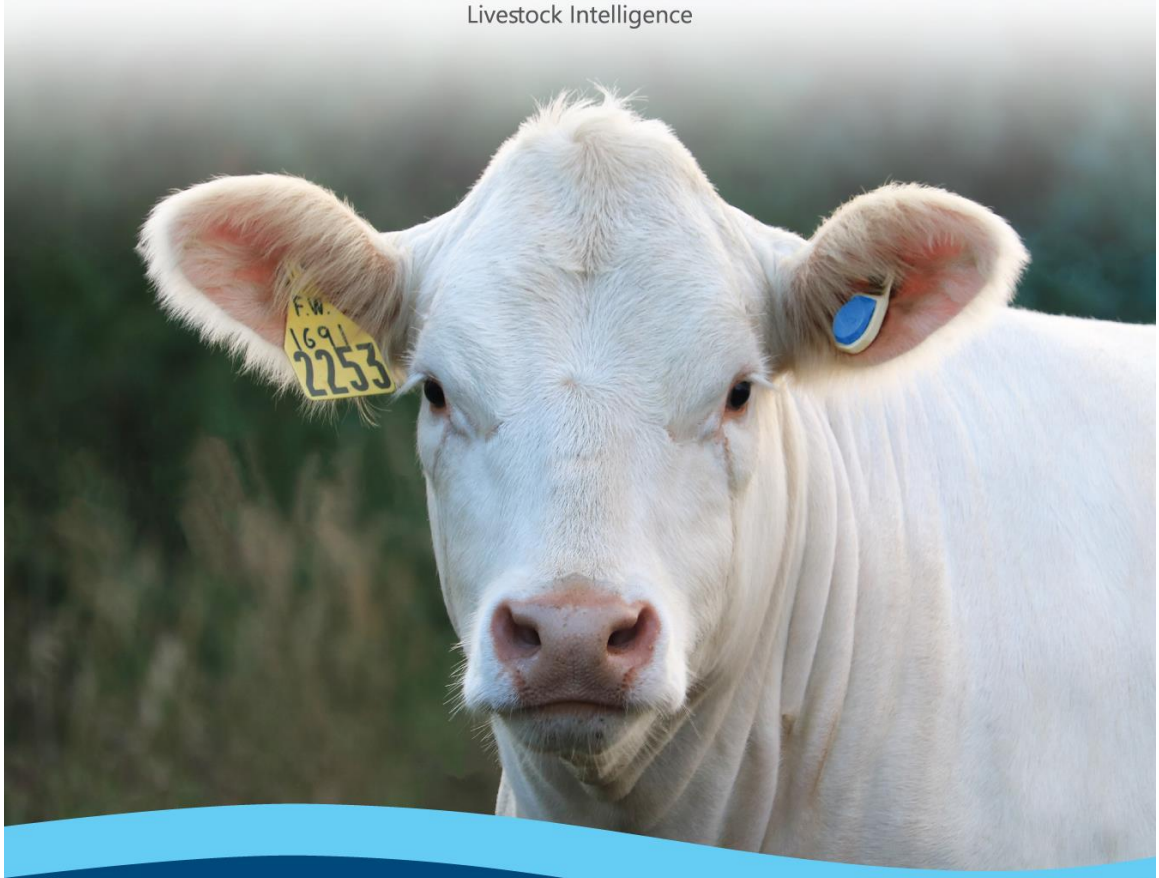
Allflex

Livestock Intelligence



SenseHub

User Guide

An Antelliq company

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Table of Contents

1 SenseHub™ 1

1.1 Safety First 2
1.2 Conventions Used in this Manual 2

2 SenseHub™ Setup Guide 3

2.1 cSense Flex Tag Placement 3

2.1.1 Attaching cSense Flex Tags to Cows 3
2.1.2 Removing cSense Flex Tags from Cows 7
2.1.3 Attaching eSense Flex Tags to Cows 8
2.1.4 How to Place eSense Flex Tags to Cows as a Second Tag 10
2.1.5 How to Remove eSense Flex Tags 11

2.2 SenseHub™ Basic Configuration 13
2.3 SenseHub™ Registration 18
2.4 SenseHub™ Mobile Application 21
2.5 Minimum Requirements 21
2.6 Using the SenseHub™ Tools Installer 22
2.7 Creating Groups 24
2.8 First Time Animal Entry using SenseHub™ 26

2.8.1 Required Data when Entering Heifers/Cows 26

2.9 Entering Heifers in SenseHub™ 27
2.10 Entering Cows in SenseHub™ 30
2.11 Pairing Cows and cSense/eSense Tags 33
2.12 SenseHub™ Cow Card 34

2.12.1 Timeline 35
2.12.2 Events 36
2.12.3 Graphs 41
2.12.4 Details 43

3 Using SenseHub™ 45

3.1 Overview/Dashboard 45

3.1.1 Accordion/Widgets 46
3.1.2 Animals in Heat 47
3.1.3 Animals to Inspect 48
3.1.4 Farm Statistics 49
3.1.5 Key Performance Indicators - KPIs 50
3.1.6 Dashboard Configuration 52
3.1.7 System Maintenance 54

3.2 SenseHub™ Alerts 55

3.2.1 Cow Alerts 55
3.2.2 Tag Software Version Alerts 56
3.2.3 System Alerts 58

3.3 SenseHub™ Reports 60

3.3.1 Adding a Report to Your Favorites 61
3.3.2 Removing a Report from your Favorites 61
3.3.3 Sorting and Filtering Reports 62
3.3.4 Navigating within Reports 64
3.3.5 Batch Events from Reports 64

3.4 SenseHub™ Graphs 65
3.5 Daily Tasks 69

3.5.1 Reading the Animals in Heat Report 70
3.5.2 Reading the Health Report 73
3.5.3 Reading the Animal Distress Report 74
3.5.4 Reading Animals to Inspect Report 75
3.5.5 Reading the Daily Activity/Rumination Routine Graph 77
3.5.6 Reading the Heat Stress Routine Graph 78

3.6 Weekly Tasks 79

3.6.1 Reading the Anestrus Cows Report 80
3.6.2 Reading the Irregular Heats Report 81
3.6.3 Reading the Pregnancy Probability Report 82
3.6.4 Reading the Suspected for Abortion Report 87
3.6.5 Understanding the Group Consistency Trend Graph 88
3.6.6 Understanding the Group Heat Stress Trend Graph 89
3.6.7 Reading the Tag Maintenance Report 90

3.7 Monthly Tasks 91

3.7.1 Understanding the Farm Statistics 92
3.7.2 Checking Group Membership 93

3.8 Recurring Tasks 94

3.8.1 Adding Animals from File 100
3.8.2 Unpairing Tags 105
3.8.3 Changing Tags 107

3.9 Batch Events 109

4 Which Wand and Which Device 111

4.1 Using the Allflex 420 NFC Wand 111
4.2 Pair the Wand with your Smart Phone 111

4.2.1 Pairing with an Android Smart Phone 111
4.2.2 Pairing with an iPhone 112
4.2.3 Differences in Wand Operation 112
4.2.4 Assign and Pair Tags 113
4.2.5 Pair EID tags with Flex Tags 113
4.2.6 Assign Flex Tags 113
4.2.7 Creating Working Lists 114
4.2.8 Using Working Lists 116
4.2.9 Common Wand Device Error Messages 117

4.3 Using the Agrident Wand 118

4.3.1 Pair the Wand with your Smart Phone 118

4.3.2 Configure Agrident Wand for the SenseHub Mobile App 118
4.3.3 Pairing with an Android Smart Phone 120
4.3.4 Working with the Agrident Wand 121
4.3.5 Creating Working Lists 121
4.3.6 Using Working Lists 123
5 Farm Settings 124
5.1 Alerts 125
5.2 Reproduction 126
5.2.1 Voluntary Waiting Period 126
5.2.2 Pregnancy Length 126
5.3 Health 127
5.3.1 Health Report 127
5.3.2 Early Fresh Cows Report 127
5.3.3 Distress Sensitivity 128
5.3.4 Days to Weaning 128
6 System Settings 129
6.1 System Dashboard 129
6.1.1 Device Details 130
6.2 Tag List 132
6.3 Herd Management Setup 133
6.3.1 Monitoring Herd Management 134
6.3.2 Herd Management Synchronization Threshold 134
6.3.3 Flex Tag Assignment with Allflex Wand 135
6.3.4 Herd Management Setup – Status File 135
6.4 System Configuration 137
6.5 Account Details 138
6.5.1 Users 139
Appendix A Migrating from Heatime® HR in Link Mode 140
Appendix B Certifications 141

1 SenseHub™

SenseHub™ is a sophisticated, modular, cow monitoring solution that delivers actionable information on the reproductive, health, nutritional, and wellbeing status of individual cows and groups. With SenseHub™, dairy farmers can make data-driven decisions for maximized productivity. It offers a choice of neck or ear tags along with varied application plan levels, payment options, and user devices. All components can be expanded or changed to fit changing needs. Simple to install, use and maintain, and easily upgradable, SenseHub™ delivers value from the start, with long-term investment protection.

SenseHub™ offers farmers a new way to use advanced cow monitoring to improve the productivity and efficiency of their farm. Unique features and capabilities of SenseHub™ include:

- Unmatched heat, estrus, detection accuracy, with precision insemination timing guidance.
- Market-leading health monitoring and insight at the individual cow and group levels.
- An advanced solution from the global market-leaders in cow monitoring and livestock identification, and based on technology and products proven on millions of cows worldwide.
- Extensive flexibility and choice of form factors, payment plan levels, user devices, and payment options.
- The first cow monitoring system supporting multiple tag form factors – ear tag and neck tag.
- Best-in-class interface that enables easy and efficient use, along with simple configuration to suit different farms and management practices.

Assemble the SenseHub™ solution package to best suit the needs of your farm. With a choice of neck tag or ear tag, application plan levels, user devices, and payment plans, in addition to the flexibility to change the package at any time according to your needs. SenseHub™ always makes sense for your business and operation.

- SenseHub Controller systems support:
    - Farms with up to 2000 Animals that have up to 1000 Animals with Tags
    - Up to 500 Culled Animals
- SenseHub Server systems support:
    - Farms with up to 10,000 Animals that have up to 5000 Animals with Tags
    - Up to 2500 Culled Animals

1.1 Safety First

In addition to always following all local codes and regulations, remember to always place wiring in such a way that it is distant from the natural curiosity of cows.

WARNING

Always follow all local codes and regulations when working with electricity and on ladders.

1.2 Conventions Used in this Manual

This manual is written to help technicians install and help Farmers use the SenseHub™ System. The following conventions are used throughout:

NOTE

Note identifies information that is of interest or is important.

CAUTION

Caution identifies an item or items that may cause harm to equipment or data.

WARNING

Warning identifies an item or items that may cause personal injury or loss of data.

There are currently several different Application Plans available for the SenseHub™ System:

- Starter – Reproduction
- Advanced – Health
- Premium – Group and Nutrition

Each higher plan includes the contents and capabilities of the one directly under it

NOTE

The manual describes all possible reports and graphs. The reports and graphs available on the farm depend on the Application Plan enabled on the farm.

There are also currently two different payment plans:

- Go – Farms using this payment plan are paying a monthly fee per tag purchased for the farm.
- Up – For this payment plan the tags are covered for 6 years for cSense Flex tags and for 3 years for eSense Flex tags.

2 SenseHub™ Setup Guide

This section describes the important first steps after the SenseHub™ System is physically installed on the farm.

2.1 cSense Flex Tag Placement

Fit the tags on the cows as soon as possible. Tags need to be on the cow for seven to ten days to gather activity and rumination information. The information collected depends on the type of tags in use. This baseline of information is used to judge behavior in the future.

NOTE

Two people are needed to fit the tags on the cows.

WARNING

Extreme care and caution must be exercised when attaching tags/collars to cows.

2.1.1 Attaching cSense Flex Tags to Cows

Read these instructions from start to finish before attempting this procedure.

1. Remove the collar from the box.

NOTE

The tag is already mounted and positioned on the collar.

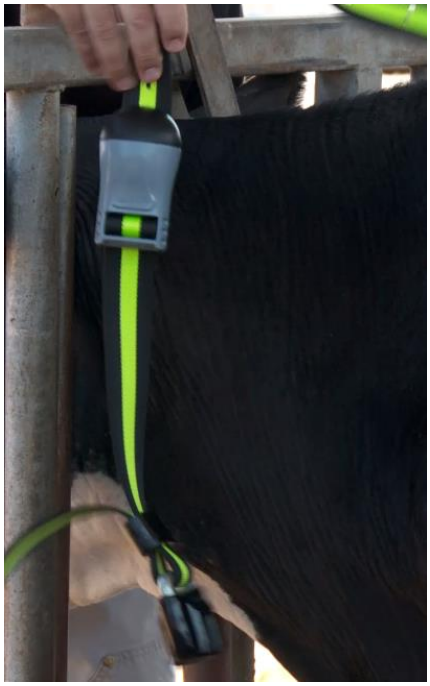
2. Record the Tag Number and Cow Number

   When assembling the tags, record the tag number, cow number, group, and status in a list.

Keep this list handy since the information will be used later. This table may be printed as required.

Cow Number	Tag Number	Group

3. Stand on the right side of the cow and pass the collar with the tag over the top of the cow.



4. Pay attention to; the correct amount of slack, 2 fingers at the top of the cow's neck, and that the tag is placed directly behind the left ear.

CAUTION

Correct attachment of the cSense Flex tags is vital to their performance. Tags that are placed too high on the cow or too low on the cow or on the wrong side of the cow result in inaccurate data collection.

For a video demonstration on how to mount cSense Flex tags on cows in headlocks go here.

For a video demonstration on how to mount cSense Flex tags on cows in treatment stalls go here.

