	11	22	3	4	2	--	5	5	8
Smooth Ovaries	273	18	27	36	36	51	35	11	6	3	15	13	22
Sum	4375	463	510	493	425	420	471	244	232	210	298	267	342

There are specific Diagnosis Summary Reports for Fertility, Calving and Udder

Use the Design button to define the period of the report.

A Detailed Report of Paratuberculosis cows (Johnes' disease)

Diagnosis Summary (01/07/2003 - 30/06/2004) (27/07/2004 15:40:07)

Save | Save As... | Design | Refresh

Diagnosis	Total events	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
Panaritium	8	--	--	--	--	--	--	--	1	3	--	2	2
Paratuberculosis	6	2	--	--	--	--	--	1	--	--	--	2	1
Retained Placenta	56	9	8	11	8	3	3	2	2	4	1	5	--
Right Corpus Luteum	329	35	22	33	24	44	17	30	22	12	21	27	42
Right Cyst	313	20	45	37	32	40	35	13	12	15	9	21	34
Rumen Impaction	70	5	12	4	3	4	6	10	--	9	7	4	6
Simple Indigestion	106	10	19	6	2	4	6	6	3	6	18	9	17

Index	Cow	Date	Event	Event Info	Comment
1	86	27/07/2003	Veterinary	Diagnosis:Paratuberculosis;	
2	5155	19/11/2003	Veterinary	Diagnosis:Paratuberculosis;	
3	464	30/11/2003	Veterinary	Diagnosis:Paratuberculosis;	
4	5157	17/12/2003	Veterinary	Diagnosis:Paratuberculosis;	
5	5366	21/01/2004	Veterinary	Diagnosis:Paratuberculosis;	
6	5323	21/01/2004	Veterinary	Diagnosis:Paratuberculosis;	

☑ Show details ☐ Show vertical

Drug Summary Report + Detailed Report

Drug Summary (01/07/2003 - 30/06/2004) (27/07/2004 16:21:26)

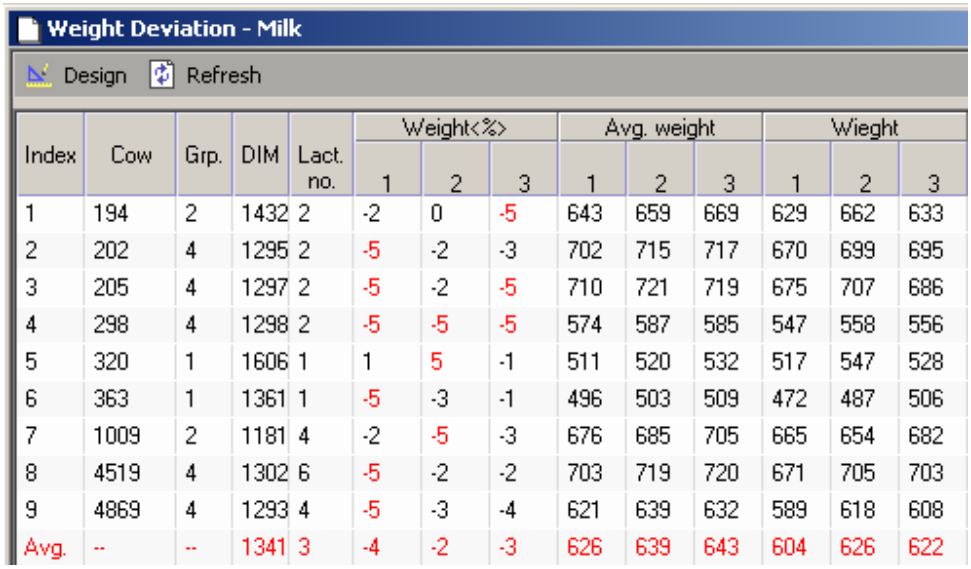
Save | Save As... | Design | Refresh

Drugs	Total events	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
BVD+IBR vaccine	996	69	80	117	68	82	51	55	36	50	77	173	138
GNRH Analog	138	7	33	1	1	8	41	--	10	8	6	6	17
K99+Rotavirus Vaccine	266	43	20	9	8	25	3	--	35	38	27	30	28
Oxytetracycline	10	1	--	--	--	--	1	1	--	1	1	5	--
Penicillin+Streptomycin	44	3	5	1	--	--	4	4	1	13	3	5	5
Prostaglandin	333	25	19	18	22	44	33	21	27	25	28	30	41
Other NSID	112	26	22	19	4	7	5	8	2	3	5	5	6
Propylene Glycol	173	6	4	4	32	9	14	8	17	18	29	19	13
Botulism Vaccine	1635	66	47	73	65	842	102	126	65	16	46	41	146
Magnet	307	37	14	30	21	33	35	10	50	9	7	29	32
FMD Vaccination	1434	80	1	11	41	--	--	--	--	--	18	567	716
Brucellosis Vaccination	321	46	--	76	41	37	--	28	--	17	15	41	20
Sum	5769	409	245	359	303	1087	289	261	243	198	262	951	1162

Index	Cow	Date	Event	Event Info
1	2153	17/03/2004	Veterinary	Diagnosis:Endometritis; Treatment:Uterus Oblets; Drugs:Penicillin+Streptomycin;

Weight Deviation reports

A cow automatically enters the **Weight deviation report** if it deviates from the parameters set for weight deviation. Weight deviations may indicate that a cow is sick. A cow with feet or digestive problems will eat less and a drop in body weight may appear before a drop in milk yield is felt. Two weight reports are displayed in the Health Report List window: heifers, and milk cows.
Use the **Design** button change deviation % thresholds for animals entering the report.


Weight Deviation - Milk

Design Refresh

Index	Cow	Grp.	DIM	Lact. no.	Weight<%>			Avg. weight			Wieght		
					1	2	3	1	2	3	1	2	3
1	194	2	1432	2	-2	0	-5	643	659	669	629	662	633
2	202	4	1295	2	-5	-2	-3	702	715	717	670	699	695
3	205	4	1297	2	-5	-2	-5	710	721	719	675	707	686
4	298	4	1298	2	-5	-5	-5	574	587	585	547	558	556
5	320	1	1606	1	1	5	-1	511	520	532	517	547	528
6	363	1	1361	1	-5	-3	-1	496	503	509	472	487	506
7	1009	2	1181	4	-2	-5	-3	676	685	705	665	654	682
8	4519	4	1302	6	-5	-2	-2	703	719	720	671	705	703
9	4869	4	1293	4	-5	-3	-4	621	639	632	589	618	608
Avg.	--	--	1341	3	-4	-2	-3	626	639	643	604	626	622

. COLUMNS IN THE WEIGHT DEVIATION REPORT

Column	Information
Index	The number of the row in the table.
Cow	The cow number.
Group	The number of the group the cow is assigned to.
DIM (Days in Milk)	The number of days the cow has been lactating. Data appears only if a date of calving has been entered in the **Cow Data** screen.
Weight Deviation (%): Sessions 1-3	These figures compare the data obtained for a session, with the average weight over last 10 days. If the decrease is greater than the threshold defined in the Weight Deviation Parameters window, the percentage drop is shown in **red**.
Average Weight: Sessions 1-3	Average body weight per session for the last 10-day period.
Weight: Sessions 1-3	Body weight per session for the last 3 sessions.

Reporting a Health Event (Diagnosis, Treatment, Drug)

As with all **data entry** there is more than one option for reporting a **Health Event**:

1 Type the number of the animal in the dialog box on the menu bar and <**Enter**> on the keyboard **or** open the **Data entry** window. (Click ).

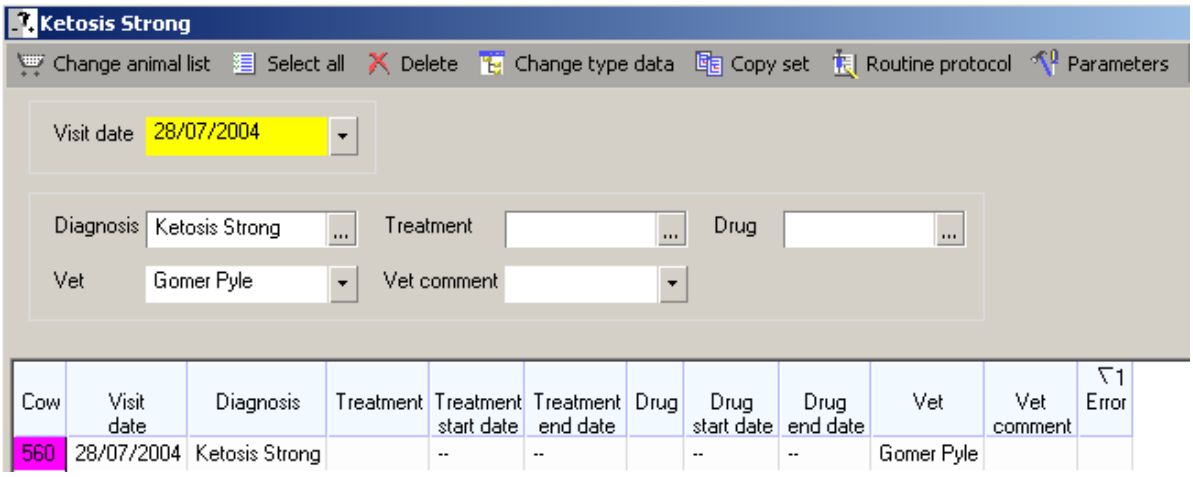
2 Select the event, **or**

3 Double-click the number of the animal in the **Animals List** you are viewing. Scroll through the list if the number you are looking for is not visible. **Or** type in the animal number and **<Enter>**.

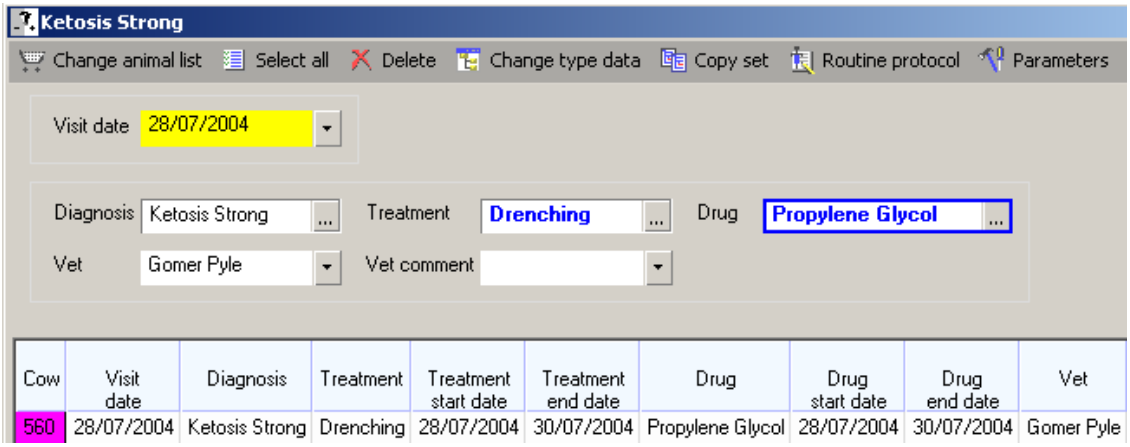
4 The selected cow number appears in the **Selected Cows** box on the right.

5 The selected Event dialog box opens, with some information displayed automatically. This information can be edited, and new information can be added.

Diagnosis: Ketosis Strong. By default the date is today's date, a Vet name appears only if it was entered in Health parameters.



We enter a **Treatment**: Drenching + a schedule for 3 days.
Drug: Propylene Glycol + a schedule for 3 days.



Breeding Cows

Breeding

Each farmer's goal is to have a **cost effective program to grow out and inseminate** his quality females to the bulls of his choice.

Heat Detection

To achieve maximum genetic gains in a dairy herd, artificial insemination with top proven sires must be used on all cows and replacement heifers. The benefits of AI are clear, however AI is not without its problems, the primary one being heat detection.

AfiFarm offers you tools for actual Heat Detection and Herd Fertility Performance.

Estrus reports are daily worksheets for **Heat detection** and daily decisions on which animals to inseminate.
A cow automatically enters the **Estrus** report if it deviates from the parameters set for breeding, excessive activity, and/or breeding in the Estrus Parameters window. These deviations may indicate that a cow is in heat, is a candidate for insemination, or is having fertility problems
A cow remains in the **Estrus** report until a heat or insemination date is entered. If no heat/insemination date is reported, the cow remains in the report for 2 days and is then deleted.

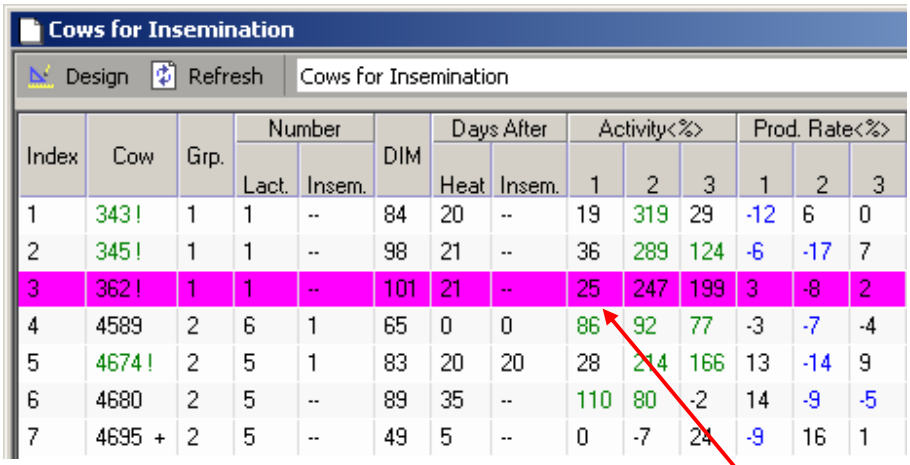
Estrus Reports

- **Cows for Insemination**: Three factors determine whether or not the cow is included in the breeding report: the cow's heat cycle, activity deviation, and production rate deviation. **Recommended Report for analysis and decision making.**
  - Stages in the cow's heat cycle: **A cow's normal heat cycle lasts approximately 21 days. In** Estrus Parameters **Minimum and Maximum days after insemination or heat (respectively) are set to indicate when in this cycle the cow is most likely to be in heat. Default settings are set to 18–24 in accordance with a normal heat cycle of around 21 days. In the case of heifers, the range is 18-23 days.**
  - The **Production rate deviation** value entered in Parameters sets the threshold for inclusion in the **Cows for Insemination Report**; the production rate value is shown in **blue** in the report.
  - The **Activity deviation** value entered here sets the threshold for inclusion in the **Cows for Insemination Report**; the activity deviation is shown in **green** in the table.
- **Excessive Activity (Suspected Heat):**
  - Lists cows with high activity that have been confirmed pregnant (allows you to detect possible abortions).
  - Cows that have been designated as not for insemination (allows you to monitor these cows and considering fluctuating milk prices, to change your policy).
  - Cows not within the range of days after calving/ breeding specified in the **Cows for Insemination Report**.

- **Breeding Report:** Lists cows with possible fertility problems. Cows enter the Breeding Report at the end of the **Voluntary Waiting Period,** and leave the report when pregnancy is confirmed by the Breeding Report parameters. (A herdsman can decide that cows will appear on the report only 60 days after calving because he does not inseminate before 60 days or that he only records heats which occur 20 days after calving. The period is defined according to each farm's strategy.

Rows and columns in Estrus reports

All **Estrus** reports are tables, in which cow numbers are listed in a column at the left, and information for each cow appears in subsequent columns. All breeding reports can be viewed from any of the reports, using the pull down menu listing all the reports.



Index	Cow	Grp.	Number		DIM	Days After		Activity<%>			Prod. Rate<%>		
			Lact.	Insem.		Heat	Insem.	1	2	3	1	2	3
1	343 !	1	1	--	84	20	--	19	319	29	-12	6	0
2	345 !	1	1	--	98	21	--	36	289	124	-6	-17	7
3	362 !	1	1	--	101	21	--	25	247	199	3	-8	2
4	4589	2	6	1	65	0	0	86	92	77	-3	-7	-4
5	4674 !	2	5	1	83	20	20	28	214	166	13	-14	9
6	4680	2	5	--	89	35	--	110	80	-2	14	-9	-5
7	4695 +	2	5	--	49	5	--	0	-7	24	-9	16	1

Double click on any row of a **Breeding** report (or any other type of Cow report), to display a **10 Day Graph**. Graphs illustrate the deviations and for most people are more tangible than the numbers in the report. In the example above, **cow #362** had a rise in **Activity** and a slight drop in **Milk**. The cow is 21 days since her last recorded heat. High Activity + good 21 day cycle makes her a candidate for insemination.