For a video demonstration on how to mount cSense Flex tags on cows in the milking parlor go here.

2.1.2 Removing cSense Flex Tags from Cows

From time to time it will be necessary to remove tags from cows. Read these steps from start to finish before attempting to remove tags.

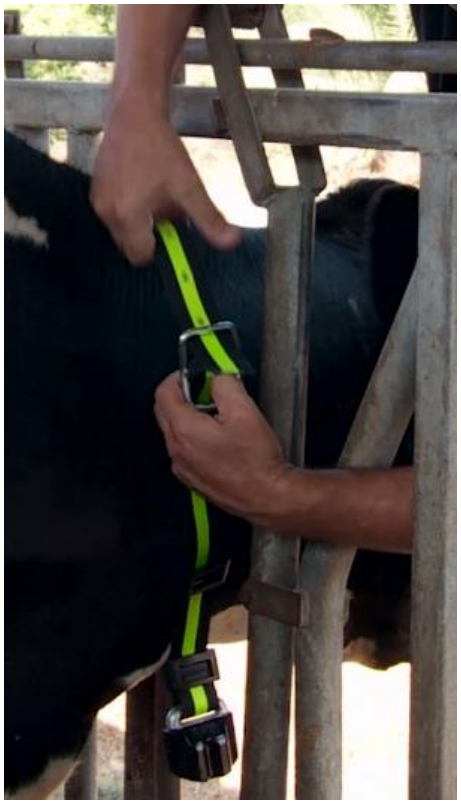
NOTE

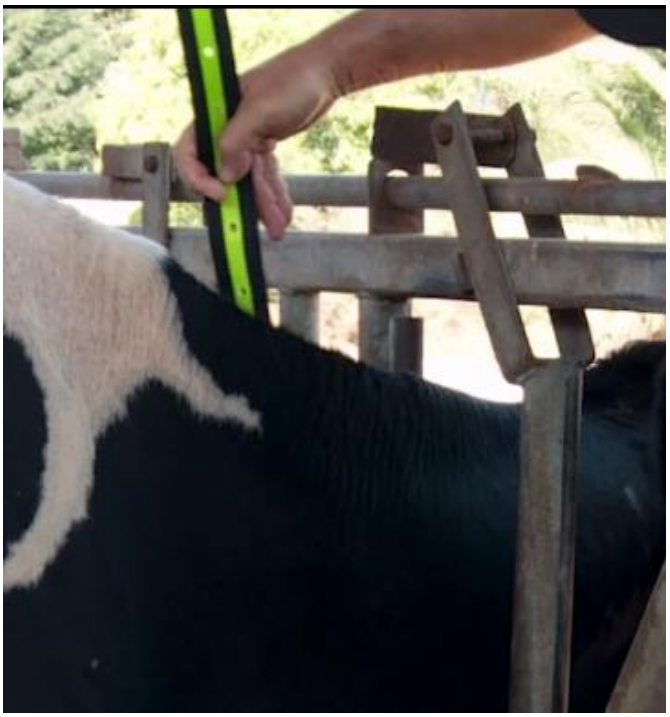
Two people are needed to remove cSense Flex tags from cows.

WARNING

Extreme care and caution must be exercised when removing tags/collars from cows.

- Unbuckle the buckle and pull the tag away from the left side of the cow over the headlocks.





For a video demonstration on how to mount cSense/cSense Flex tags on cows in headlocks go here.

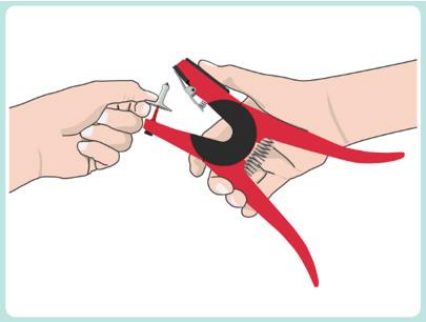
For a video demonstration on how to mount cSense/cSense Flex tags on cows in treatment stalls go here.

For a video demonstration on how to mount cSense/cSense Flex tags on cows in the milking parlor go here.

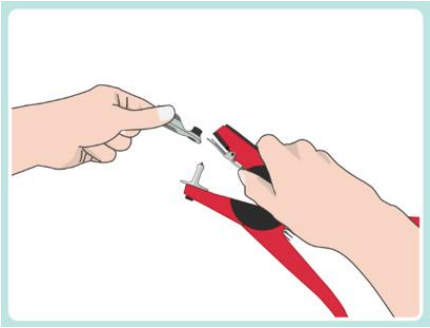
2.1.3 Attaching eSense Flex Tags to Cows

This explains how to attach an eSense Flex Tag as the only tag in the ear of the cow. Read these instructions from start to finish before attempting this procedure.

1. Attach the pin or back of the eSense Flex Tag to the Universal Ear Tag Applicator.



2. Attach the eSense Flex Tag to the Universal Ear Tag Applicator.



3. Immerse the loaded Tag Applicator in the sterilizing solution.

4. Attach the eSense Flex Tag to the ear of the cow.

5. Enter the Tag and Cow information on this sticker found on the box of tags so they can be entered into the SenseHub™ application later.

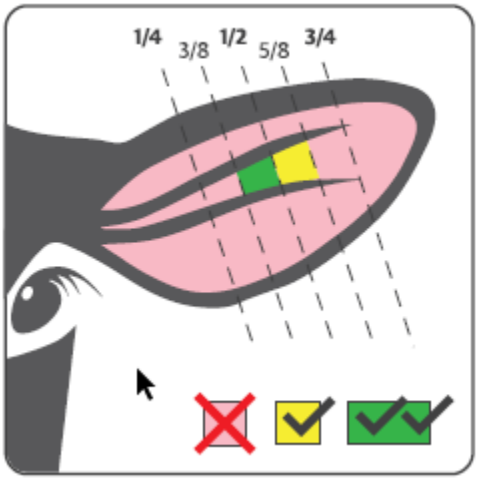
2.1.4 How to Place eSense Flex Tags to Cows as a Second Tag

When it comes time to attach the eSense Flex Tag to the cow there may already be a tag in place in the ear. Follow these rules when deciding where to place the eSense Flex tag in the ear for the best results.

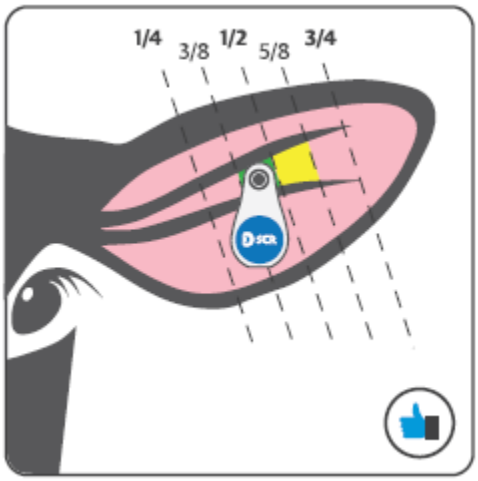
NOTE

Placing the eSense Flex Tag too close to the head of the cow may cause the tag to get caught in the ear and limit the freedom of motion on the tag.

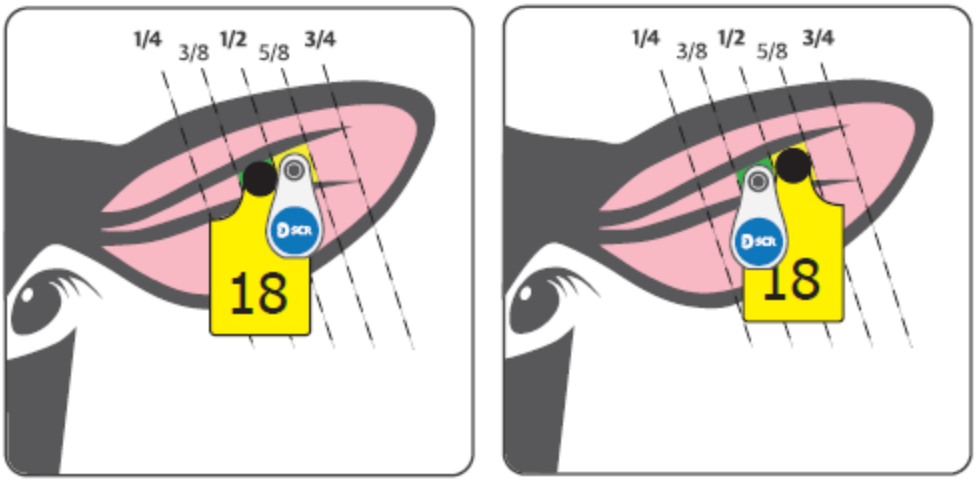
1. The picture below describes the entire area of the ear of the cow and identifies the best place to attach the eSense Flex Tag.



2. The best place for the eSense Flex Tag is directly on the center line, ½, of the ear.



3. Place the eSense Flex tag in either the green or yellow zones depending on where the visual or EID tag is already placed.

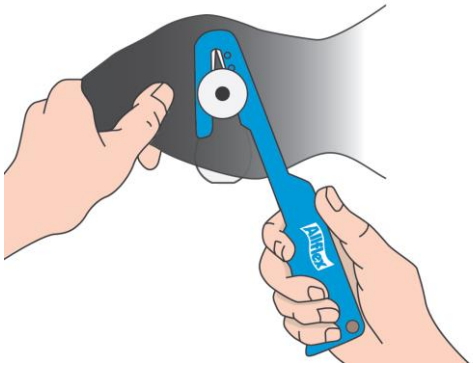


4. When attaching the tags to the cows follow the instructions as explained in Attaching eSense Flex Tags to Cows.

2.1.5 How to Remove eSense Flex Tags

When removing the eSense Flex tag, if the animal is culled for example, follow these instructions.

1. Grasp the ear of the cow firmly.
2. Using the Allflex Safety Ear Tag Removal tool, slip the blade of the tool between the base of the small male side and the ear.



3. Pull the tool firmly and quickly to cut through the shaft of the small male pin and remove the eSense Flex tag from the cow.

4. Make sure to clean the Tag Removal tool between uses.

NOTE

If any irritation occurs to the hole, consult your veterinarian for the appropriate treatment.

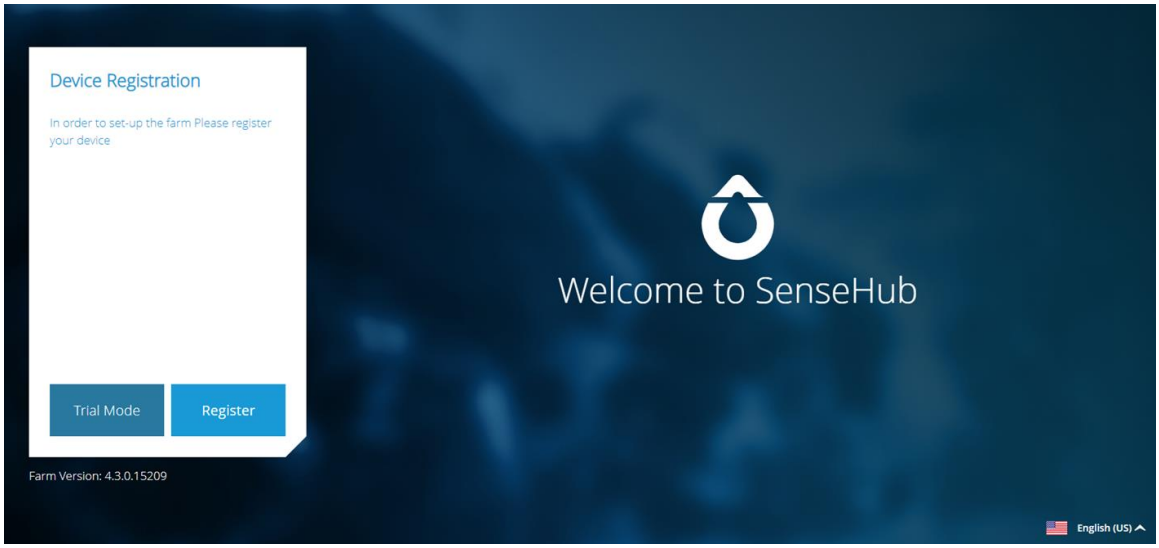
2.2 SenseHub™ Basic Configuration

Follow these steps to configure your SenseHub™ system.

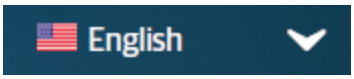
1. Download and install the SenseHub™ Web Application from here. This application allows a local network connection to your SenseHub™ System. Installation instructions can be found on page 22.

2. Double-click on the SenseHub™ Web Application

Icon; the application launches. The PC used to run the Web Application should be connected to the Internet.



   a. The application connects to the installed SenseHub™ Controller and begins the registration process.

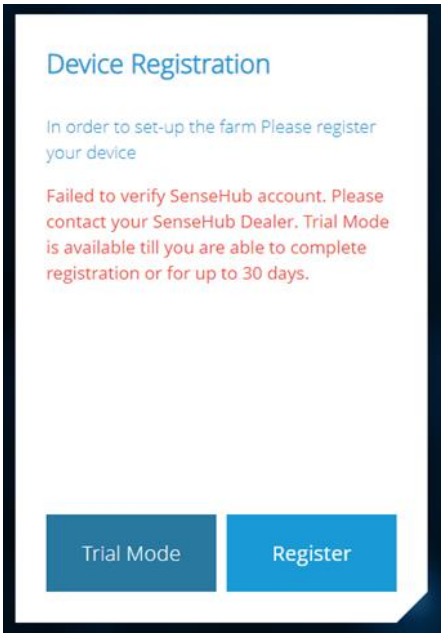
   b. Choose the Language 

you wish to use for the Registration Process.

   c. Click Register to begin the Registration Process or choose Trial Mode to enter Trial Mode.

   d. The Farm Version currently running on the Controller is displayed. This is information that you might need for support.