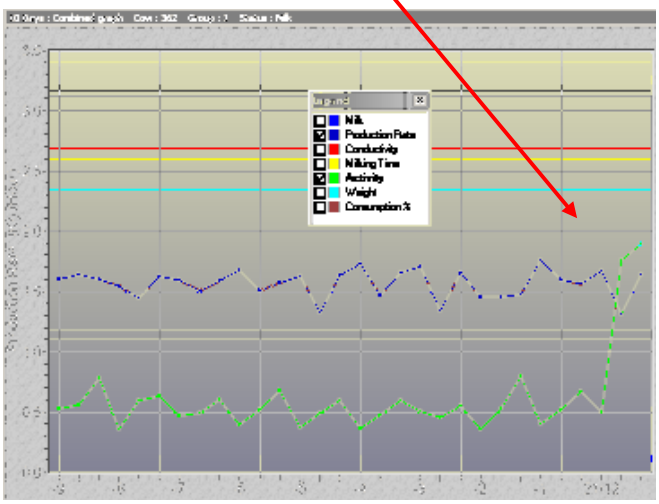


***TABLE*: COLUMNS AND ROWS IN ESTRUS REPORTS**

Column	Information
Index	The number of the row in the table.
Cow	Cow number; a **green number** indicates high activity. An exclamation point (**!**) indicates that the time elapsed since the cow was last in heat falls within the parameters you set in the **Estrus Parameters** window, i.e., the cow is in heat within its heat cycle (normally between 18 to 24 days). A plus sign (**+**) indicates significant activity on the previous day.
Group	The number of the group the cow is assigned to.
Lact. Num.	The number of times the cow has lactated.
Insem.Num.	The number of inseminations the cow has had in the present lactation.
DIM	Days in Milk.
After heat	The number of days that have elapsed since the last time the cow was in heat.
After insem.	The number of days that have elapsed since the last time the cow was inseminated.
Activity (%): Sessions 1-3	The percentage of deviation from the average activity of this specific cow, measured over 3 milking sessions in the past 24 hours. A **green** number indicates an increase in activity, above the threshold set in the **Estrus Parameters** window. Increased activity may indicate that the cow is in heat.
Production Rate (%): Sessions 1-3	Sometimes, excessive activity is followed by a decrease in the milk production rate. If the decrease is greater than the threshold defined in the **Estrus Parameters** screen, the production rate number is shown in **blue**.

Pasture

These reports are structurally similar to the reports mentioned above. Inclusion of a cow in the this list depends upon the parameters set by the herd manager in the **Estrus Parameters** screen.

Herds which go out to pasture should use the ✔ **Pasture** button feature in **Estrus Parameters**. This function causes the program to calculate **Activity deviation** for each animal, not only as compared to its own last **10 day activity average** but compares the deviation to the rest of the animals in the group.

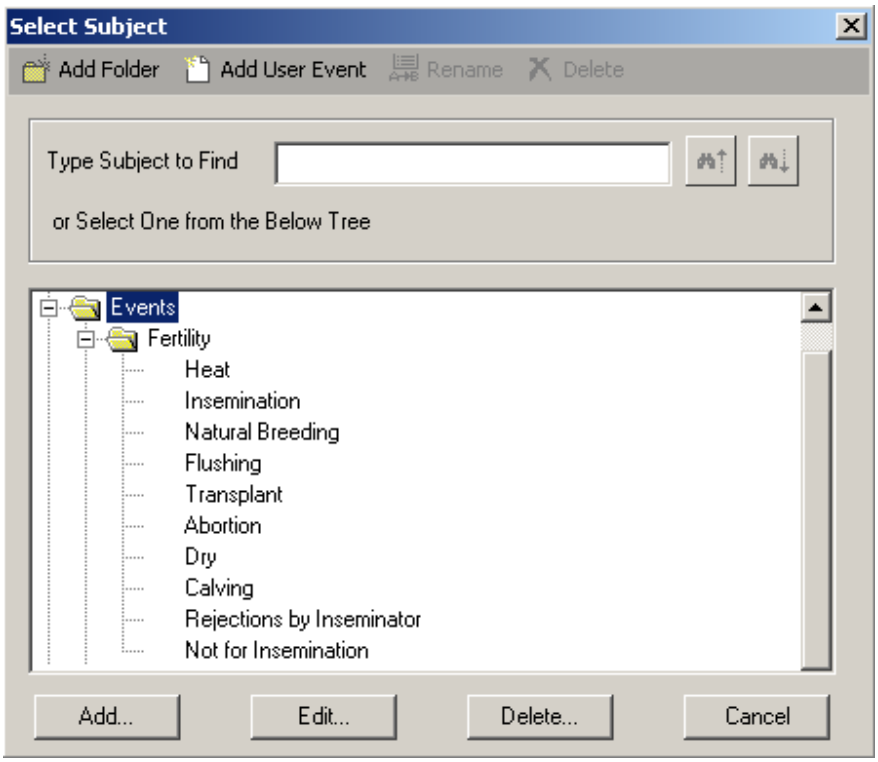
Each day the cows are taken to a different lot and the distances can vary from day to day. The additional calculation – group activity comparison – allows you to receive more accurate heat detection and less false positives.

When the Pasture button is activated ✔, your default Estrus reports are Pasture reports.

Tip: **In a herd where the cows are kept in stables and a group of cows ran away during the night. During the next session, temporarily use the Pasture feature to get a more accurate Cows for Insemination report. Use the Pasture report.**

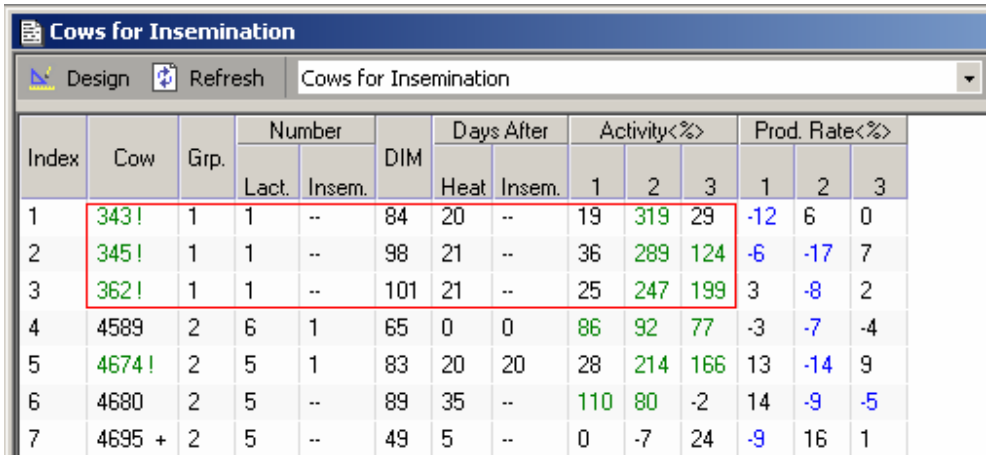
Breeding

Reporting Fertility Events in AfiFarm



Entering accurate and detailed information in the Database will help your decision making and give you a better analysis of herd performance in summary reports.

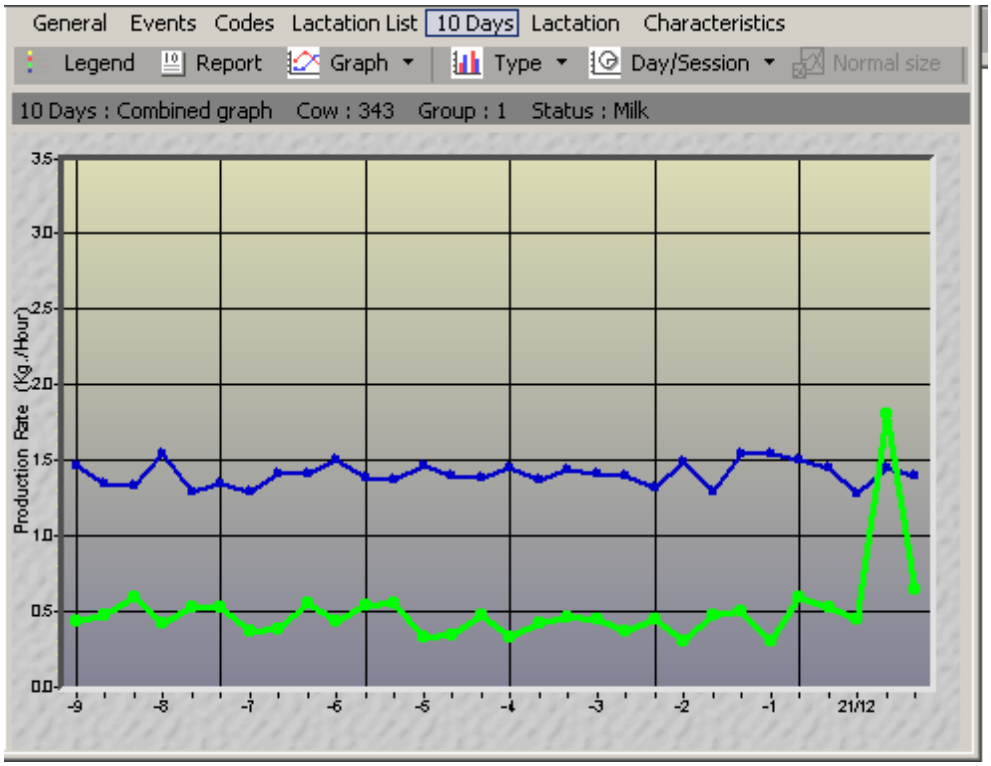
- **Heat** – Enter all heats. Decision making based on your Estrus reports will be clearer. Example: the first three cows on the report are all in a DIM range for breeding, they show a high activity deviation and are 20-21 days after heat (past heat events were reported). They are sure candidates.