If the internet is not yet available on the farm you may see this message directing you to enter Trial Mode until registration is available and can be completed.

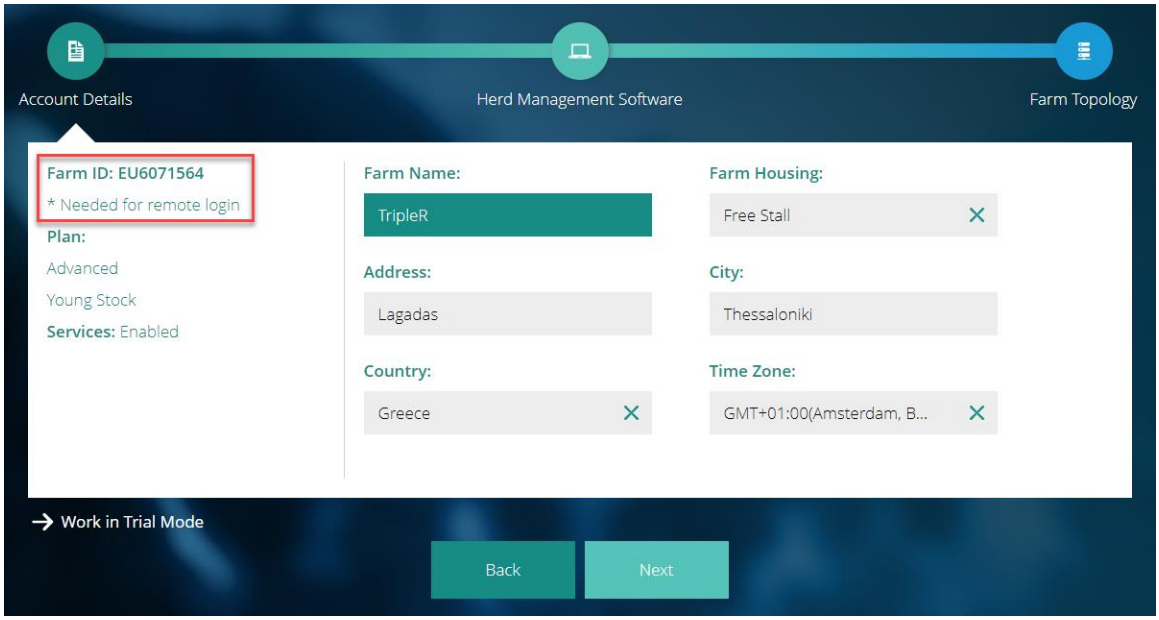


Trial Mode is available for 30 days after which Configuration and Registration must be completed.

NOTE

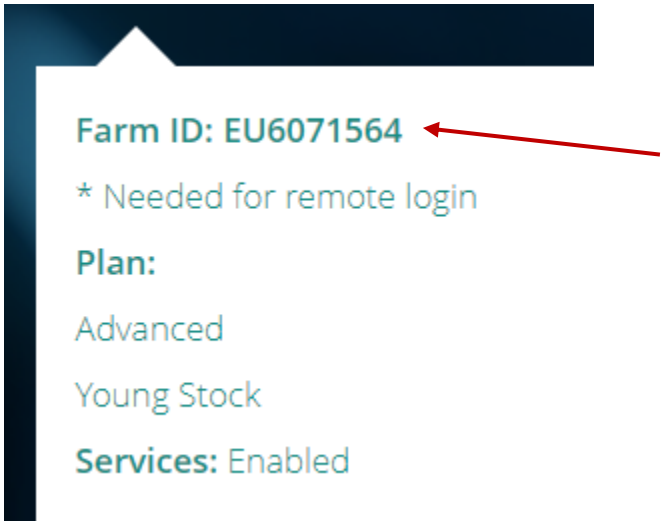
When System Registration is completed after Trial Mode, reports and graphs that were available during Trial Mode may not be available after registration is completed as these depend on the Application Plan

3. Review/complete the Account Details section; When finished click Next.



NOTE

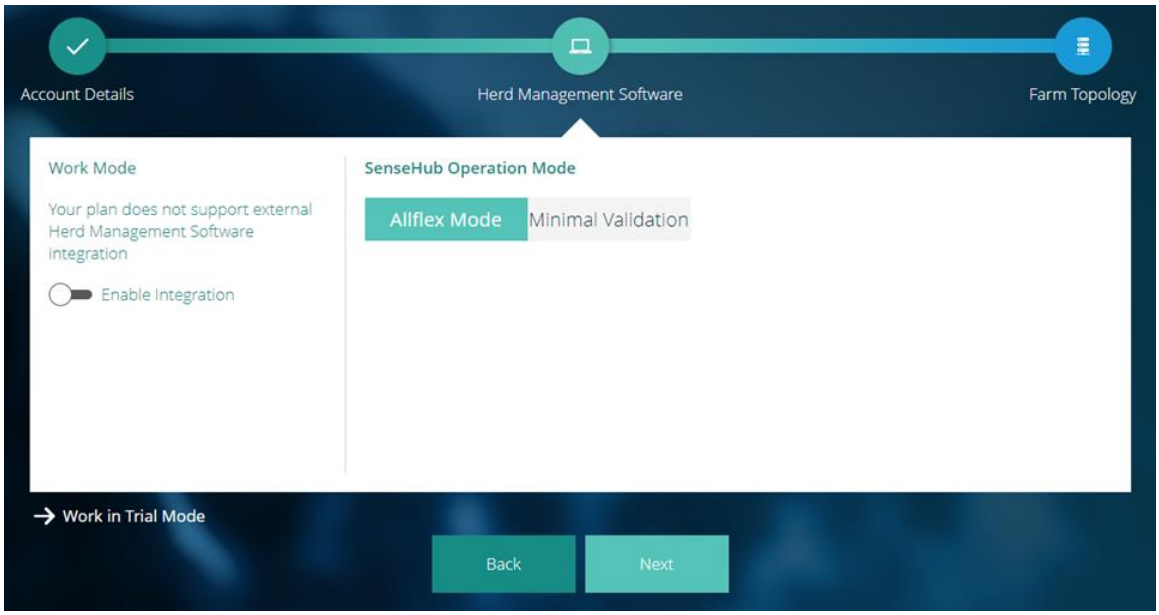
Record the Farm ID as written. This Identification String is required to log in to your SenseHub™ Controller.



The Farm ID is very important for Remote and Mobile Connections to your SenseHub System.

4. Will SenseHub™ be linked to a Herd Management System?

   Is there a Herd Management System in use on the farm and will there be an exchange of data between that system and the SenseHub™ System. If no continue to step 5.

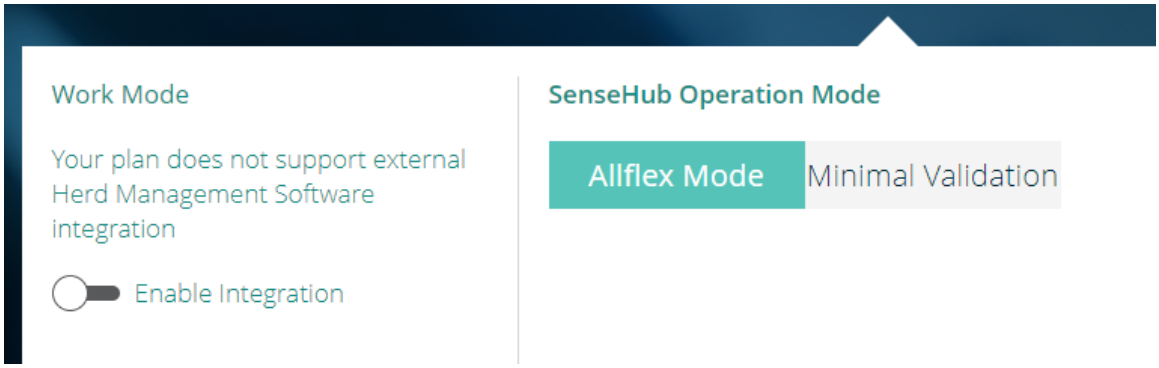


   a. If this SenseHub™ system is linked to a Herd Management System, choose that system from the Integration Drop-down menu and then copy the Registration Key to the correct place in that system.

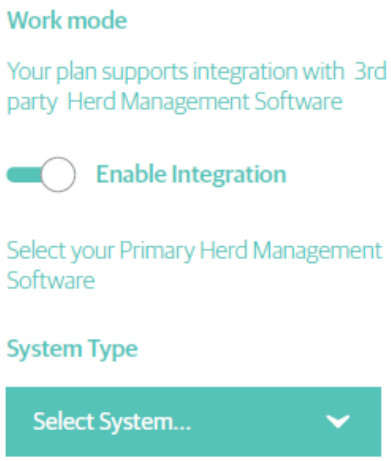
   b. When complete, click Next. Continue to Step 6 below.

5. Will the SenseHub™ System work in Allflex or Minimal Validation Mode.

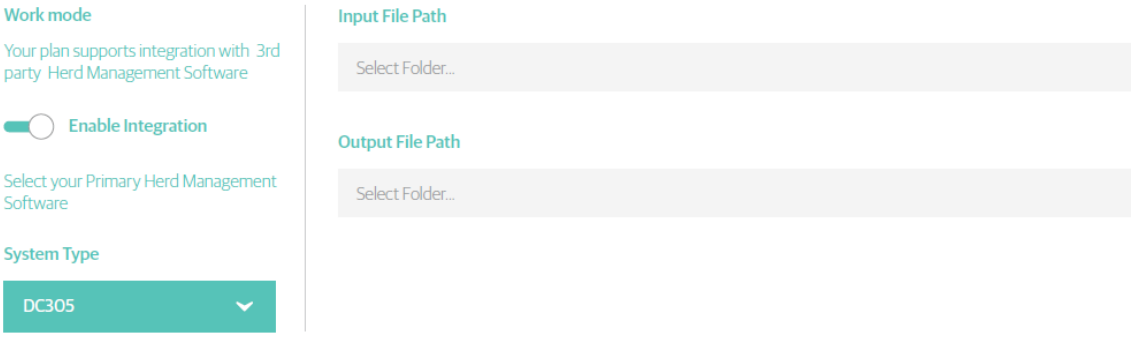
Allflex Mode is the default system configuration and will give farms the best results. After making your choice, click Next.



a. Will the SenseHub System be integrated with a Herd Management System?



b. If so then choose the Herd Management System in use. If you will be working with DC 305 or PC Dart configure as well the Input and Output File paths.



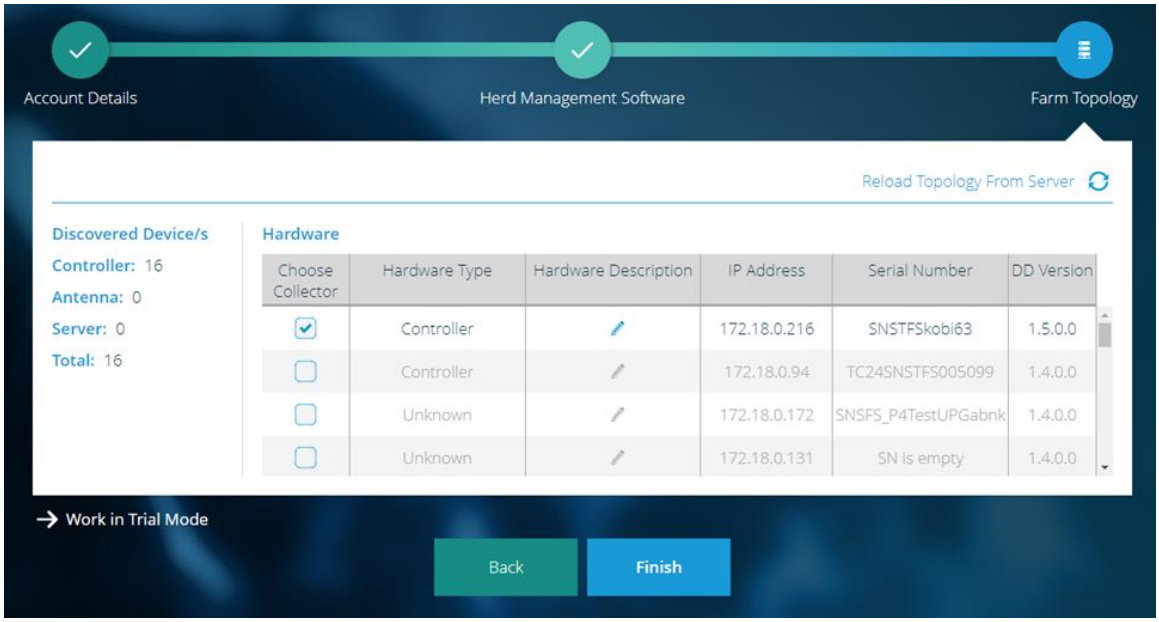
When choosing to work in DC305 or PC Dart Modes the input and output file paths must be defined. These are the file paths where DC305 / PC Dart places the Status File, Input File Path, and where SenseHub, Output File Path, places its output files.

Create the Input and Output file paths on the same PC where the SenseHub Status File Service is installed. The installation is described on page 22.