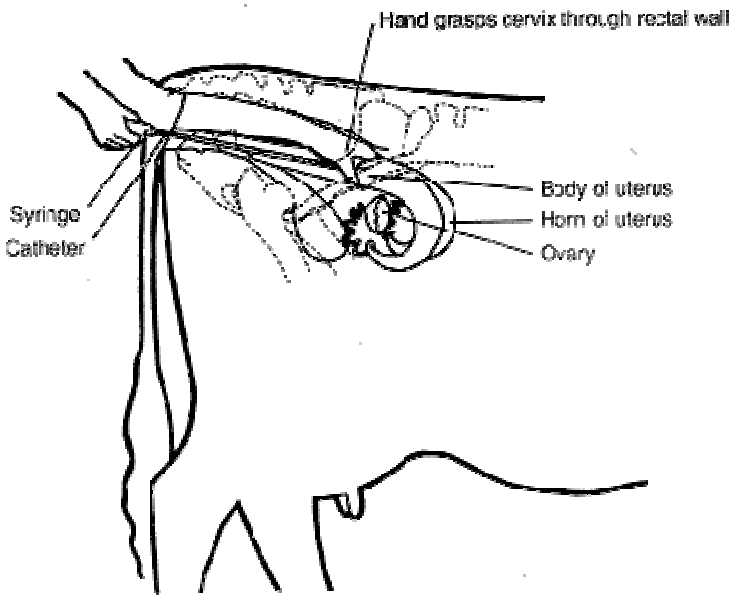
Index	Cow	Grp.	Number		DIM	Days After		Activity<%>			Prod. Rate<%>		
			Lact.	Insem.		Heat	Insem.	1	2	3	1	2	3
1	343 !	1	1	--	84	20	--	19	319	29	-12	6	0
2	345 !	1	1	--	98	21	--	36	289	124	-6	-17	7
3	362 !	1	1	--	101	21	--	25	247	199	3	-8	2
4	4589	2	6	1	65	0	0	86	92	77	-3	-7	-4
5	4674 !	2	5	1	83	20	20	28	214	166	13	-14	9
6	4680	2	5	--	89	35	--	110	80	-2	14	-9	-5
7	4695 +	2	5	--	49	5	--	0	-7	24	-9	16	1

- **Insemination** – Enter all inseminations and details such as **Bull ID** and **Inseminator name**. The additional data will be available in reports such as Fertility by Breeder, Fertility by Bull. It will also automatically enter Sire ID for new born calves.
- **Rejection by inseminator** – This might help you in cutting semen costs and/ or identifying a problematic Breeder.
- **Not for Insemination** – Enter this event for cows to be culled, they will not clutter up your Estrus reports.

Cow 10 Day Activity Graph



AI Technique



Fertility Reports

General Fertility and Pregnancy Rate Reports

These reports allow you to monitor:

- **DIM at First Insemination** - DIM at first insemination is a measure of early heat detection. Evaluation in a herd using this measure is dependent on the length of the postpartum rest period the dairy producer gives the herd. With good heat detection the average days in milk at first insemination should not exceed the rest period by more than 22 days (6). (i.e. rest period = 60 Days, DIM at 1st insemination <= 82 days)
- **Percent Detected Heats -** Is calculated by the following formula:

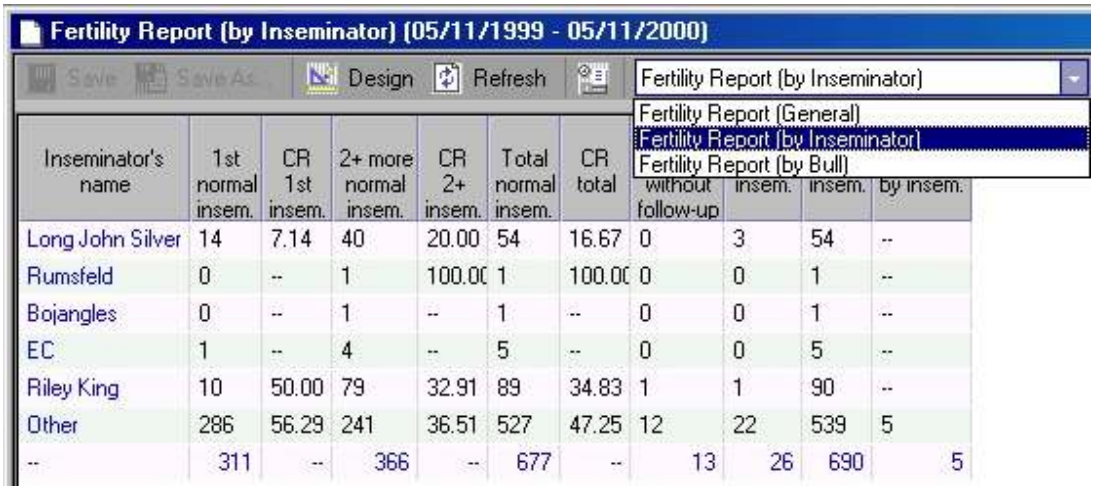
$$\text{Percent Heats Detected} = \frac{(\text{Services per Conception X } 21)}{(\text{Days Open - Voluntary Waiting Period} + 10.5)}$$

- **Breeding Intervals -** A breeding interval is the number of days between successive inseminations. On the average, cows cycle at 21 days intervals. With good heat detection, breeding intervals should average 21 Days. However, because of missed heats, abnormal cycle lengths and a number of other factors a good average breeding interval would be 24-30 days
- **Percent Confirmed on Pregnancy Check -**

By Inseminator Fertility Report

This report is of particular importance in farms where inseminations are done by workers on the farm, to compare performance of each inseminator.

In the dialog box in the top left of the **Fertility report** window choose **By Inseminator** or in the **Folders List > Fertility > Fertilty Reports** and from the Reports list choose **By Inseminator.**



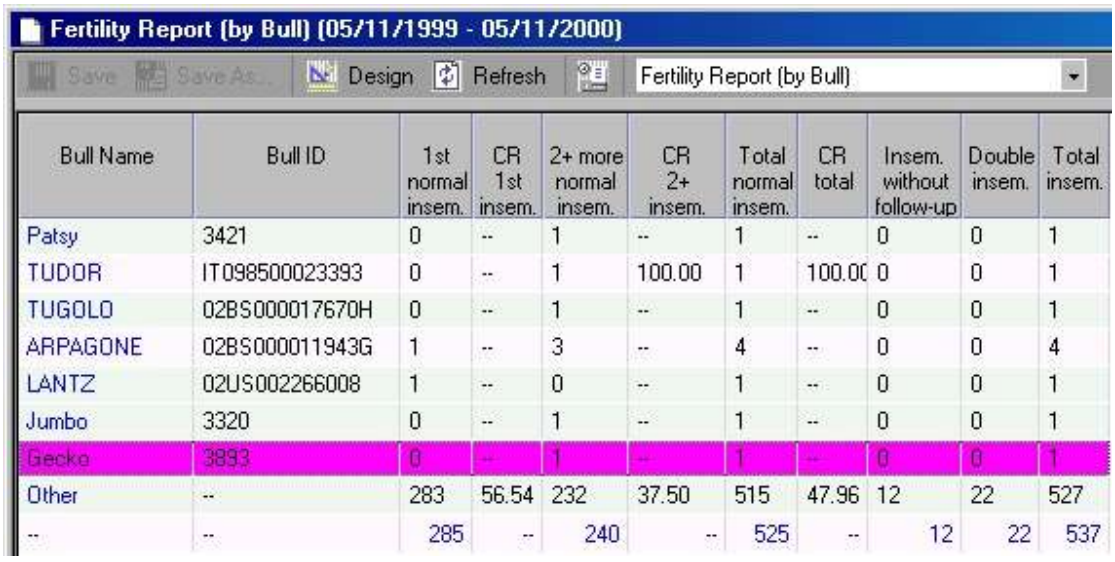
Fertility Report (by Inseminator) (05/11/1999 - 05/11/2000)