NOTE

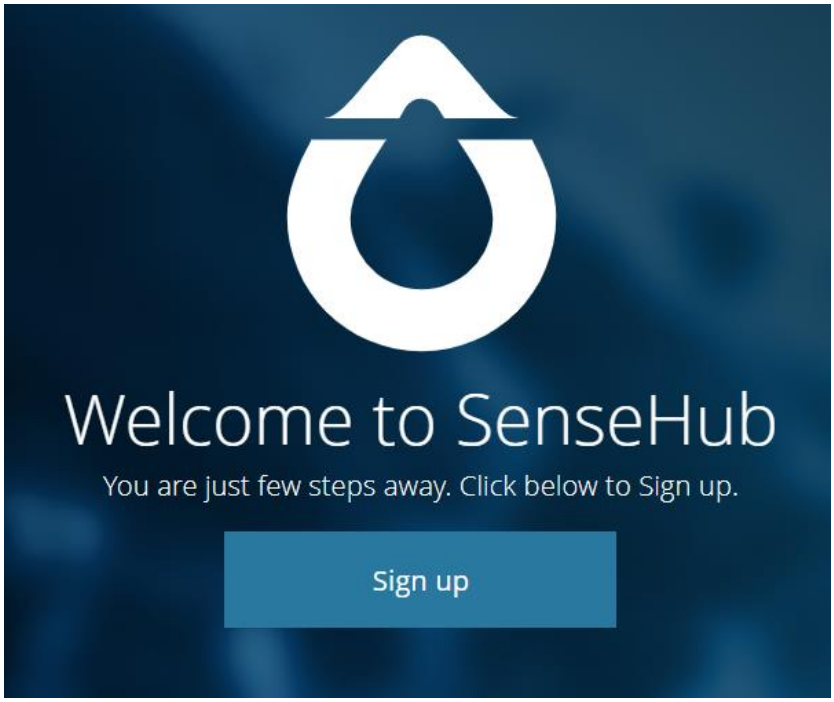
It is highly recommended to browse on the local PC where the SenseHub Status File Service is installed using Windows Explorer to the correct file location and then copy that path to the correct window in the browser as the input or output file path as required.

6. Review the SenseHub™ System Farm topology. Give the Controller and Antenna significant names that are associated with where they are installed so they can be found quickly. When complete click Finish.



2.3 SenseHub™ Registration

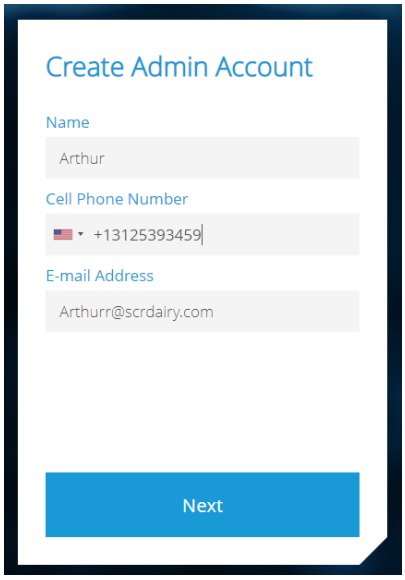
Once completing the configuration section, the system automatically moves to the registration portion of the wizard.



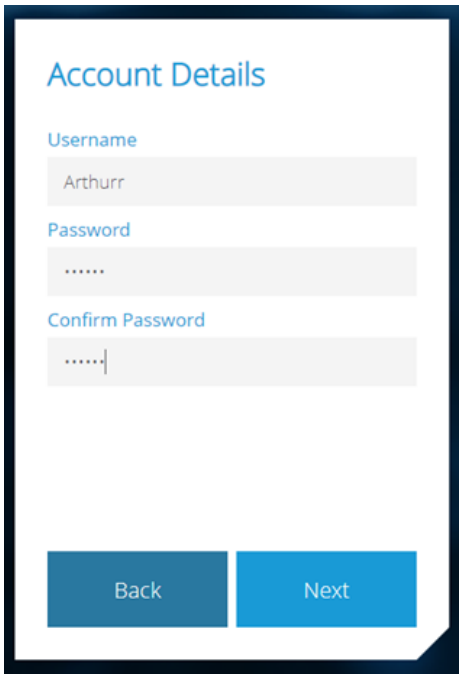
NOTE

When Registering after Trial Mode, all the reports, graphs, and series that were available during Trial Mode may not be available after registration is completed as these depend on the Application Plan in place on the farm.

1. Enter here the Username and Password created for you. Both these fields are mandatory.



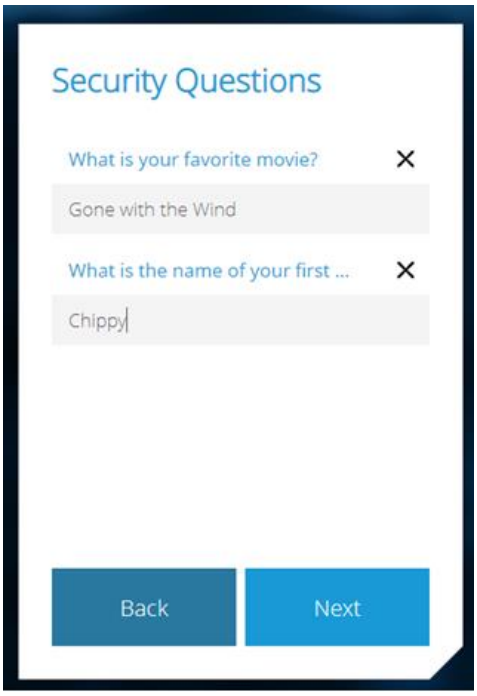
2. Verify/Edit the Account Details.

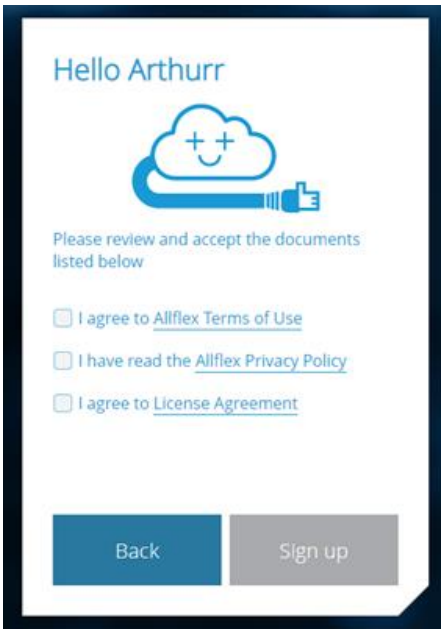


NOTE

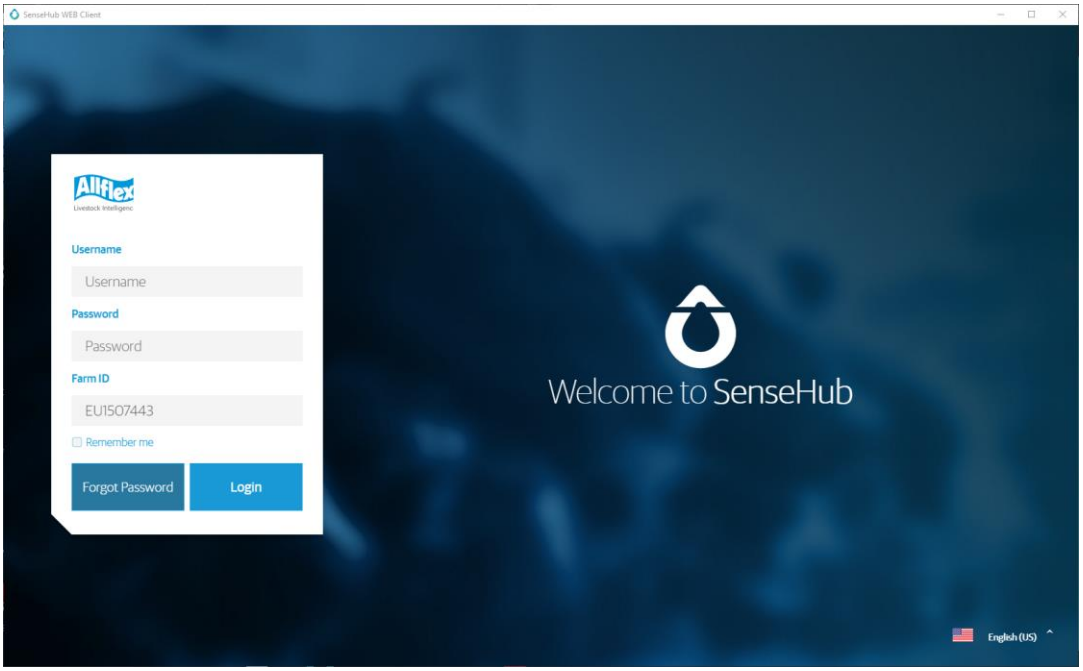
The password must contain at least 6 characters. There must be at least one Capital Letter, one small letter, and one number.

3. Enter the answers to the security questions.





4. Read and then check your agreement with the Terms of Use, Privacy Policy and License Agreements and then click Sign-up.
5. When complete you will be asked to sign in again.



NOTE

The Farm ID was assigned during Step 3 on page 14. If you have not yet done so record this now.

SenseHub™ Configuration and Registration is now complete.

2.4 SenseHub™ Mobile Application

The SenseHub™ Mobile Application is available for both Android and Apple Devices.

NOTE

The minimum Android version is 5.X.
The minimum iOS version is 10.0.

NOTE

Trial Mode users will only be able to use the Mobile Application when accessing their SenseHub™ Systems over the local network, LAN.

2.5 Minimum Requirements

Correct operation of SenseHub™ requires these minimum requirements:

Property	Minimum Requirement
cSense Tag Version	The Tag Version used must be 01.34.44.46 or higher. When migrating from Heatime® HR, update the tags before migrating the Farm/Customer
eSense Tag Version	The Tag Version used must be 11.24.12.12 or higher.
Windows PC Minimum Version	Windows 7 Service Pack 1
Google Chrome Minimum Version	60.0.XXXX.xxx
Video Resolution	The minimum Resolution is 1360 x 768
Farm Network Connection	At Least 256Kbps Upload
SenseHub™ Tools Installer (includes the Web Application)	Download from here
On-premises router/firewall configuration.	Ports 22, 80, 443, 61616 open for outbound communications for TCP, UDP, SSH, FTP, SFTP.

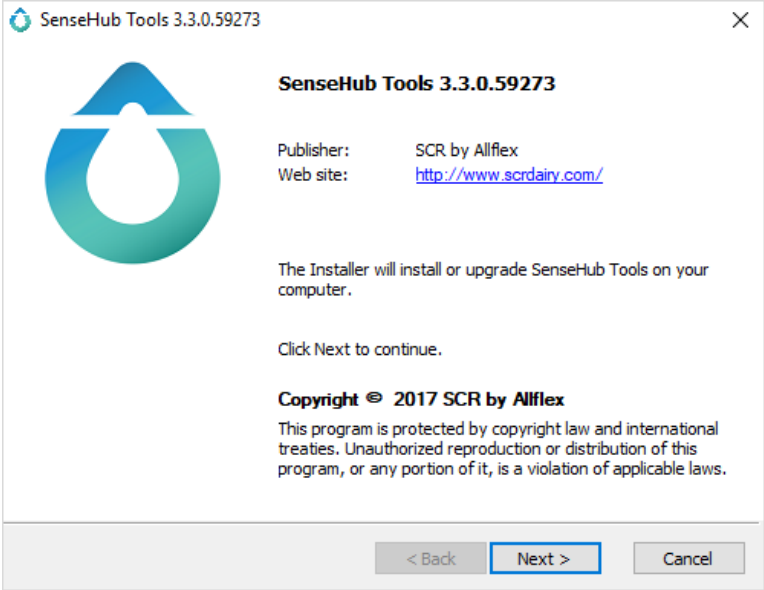
NOTE

For remote connections enter https://st.scrdairy.com/ in your Chrome Browser. Remote connections are only available after completing configuration and Registration, that is detailed above.

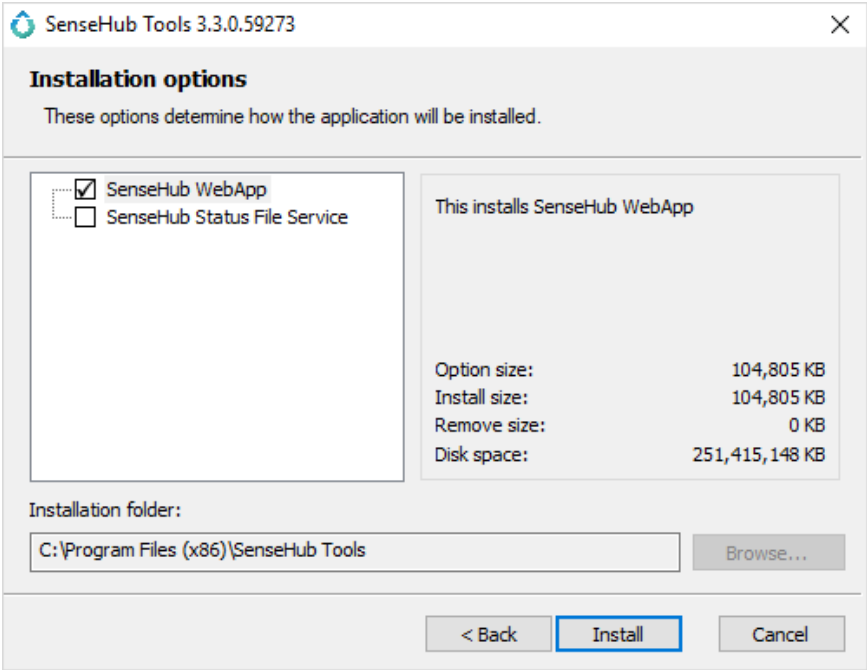
2.6 Using the SenseHub™ Tools Installer

After downloading the SenseHub™ Tools installer run the application to install the SenseHub™ Web Application. Other tools that may be required, like the SenseHub™ Status File Service, are also available in the Tools Installer.

6. Double-click SenseHub Tools – Setup.exe, the installer launches. Click Next to proceed.



7. Choose the options that you need to install.

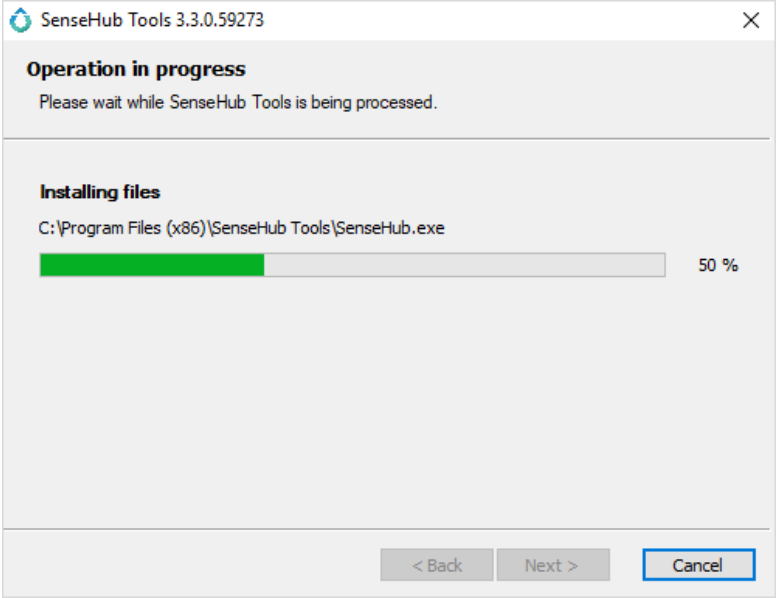


- The SenseHub™ WebApp is the web application required to access the SenseHub Controller.

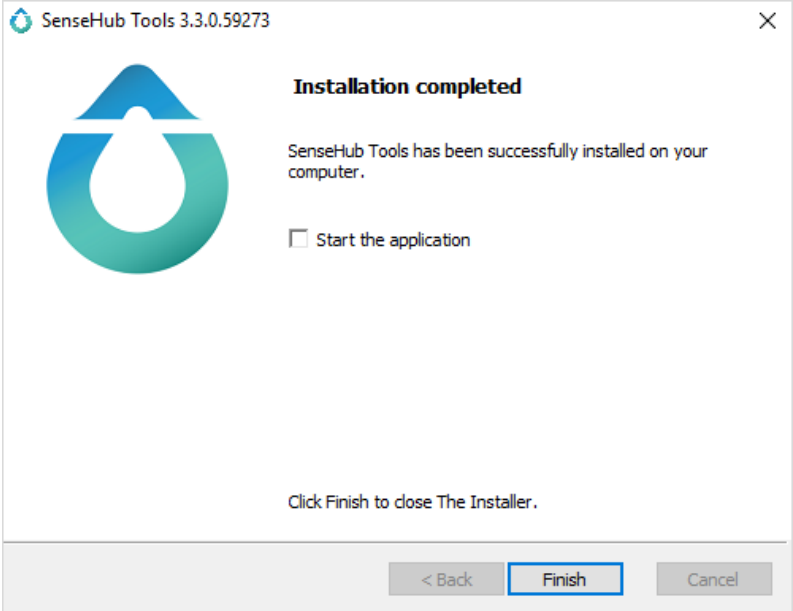
- The SenseHub Status File Service is the service required to link between Herd Management Systems that use the Status File Protocol, like DC 305, and the SenseHub Controller.

  After choosing all the required components click Install.

8. The installation begins and progresses.



9. When the installation completes a confirmation is displayed. Click Finish to exit the installer.



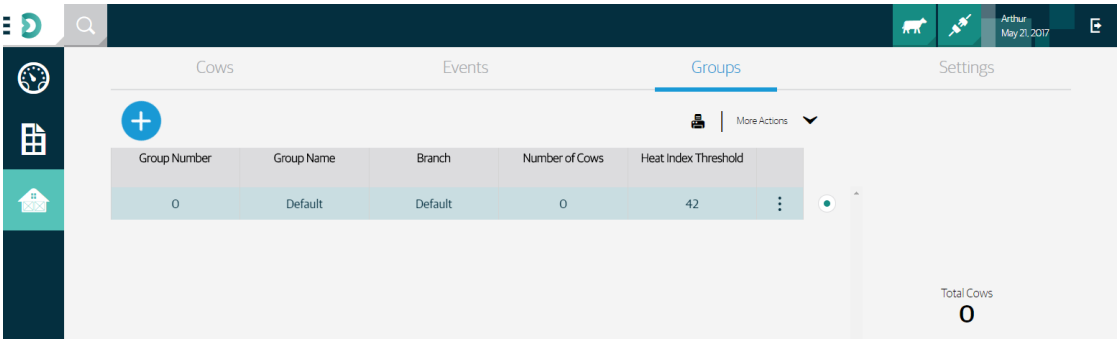
NOTE

It is only necessary to run the installer once. The applications will update automatically once installed.

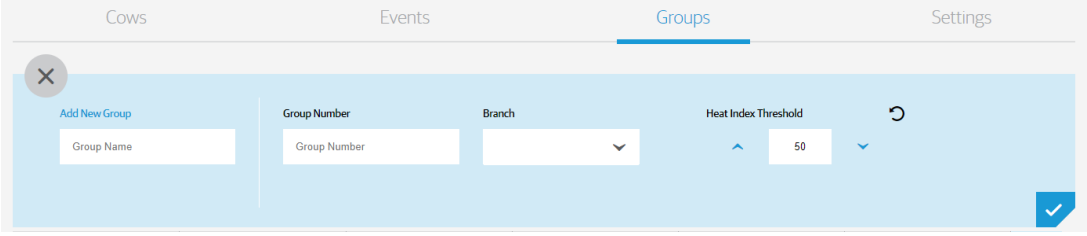
2.7 Creating Groups

The next step in setting up your SenseHub™ System is to create groups. Create groups that correspond with the actual groups on the farm.

1. From the Dashboard click Farm and then Groups; the Groups page appears.



2. Click to add a group.



Field Name	Description
Group Name	The name of the group. This field is limited to 20 characters.
Group Number	The number of the group. All groups must have a number.
Branch	The economic category of this group. The possible categories are: Milking, Dry, Heifers, Calves, or default.
Heat Index Threshold	The Heat Index Threshold for this group. When cows in this group get to a Heat Index that is equal to or above this number the cows will enter the Heat Report.
	Click here to return all the fields to default.

3. When all the information is complete and correct click to save the Group.

NOTE

Changing the Heat Index Threshold can significantly affect how the SenseHub™ System detects heats and can significantly affect the fertility rates on the farm. Do not change the Heat Index Threshold unless directed by SCR or your SCR Dealer.

2.8 First Time Animal Entry using SenseHub™

Entering your herd for the first time in SenseHub™ system is not difficult, but is does require some preparation.

NOTE

Farms that are migrating from Heatime HR should use the migration tool. Detailed instructions on how to use the migration tool are found on page 129.

2.8.1 Required Data when Entering Heifers/Cows

This data is required when entering Heifers into SenseHub™:

Heifer Status	Required Information
Ready (for Breeding)	Birthdate
Bred Heifer	Birthdate + Breeding Date and Number
Pregnant Heifer	Birthdate + Effective Breeding Date and Number

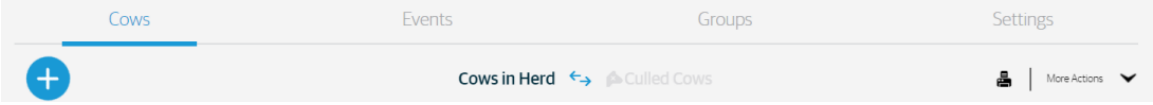
This data is required when entering Cows, with one or more calvings, into SenseHub™

Cow Status	Required Information
Fresh/Ready/Open Cow	Last Calving Date. The cow is classified as Fresh if: • the calving date entered is less than 70 days in the past for first lactation cows. • 60 days in past for second and higher lactation cows.
Inseminated Cow	Last Caving Date, Breeding Date and Number.
Pregnant Cow	Last Caving Date, Effective Breeding Date and Number.
Dry	Last Caving Date, Effective Breeding Date and Number, Dry-off Date.

2.9 Entering Heifers in SenseHub™

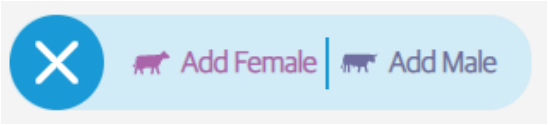
Follow these instructions to enter Heifers in SenseHub™.

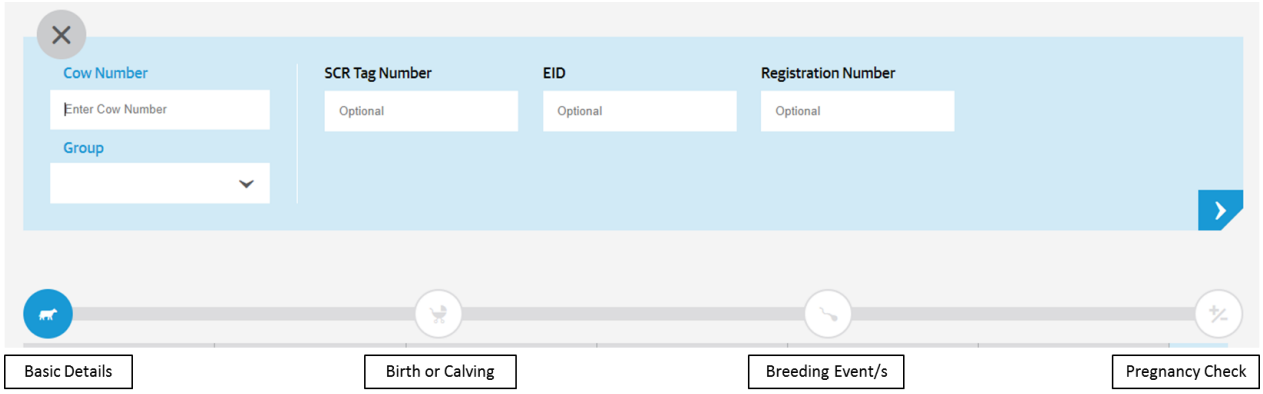
1. From the Dashboard click Farm and then Animals, the Animals in Herd list appears.



   The list of Culled Animals, once there are Culled Animals from the herd, is also found here.

2. Click to begin adding a Heifer to the herd.
   a. Choose the gender of the animal.





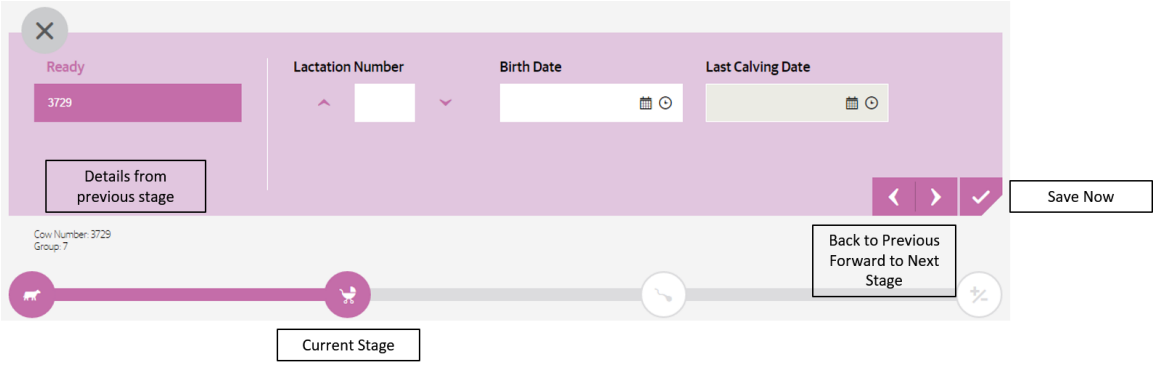
   b. Begin by entering the Basic Details about the Heifer, Cow Number, the Group where the Heifer is housed. The SCR Tag Number, EID Number, if used on the farm, and the Registration Number assigned to the Heifer, may be entered here but they are all optional.

3. Click Next to add more, required, information.

4. Enter here the current Lactation, 0 for Heifers, and the Birthdate of the Heifer.

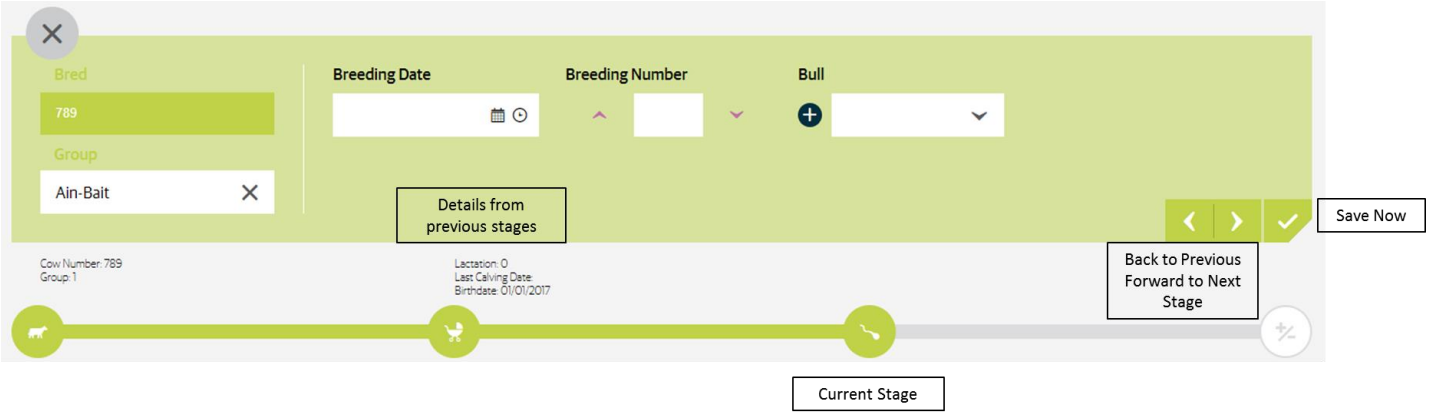
NOTE

The Birthdate is required for Heifers.