Save | Save As... | Design | Refresh | Fertility Report (by Inseminator)

Fertility Report (General)
Fertility Report (by Inseminator)
Fertility Report (by Bull)

Inseminator's name	1st normal insem.	CR 1st insem.	2+ more normal insem.	CR 2+ insem.	Total normal insem.	CR total	without follow-up	insem.	insem.	by insem.
Long John Silver	14	7.14	40	20.00	54	16.67	0	3	54	--
Rumsfeld	0	--	1	100.00	1	100.00	0	0	1	--
Bojangles	0	--	1	--	1	--	0	0	1	--
EC	1	--	4	--	5	--	0	0	5	--
Riley King	10	50.00	79	32.91	89	34.83	1	1	90	--
Other	286	56.29	241	36.51	527	47.25	12	22	539	5
--	311	--	366	--	677	--	13	26	690	5

By Bull Fertility Report



Fertility Report (by Bull) (05/11/1999 - 05/11/2000)

Save | Save As... | Design | Refresh | Fertility Report (by Bull)

Bull Name	Bull ID	1st normal insem.	CR 1st insem.	2+ more normal insem.	CR 2+ insem.	Total normal insem.	CR total	Insem. without follow-up	Double insem.	Total insem.
Patsy	3421	0	--	1	--	1	--	0	0	1
TUDOR	IT098500023393	0	--	1	100.00	1	100.00	0	0	1
TUGOLO	02BS000017670H	0	--	1	--	1	--	0	0	1
ARPAGONE	02BS000011943G	1	--	3	--	4	--	0	0	4
LANTZ	02US002266008	1	--	0	--	1	--	0	0	1
Jumbo	3320	0	--	1	--	1	--	0	0	1
Gecko	3833	0	--	1	--	1	--	0	0	1
Other	--	283	56.54	232	37.50	515	47.96	12	22	527
--	--	285	--	240	--	525	--	12	22	537

This report gives you a comparative evaluation of the performance of the bulls you use.

Other Fertility Tools

Anestrus Report

The accurate and efficient detection of heats in dairy cattle is an important component of a good reproductive management program. Individual cows may not be observed in estrus for one of two reasons. First, the ovaries of the cow are not functioning properly and the cow is anestrus (failure to have an estrus cycle). The second reason is that the Herdsman misses seeing a cow that actually is in estrus – the second reason has been eliminated through your purchase of AfiMilk.

The percentage of cows in a herd without a normal estrus cycle by 60 DIM can range from less than 5% to over 20%.

The **Anestrus report** displays a list of cows which have not displayed heat symptoms according to a set of **Parameters** (flexible parameters which can be changed by the user to suit his breeding policy) which make up the sets of the Anestrus Trigger (this same Trigger is used to automatically put certain animals on the Vet Visit – see Reasons for Vet Visit later in this chapter).

- Any heifer above the age of 427 days which has no recorded heat or is not within the range of 0-25 days since last heat will appear on the report.
- Any 1st lact cow above 70 DIM which has no recorded heat or is not within the range of 0-25 days since last heat will appear on the report.
- Any 2nd lact cow above 52 DIM which has no recorded heat or is not within the range of 0-25 days since last heat will appear on the report.
- Any 3rd or more lact cow above 52 DIM which has no recorded heat or is not within the range of 0-25 days since last heat will appear on the report.
- Any animal after 30 or more days after abortion which has no recorded heat will appear on the report.
- Any animal found negative at preg check which has no recorded heat since the PD-.

Vet Visit

If you choose to work with the AfiFarm Vet Visit, its' Reasons for Vet Visit Triggers (flexible parameters which can be changed by the user to suit his breeding policy) can automatically bring cows to the Vet Visit for the following reasons:

- **Post Partum examination** – routinely checking each cow can save on open days. Untreated metritis will cost you in milk production and added open days.
- **Short cycle**
- **Prolonged cycle**
- **Anestrus**
- **Repeated breedings**
- **PD**

Procedures

In AfiFarm you can set up **Ovulation Synchronization Programs** which can be easily applied to animals fitting the criteria for the procedure which best suits each farmer. These criteria are established through the use of **AfiFarm Triggers** to filter the specific animals. The Start date and different steps of each Procedure are easily set up through the use of a Procedure Wizard which guides the user through all the steps.

In addtion, attention lists such as the Daily Agenda and Today's Tasks remind you of tasks to perform and allow for easy Event confirmation and multiple animal data entry.

Various

Animal Reports

Herd Reports

A detailed **Herd Inventory** report which can be generated for any period of time. The report provides specific information about each status group during the defined period of the report.

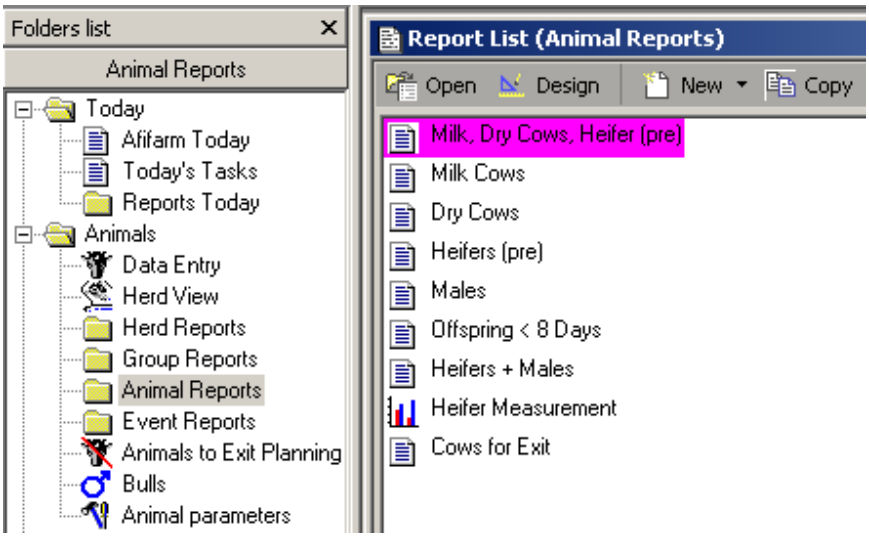
Status Distribution (01/01/2002 - 31/12/2002)

Save | Save As... | Design | Refresh

	Beginning total	Ending total	Avg.	Births	Entry	Exit	Died during calving	Died after calving	Status change +	Status change -
First Lactation	167	178	187.96	--	2	39	--	4	181	133
2+ Lactations	257	266	291.00	--	14	95	--	13	317	227
Total Milking Cows	424	444	478.96	--	16	134	--	17	498	360
Dry	90	100	57.99	--	--	5	--	1	332	317
Total Cows	514	544	536.95	--	16	139	--	18	830	677
Dry/cows (%)	17.51	18.38								
Heifers (pre) <= 2 Month	52	52	151.11	240	--	26	1	9	--	214
Heifers (pre) > 2 Month	182	265	137.43	--	81	16	--	4	233	216
Pregnant Heifers (pre)	85	103	118.83	--	2	2	--	--	209	192
Total Heifers (pre)	319	420	407.38	240	83	44	1	13	442	622
Heifers (pre)/cows (%)	62.06	77.21								
Males <= 2 Month	9	2	2.34	243	--	249	7	4	--	1
Males > 2 Month	--	--	--	--	--	1	--	--	1	--
Total Males	9	2	2.34	243	--	250	7	4	1	1
Total Heifers Parking	--	--	--	--	2	--	--	--	--	--
Total Cows Parking	--	2	2.51	--	--	25	--	12	29	2
Total Parking	--	2	2.51	--	2	25	--	12	29	2
Total Herd	842	968	949.19	483	101	458	8	47	1302	1302

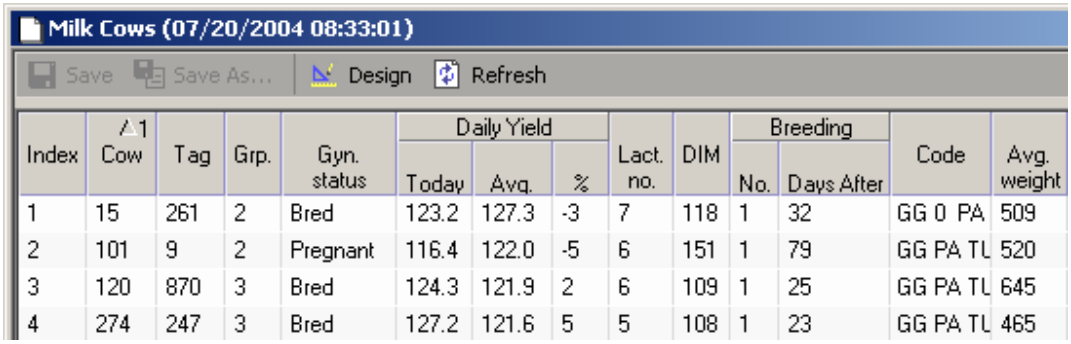
Animal reports

Pre-set **Animal reports** give you a view of each Status in detail. These reports can be copied and enhanced to display additional information relevant to the analysis you wish to perform.