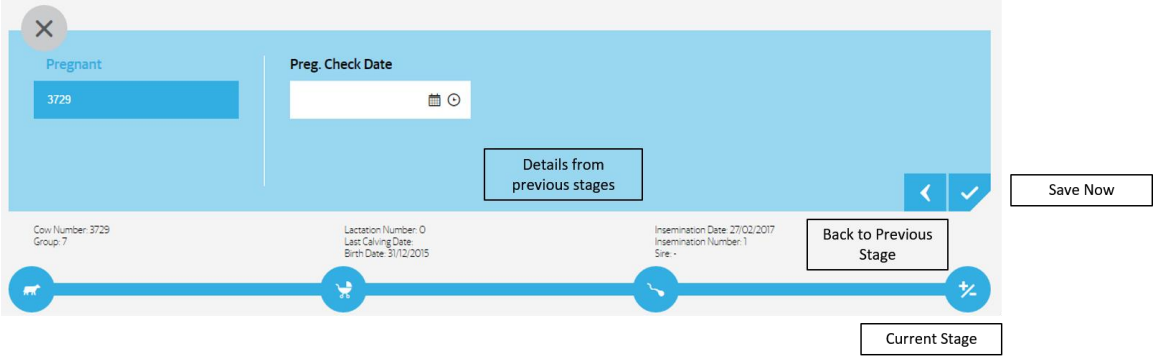
5. When complete click Save Now, otherwise click Next.

6. Enter here the most recent Breeding Date and Number. The Bull used is optional and once a Bull is entered it can be chosen from the Drop-down List.



7. When complete click Save Now, otherwise click Next.

8. Enter the Pregnancy Check Date and the Result, when complete click Save Now to save the Heifer.

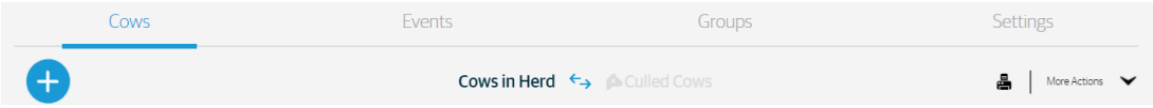


9. The Heifer and all entered details are now saved in SenseHub™.

2.10 Entering Cows in SenseHub™

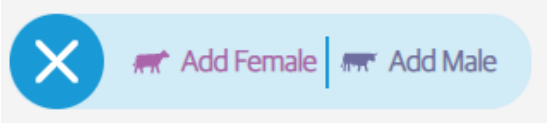
Follow these instructions to enter Cows of all calving counts in SenseHub™.

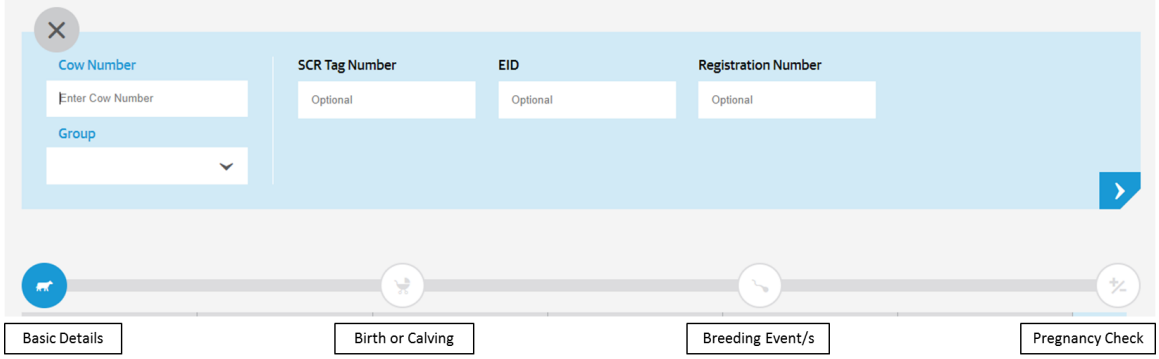
1. From the Dashboard click Farm and then Animals, the Animals in Herd list appears.



   The list of Culled Animals, once there are Culled Animals from the herd, is also found here.

2. Click to begin to add a Cow to the herd.
   a. Choose the gender of the animal.

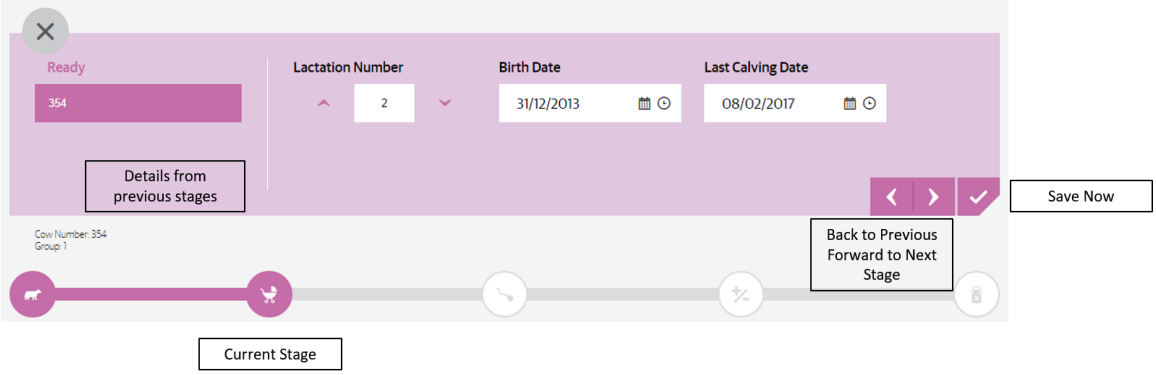




   b. Begin by entering the Basic Details about the Heifer, Cow Number, the Group where the Cow is housed. The SCR Tag Number, EID Number, if used on the farm, and the Registration Number assigned to the Cow, may be entered here but they are all optional.

3. Click Next to add more, required, information.

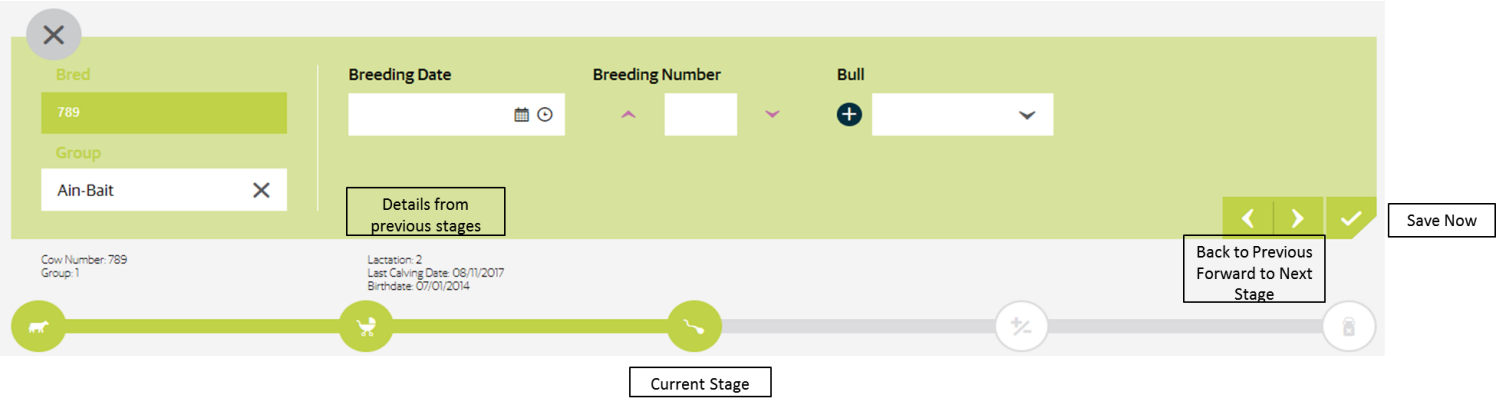
4. Enter the Current Lactation, Birthdate, and Last Calving Date for this cow.



5. When complete click Save Now, otherwise click Next.
6. Enter here the most recent Breeding Date and Number. The Bull used is optional and once a Bull is entered it can be chosen from the Drop-down List.

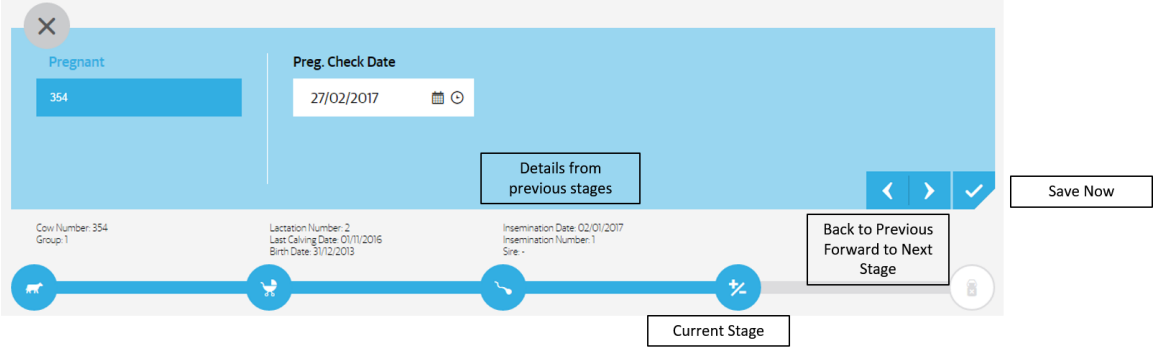
NOTE

When migrating cows for the first time to SenseHub™ data on previous lactations is not needed.



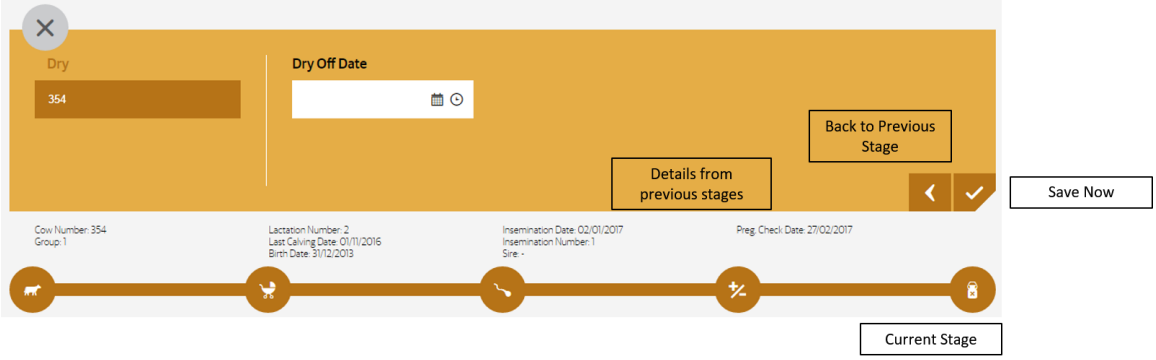
7. When complete click Save Now, otherwise click Next

8. Enter the Pregnancy Check Date.



9. When complete click Save Now, otherwise click Next

10. Enter the Dry-off date for the cow. When complete click Save Now.

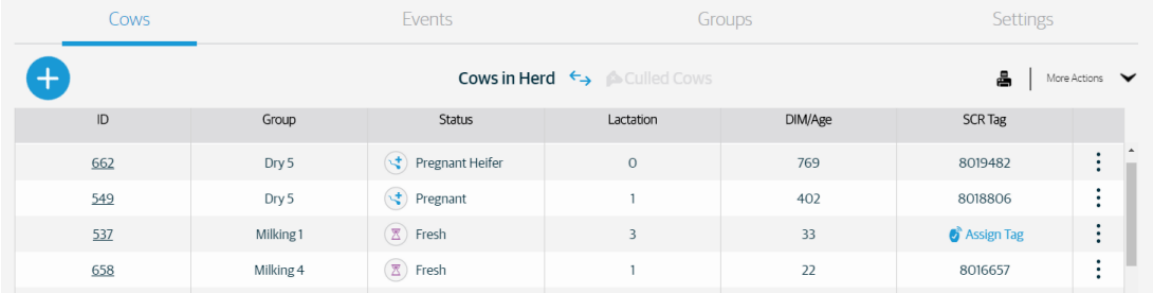


11. The Cow, and all the entered details, are saved in SenseHub™

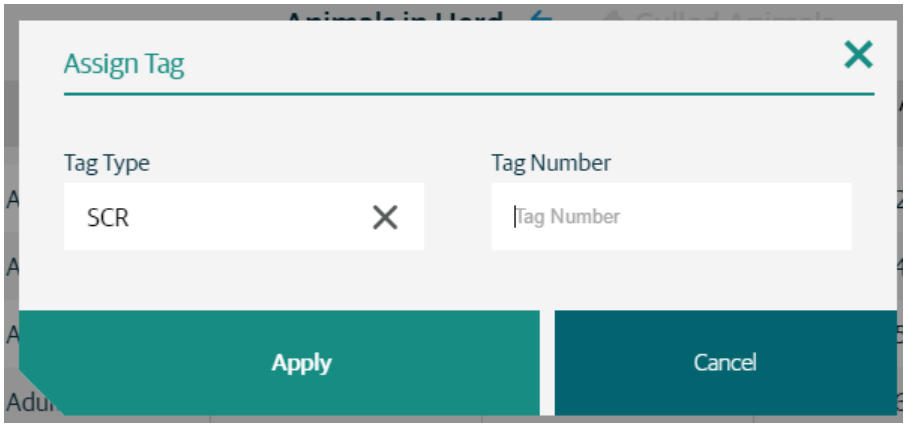
2.11 Pairing Cows and cSense/eSense Tags

After attaching the tags to the cows, configuring and registering the SenseHub™ system and entering the herd, cows can be paired with their tags.

1. From the Dashboard click Farm and then Cows, the Cows in Herd list appears.



2. Click on Assign Tag; the Tag Assignment Pop-up appears.

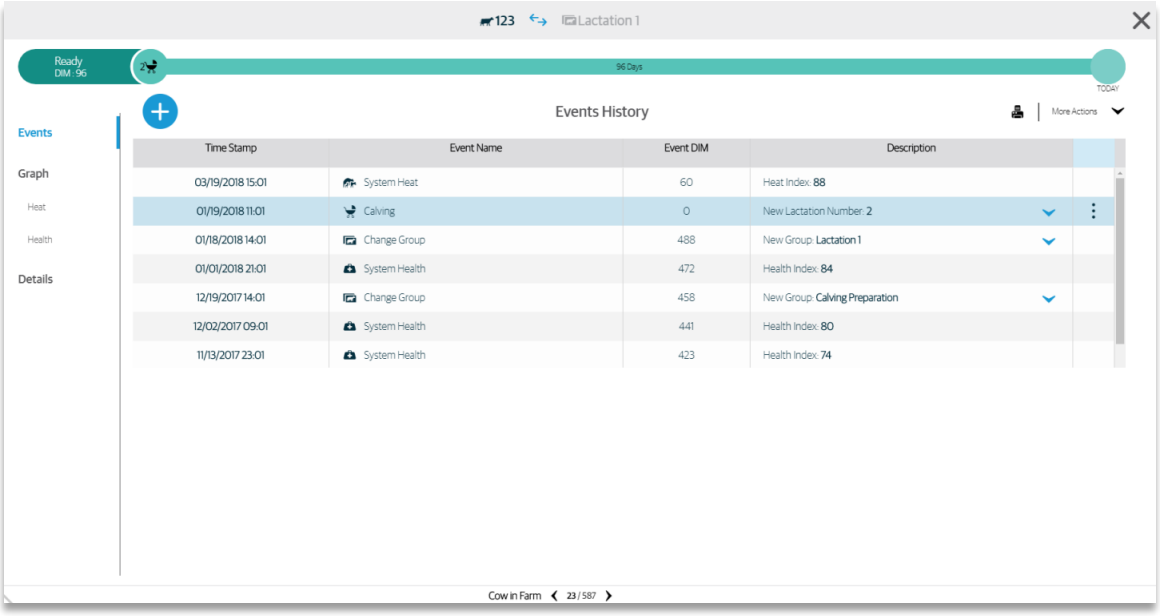


3. Enter the Tag Number and click apply. This tag is now assigned to this cow.

2.12 SenseHub™ Cow Card

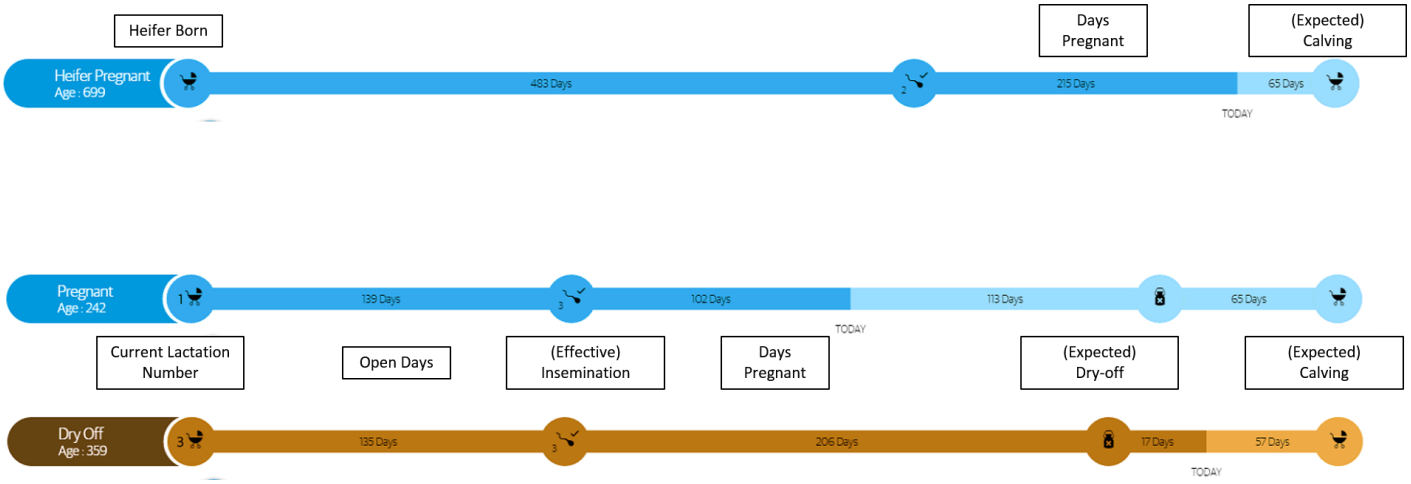
The Cow Card contains a great deal of information about the cow. The Cow Card is made up of the Lactation Timeline and three tabs:

- Events – Important happenings for this cow, grouped by lactation.
- Graphs – The Heat and Health graphs for the cow.
- Details – The information and description of the cow.



2.12.1 Timeline

The Timeline is a graphic summary of the current lactation for the cow. It contains the major events and the total number of days since the last calving for the cow.

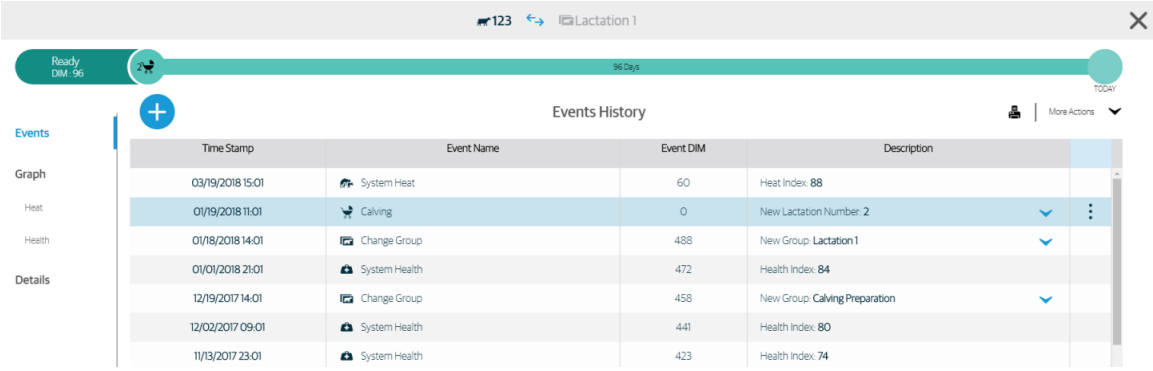


Timeline Colors are explained in this table.

Color	Icon	Description
		Heifer, From Birth until end of Voluntary Waiting Period.
		Fresh. Cows from Calving till the end of the Voluntary Waiting Period. (configurable)
		Ready/OK. Cows/Heifers ready for insemination.
		Inseminated. Cows/Heifers after they have been inseminated at least once until they are checked for pregnancy.
		Pregnant. Cows/Heifers once they have been recorded after a positive pregnancy check.
		Dry. Cows after they have been dried-off and the Dry-off recorded.
		Open. Cows/Heifers after they have a recorded negative pregnancy check.

2.12.2 Events

All the happenings to each cow in the herd are called events.



Event Icons	Description
	Calving. This icon appears where a calving is reported.
	Health. This icon appears when the Health Index of a cow falls below the threshold.
	Distress. This icon appears when a cow is determined to be in distress.
	Do Not Breed. Used to designate cows that will not continue to a subsequent lactation.
	Heat. This icon appears when a system heat is registered.
	Insemination. This icon appears where an insemination is entered/recorded for the cow.
	Pregnancy Check. This Icon appears when a cow is checked for pregnancy. Can be positive or negative.

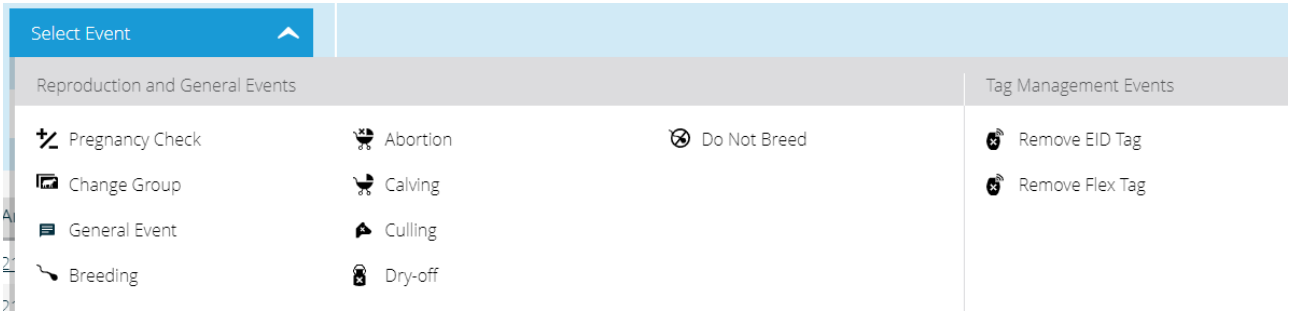
Event Icons	Description
	Culling. This icon appears when the cow is culled, removed from the herd.
	Change Group. This icon appears when a group change is entered/recorded for the cow
	Abortion. This icon appears when an abortion is entered/recorded for the cow.
	Designate Tag. This icon appears when a tag is assigned to a cow or when a tag already assigned is changed to a different tag.
	Update Tag Firmware. This icon appears when the firmware for a tag is updated successfully.
	Remove Tag. This icon appears when a tag is removed from a cow and the event is entered/recorded.

2.12.2.1 Entering Events

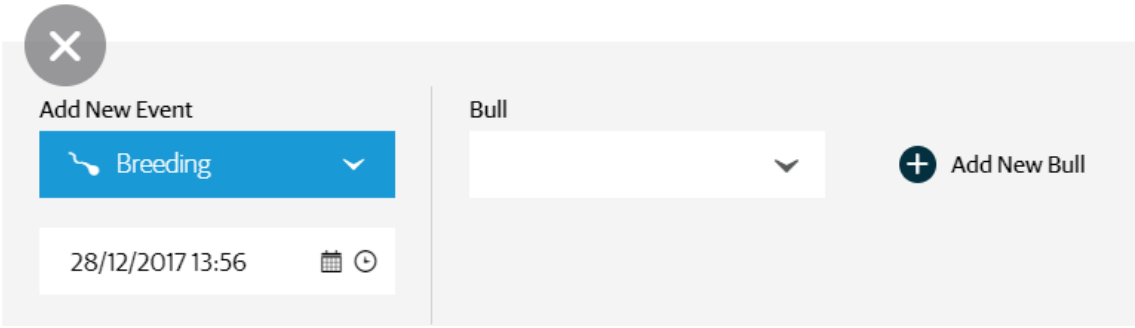
This section describes how to enter Events in the SenseHub™ System. The Add Event button is found either at the top of the Cow List, Farm → Cows, or at the top of any Cow Card.

1. To Enter an Event click on Add Event; the Add New Event screen appears.

   Only the allowed events for this point on the Lactation Timeline are available.



2. Choose the desired event and complete the required fields.



3. Click OK to save the event.

   Click Cancel to exit without saving.

2.12.2.2 Removing Events.

It is possible to Remove Events.

1. Find the desired event on the event tab.

Date	Event Name	DIM	Description
08/01/2017 14:15	Breeding	80	Breeding Number: **1**
08/12/2016 11:34	Assign Tag	49	New Tag: **8005305**
08/12/2016 11:34	Change Group	49	New Group: **Milking**

2. Click the Vertical Ellipses and choose Remove Event.

Date	Name	DIM/Age	Description
12/01/2019 4:59 PM	System Health	217	Health Index: 92
10/26/2019 8:30 PM	Change Group	181	New Group: 1
10/21/2019 8:59 AM	System Heat	176	Heat Index: 98.29
10/21/2019 7:59 AM	Breeding	176	Breeding Number: 4
09/28/2019 7:59 AM	Breeding	153	Breeding Number: 3
09/28/2019 5:59 AM	System Heat	152	Heat Index: 98.59
09/06/2019 7:59 AM	Breeding	131	Breeding Number: 2

Remove Event

3. The event is removed.

Date	Event Name	DIM	Description
08/12/2016 11:34	Assign Tag	49	New Tag: **8005305**
08/12/2016 11:34	Change Group	49	New Group: **Milking**
08/12/2016 11:34	Herd Entry	49	Lactation Status: **Dry**
20/10/2016 11:30	Calving	0	New Lactation Number: **1**
26/10/2014 11:30	Birth	0	

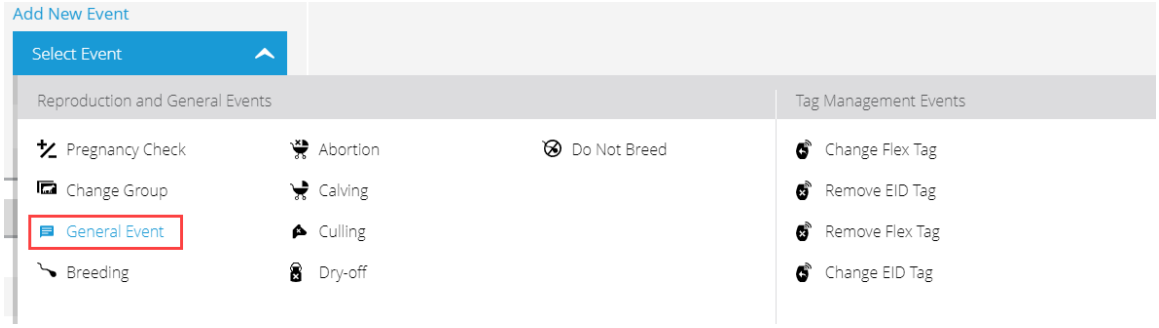
NOTE

It is only possible to remove the last, topmost, event. Past events that affect more recent events, such as inseminations to the more recent pregnancy check, may not be removed.