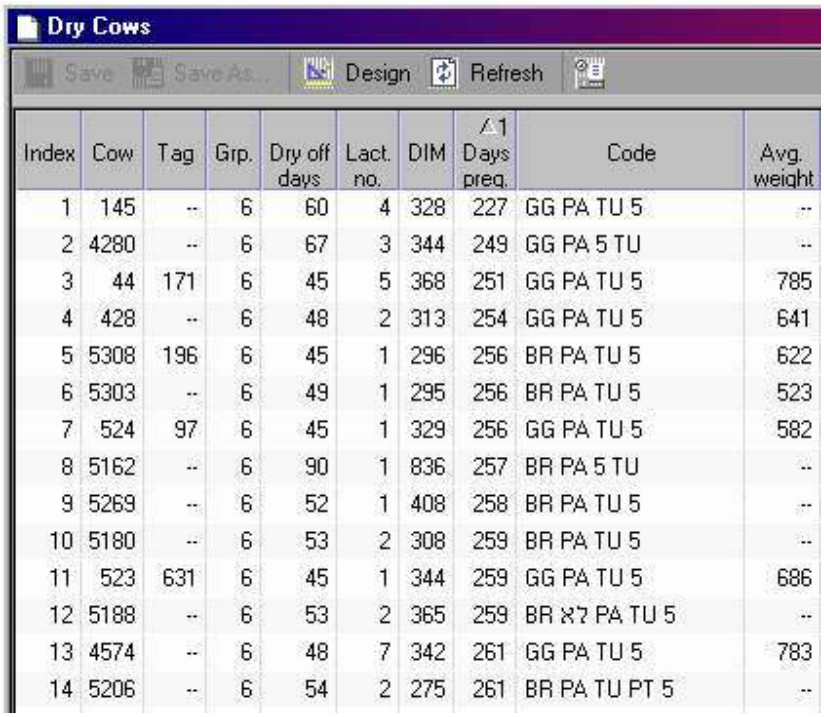
Milk Cows Report

A list of the cows in the Milk Status with all the relevant details: Latation information, last day and 10 day average data.



Index	Cow	Tag	Grp.	Gyn. status	Daily Yield			Lact. no.	DIM	Breeding		Code	Avg. weight
					Today	Avg.	%			No.	Days After		
1	15	261	2	Bred	123.2	127.3	-3	7	118	1	32	GG 0 PA	509
2	101	9	2	Pregnant	116.4	122.0	-5	6	151	1	79	GG PA TL	520
3	120	870	3	Bred	124.3	121.9	2	6	109	1	25	GG PA TL	645
4	274	247	3	Bred	127.2	121.6	5	5	108	1	23	GG PA TL	465

Dry Cows Report

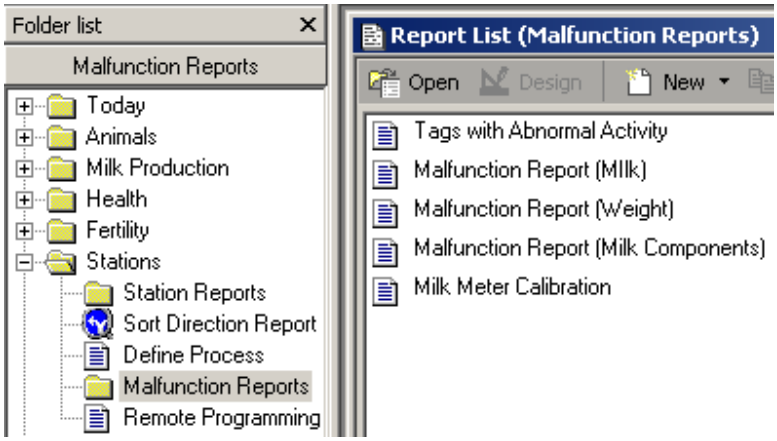


Index	Cow	Tag	Grp.	Dry off days	Lact. no.	DIM	∠1 Days preg.	Code	Avg. weight
1	145	--	6	60	4	328	227	GG PA TU 5	--
2	4280	--	6	67	3	344	249	GG PA 5 TU	--
3	44	171	6	45	5	368	251	GG PA TU 5	785
4	428	--	6	48	2	313	254	GG PA TU 5	641
5	5308	196	6	45	1	296	256	BR PA TU 5	622
6	5303	--	6	49	1	295	256	BR PA TU 5	523
7	524	97	6	45	1	329	256	GG PA TU 5	582
8	5162	--	6	90	1	836	257	BR PA 5 TU	--
9	5269	--	6	52	1	408	258	BR PA TU 5	--
10	5180	--	6	53	2	308	259	BR PA TU 5	--
11	523	631	6	45	1	344	259	GG PA TU 5	686
12	5188	--	6	53	2	365	259	BR ?? PA TU 5	--
13	4574	--	6	48	7	342	261	GG PA TU 5	783
14	5206	--	6	54	2	275	261	BR PA TU PT 5	--

Malfunction Reports

To **View Malfunction Reports**

In the **Folders List**, click **Malfunction Reports**.



Malfunction Report (Milk)

The **Malfunction Report (Milk)** displays malfunctions in the **Milk Station** for each of the components: **Milk Meter**, **Accuracy**, **Data Sampling (Communication)**, **Identification, Electrodes** and **AMT** The information is available for the last 5 sessions.

Milk Meter Malfunction Diagnostic

1- Milk meter malfunctions
This function defines problems with Milk meters. A malfunction is defined if more than 25% of cows milked at one of the stall have Yield = 0 or Conductivity = 0, or Conductivity above a system defined threshold, then **Fault** appears in the column "Milk meter".

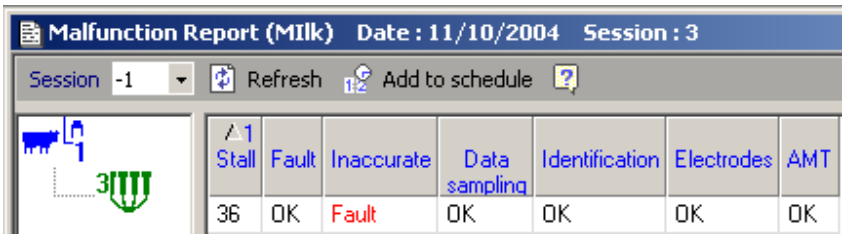
2- Accuracy malfunctions
Yield of cow for current session and 10 day yield average for current session differ by **more or less** than 25% and this occurs for more than 50% of milked animals for the specific stall. Then **Fault** appears in the column "Inaccurate".

3- Communication (Data Sampling) malfunctions
For any cow with a conductivity value = 0. Then **Fault** appears in the "Communication" column

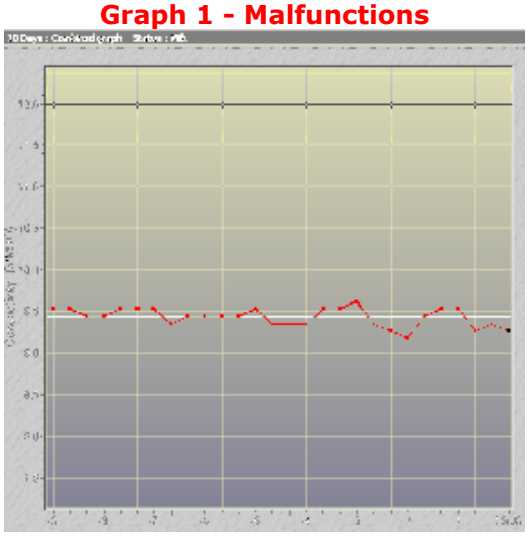
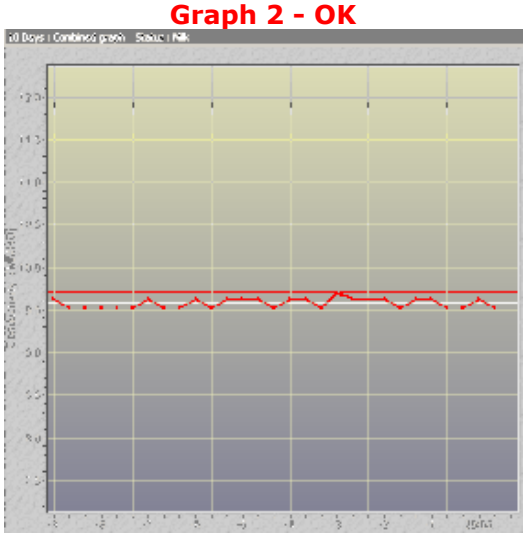
4- Identification malfunctions
ID detection malfunctions determine problems with the cow Identification system. If 25% of milked cows do not have ID, but have yield > 0.6kg (1.5lb) (for a session) then the word **Fault** appears in the column "Identification".

5- Electrodes malfunctions
More then 50% of cows with yield > 0.6kg have wrong conductivity values. Then word **Fault** appears in the column "Electrodes".

6- **AMT** (Pulsator or Liners malfunctions)
More then 50% of cows with yield > 0.6kg have an AMT reading in the current session that differs from 10 day AMT average for this session by **more** than 25%. Then **Fault** appears in the "AMT" column.



In the above example, there was a malfunction on 15/06/2004 in Stalls 23,22,21 and 8 during Session 2, indicated by the word **Fault** in the **Electrodes** column. The other parameters all functioned properly.

Graph 1 - Malfunctions	**Graph 2 - OK**
	
A **10 Day Conductivity Graph** shows that there is a washing issue on the farm, which can explain dirty Electrodes.	Water temperature was raised, detergent/ acid quantities calibrated and the problem ceased.

Vet Visit

Vet Visit features

- All the Vet Visit features are available from one window.
- There is a default US Vet Visit type: Vet Palpation Check
- User friendly Editing/Creating of a new Vet Visit type.
- Reasons for Vet Visit names have been changed to suit US farms.
- Two default Worksheets.
- The Worksheet is totally flexible, it can be edited or built from scratch to include any header. Headers can be renamed to allow for a more personal touch and to assist in condensed print.
- Condensed print – useful for large dairies.
- The Vet Visit can be totally automatic – Vet Visit Schedule – the system will activate the Vet Visit every week (or any other time setting), print the Worksheet on Vet Visit day and Send the cows to Sort.
- Quick Keys can be programmed. All the keys on the keyboard (letters, numbers & function keys) can be associated to Diagnoses, Protocols, Drugs, Treatments or Other Commands.
- Vet Protocols can be associated with Reasons for Vet Visit.
- New Reasons for Vet Visit:
  - PD Confirmation (120 preg days)
  - PD Bull Pen
    - Group Definition – Bull Pen groups can be defined.
    - New title: Days with Bull
    - Quick Key option for changing pregnancy days

Vet Visit lists are automatically generated on the basis of a preset array of conditions. By setting a date for the Vet Visit, **AfiFarm** searches the database, listing cows that comply with the preset criteria for the Vet Visit at that particular date.
This screen allows you to prepare Vet Visit lists and process the Vet Visit results (Vet diagnosis and treatment instructions). These lists may also be used to sort out cows for the Vet, as Vet Visit data sheet, and to enter Vet events (Diagnosis, Treatment..) into the cows data sheet.
The Vet Visit screen lists the existing processed Vet Visits.

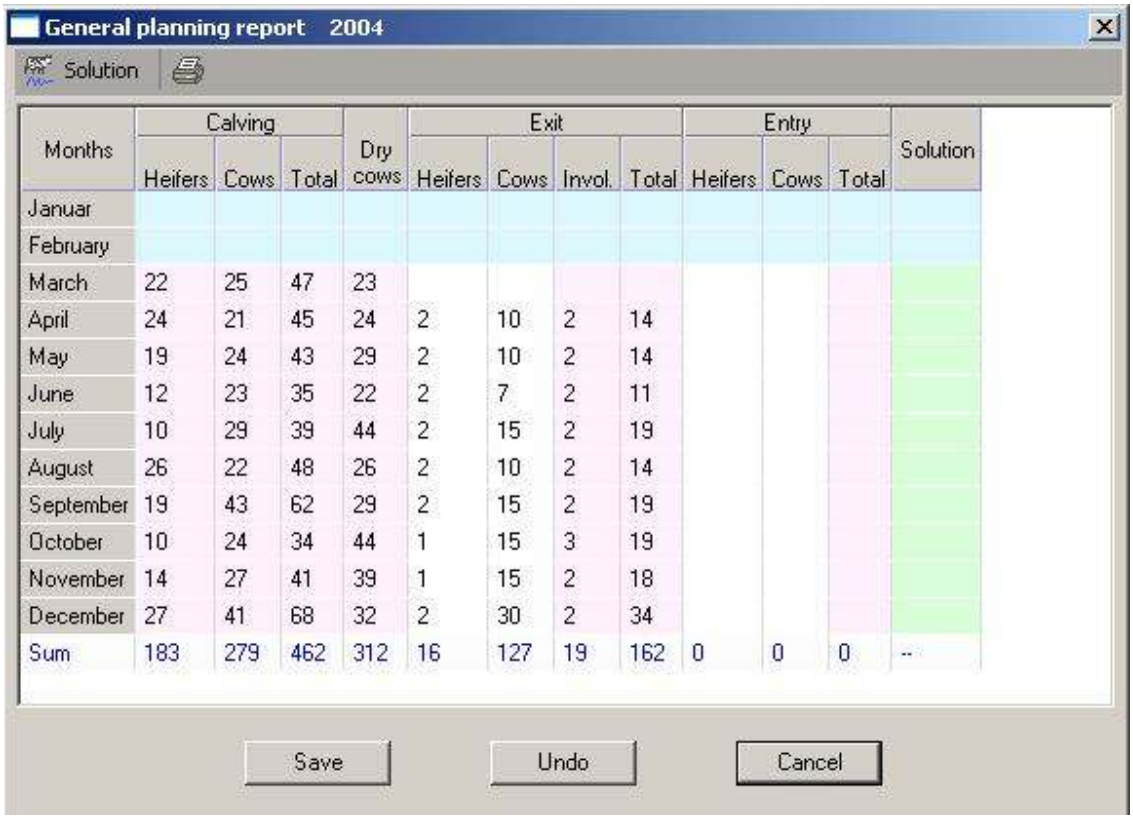
Herd and Yield Planning

The system builds Lactation Curves according to history for each lactation: 1st, 2nd, 3rd, 4th and more.

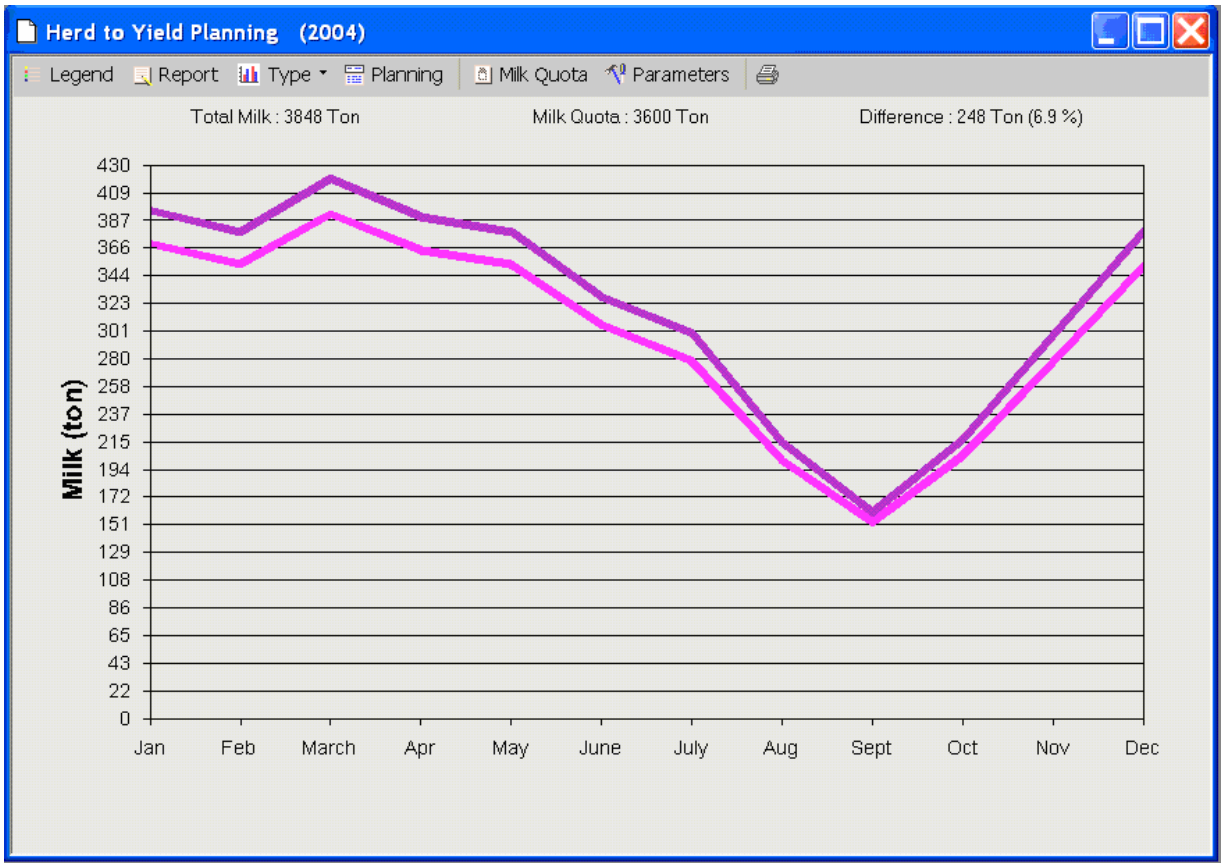
To calculate lactation length and calving intervals, CR is calculated for each insemination according to historical data. By default every 180 days the basis for calculation changes as fertility, strategy and production levels change.

Culling and its distribution as well as entry (from born in Herd and purchased animals) are taken into account.

If your farm is seasonal or has extreme differences in temperature and humidity in various months the system adjusts for these factors based on past lactation curves.



Months	Calving			Dry cows	Exit				Entry			Solution
	Heifers	Cows	Total		Heifers	Cows	Invol.	Total	Heifers	Cows	Total	
Januar												
February												
March	22	25	47	23								
April	24	21	45	24	2	10	2	14				
May	19	24	43	29	2	10	2	14				
June	12	23	35	22	2	7	2	11				
July	10	29	39	44	2	15	2	19				
August	26	22	48	26	2	10	2	14				
September	19	43	62	29	2	15	2	19				
October	10	24	34	44	1	15	3	19				
November	14	27	41	39	1	15	2	18				
December	27	41	68	32	2	30	2	34				
Sum	183	279	462	312	16	127	19	162	0	0	0	--



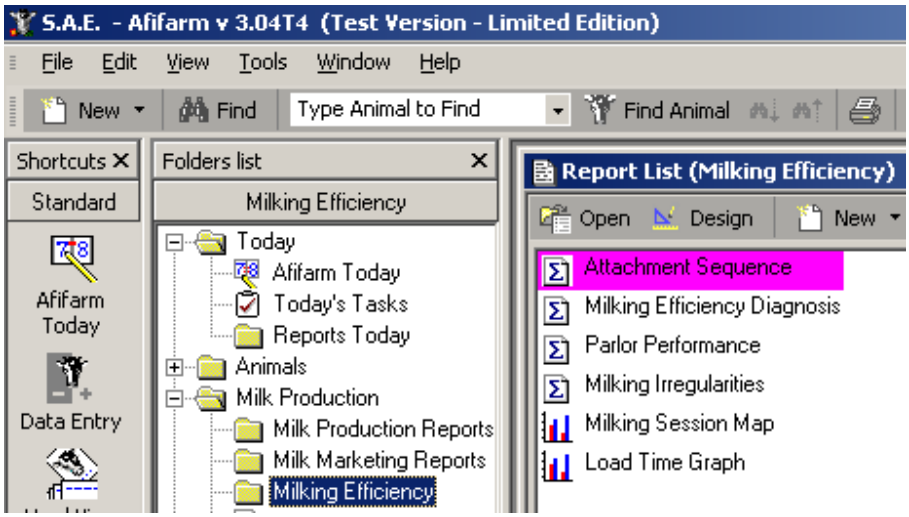
Herd to Yield Planning 2004 (Calculated: 01/03/2004)

Graph | Select Year | Milk Quota | Parameters

Month	Quota+ Factor	Total yield	Avg. yield per milk cow	Avg. cows	Milk cows	Calving			Dry cows	Exit				Entry		
						Heifers	Cows	Total		Heifers	Cows	Invol.	Total	Heifers	Cows	Total
Januar	468561	491049	34	529	470	5	23	28	21	7	8	--	15	26	--	--
February	441192	466073	34	534	474	19	22	41	22	9	7	--	16	35	--	--
March	472415	512298	35	536	478	22	25	47	23	--	--	--	--	--	--	--
April	462234	503631	35	545	485	24	21	45	24	2	10	2	14	--	--	--
May	472924	517147	34	553	487	19	24	43	29	2	10	2	14	--	--	--
June	463635	500466	34	557	489	12	23	35	22	2	7	2	11	--	--	--
July	464533	507450	34	549	481	10	29	39	44	2	15	2	19	--	--	--
August	442134	503856	34	554	479	26	22	48	26	2	10	2	14	--	--	--
September	417184	495756	34	558	487	19	43	62	29	2	15	2	19	--	--	--
October	454614	511877	35	555	478	10	24	34	44	1	15	3	19	--	--	--
November	467773	483928	35	550	461	14	27	41	39	1	15	2	18	--	--	--
December	470751	485511	35	537	448	27	41	68	32	2	30	2	34	--	--	--
Sum	5497950	5979042	--	--	--	207	324	531	355	32	142	19	193	61	--	--

Milking Efficiency Reports

To view **Milking efficiency** reports:
In the Folders List, click **Milk Production > Milking efficiency .**



The **Milking efficiency Reports List** includes pre-set reports.

Milking Efficiency Reports are designed to provide summary information of parlor and milker performance and help you analyze the quality of milking in your parlor. At a quick glance you can easily identify whether your workers are milking according to the routine which you have established as policy on your farm. By making comparisons to average performance you can pinpoint specific deviations from the norms you have established for maximum efficiency. Each report focuses on a specific aspects of the milking, thus allowing you to determine the operation procedure during milking.

Milking Efficiency Diagnosis Report

This report displays **Milking efficiency** per **Session** and **flow rates**. This report can be very useful in worker evaluation. Extreme changes in **Flow rates** indicate that the milking procedure is not followed evenly by workers. Low figures show that there was either no udder preparation or that insufficient time was allowed between udder preparation and cluster attachment.

The Attachment sequence report

1- If the **attachment sequence** is erratic rather than in the order you decided upon, you know that workers are not following the established routine.
2- A milking where the number of **kick offs** deviates from the average acceptable number indicates abnormal activity.
3- A milking which went unusually slow without any technical problems reported for that session might show you that someone spent his time next to the water cooler instead of in the parlor!
4- **Low Peak Flow** times can indicate that the udders were not properly prepared.

5- The **Detailed reports** which accompany each **Milking Efficiency report** can provide information about problematic stalls as well as offer additional information about specific animals' performances.

Parlor Performance Report

This report summarizes the output of the milking parlor and its operation. It relates to each parlor side individually so if you have different operators (milkers) in each parlor side, a comparison between their performances may be analyzed.
In the example below the herd is milked 3 times a day.
In addition to **Cow/ hour**, **Milk/ hour** you are supplied with last 10 day averages for **Cow/ hour** and **Milk/ hour**. This can give you indications on worker performance for the specific sessions in comparison to averages.
Milking efficiency %: Percentage is the % of time cows are being milked from the total time the milking takes) Calculated per session or day. (Milking time / Visit time * 100 = Milking efficiency %). Lower figures indicate less efficiency in the use of the parlor.

Milking Irregularities Report

This report summarizes all the non standard events during the milking session. A significant rise in milking irregularities may indicate that something is disturbing the cows during milking.
Irregular take offs indicates clusters removed manually before the cow finished.
Kick offs is representative of nervous cows which kicked off the machine. In both cases a high amount reveals that the milking is not done properly.
In the example below the number is high but a large number of heifers calved within the last 10 says and they are still "nervous".
Multiple attachments will give you an indication of how many "kicked off" clusters were re-attached to the cows, if the difference between the two is great, you know that some cows left the parlor without being milked completely.