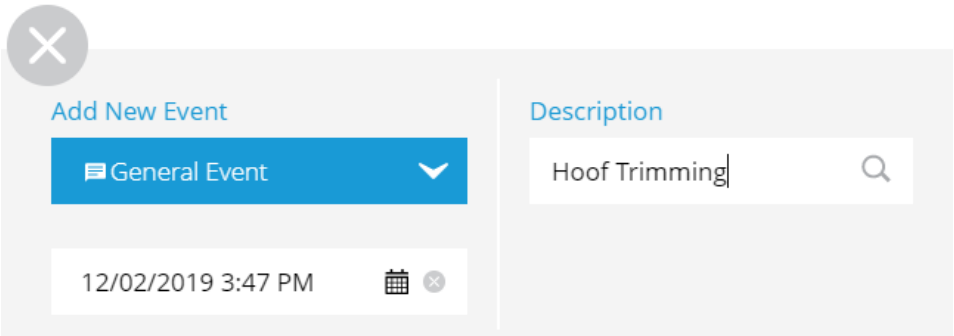
2.12.2.3 General Events

General Events are events that SenseHub Users can enter and add their own personal description.

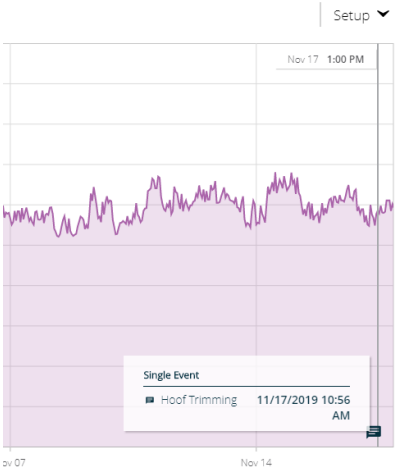
1. Click on and then choose General Event to add a General Event.



2. Enter the desired description. It is important to add meaningful descriptions to General Events.



3. When complete, click to save the event.
4. The event now appears of the graphs for this cow



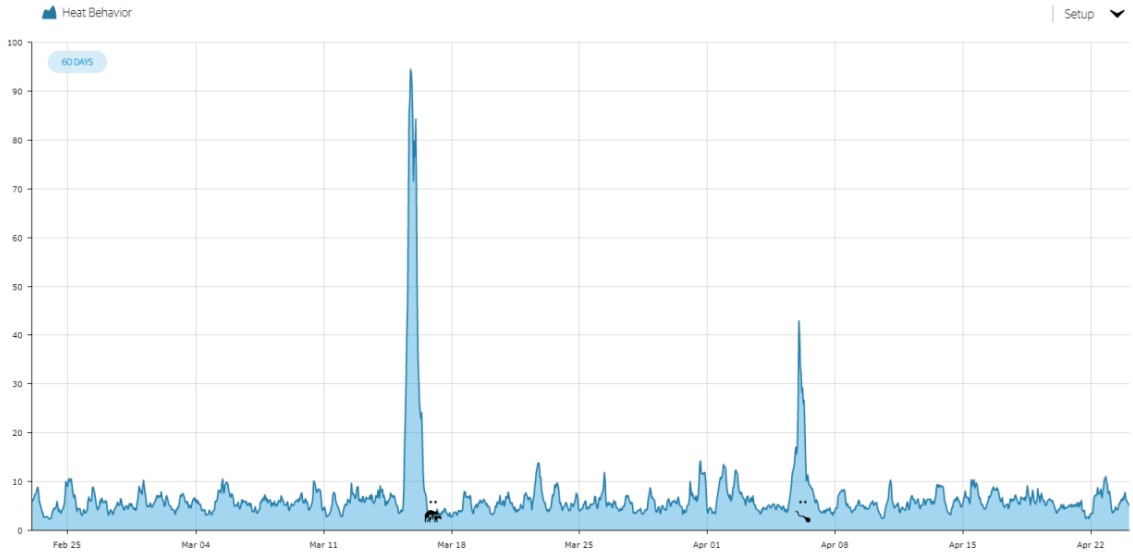
2.12.3 Graphs

The SenseHub™ System produces several useful graphs to help you manage your herd.

- Heat Graph
- Health Graph

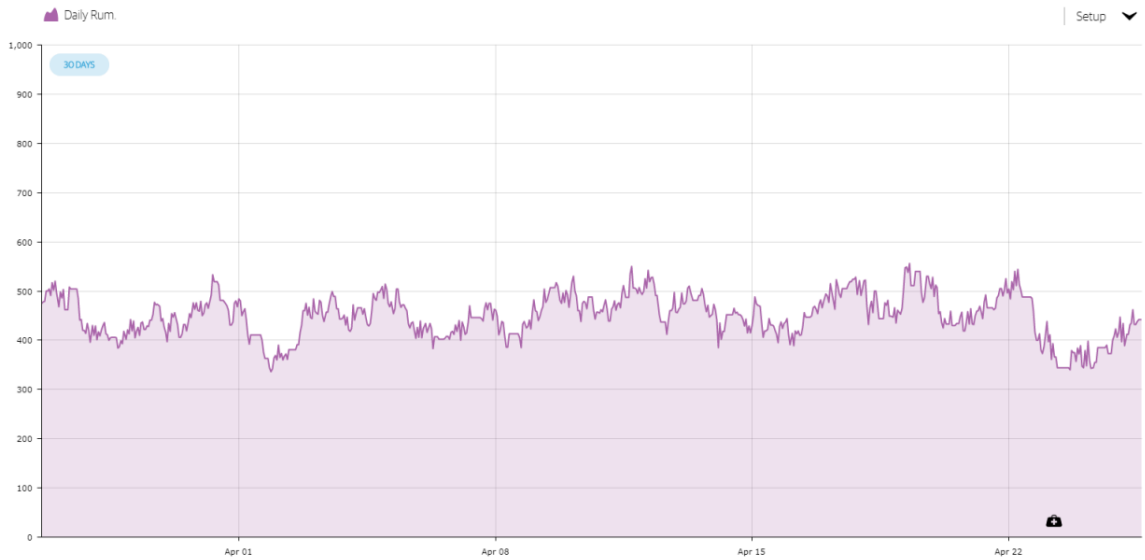
2.12.3.1 Heat Graph

The Heat Graph displays the Heat Behavior of the cow.



2.12.3.2 Health Graph

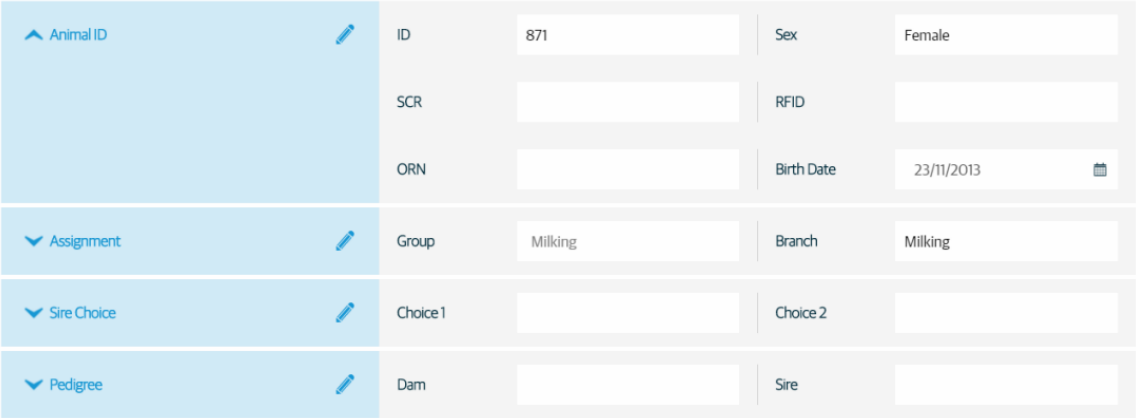
The Health Graph shows the relative health of the cow using Total Daily Rumination minutes.



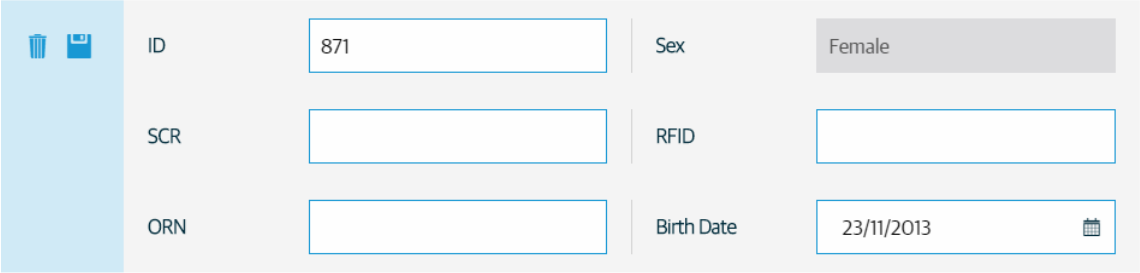
2.12.4 Details

The Details section shows all the important information about the cow.

1. To expand any of the areas click on the arrow; the area expands.

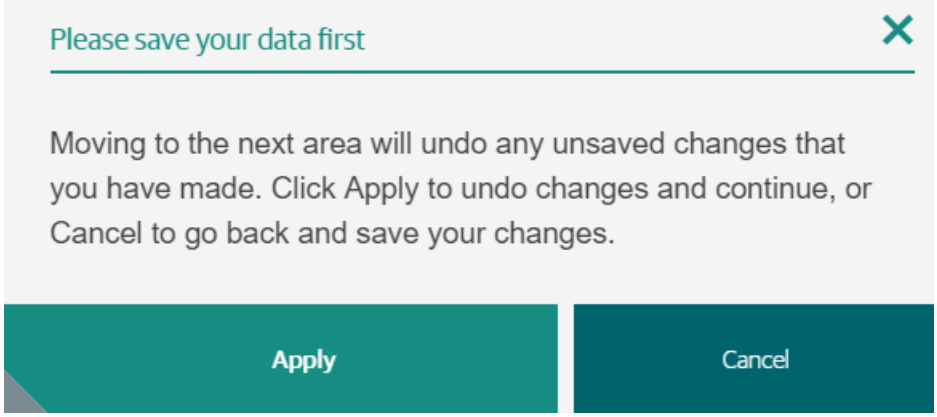


2. To edit any of the information click on Edit and the items available for editing are highlighted around the edges.



3. Click to save the changes or to discard them.

4. If you try to leave without saving a message appears.



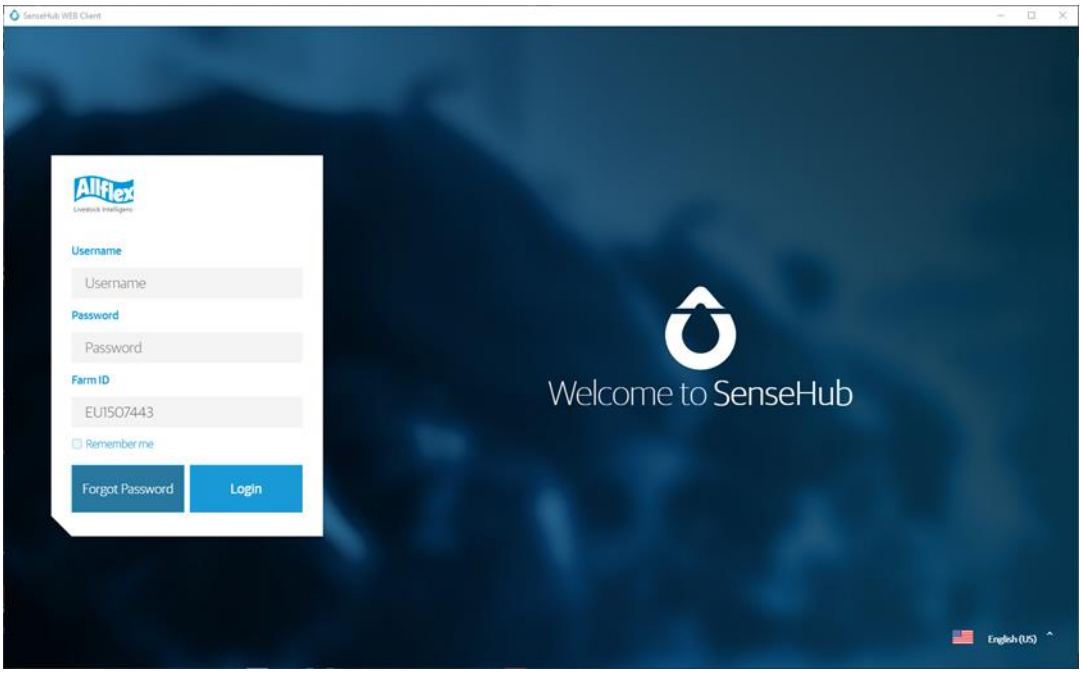
3 Using SenseHub™

Thanks to the clear and concise interface, SenseHub™ is quite easy to use.

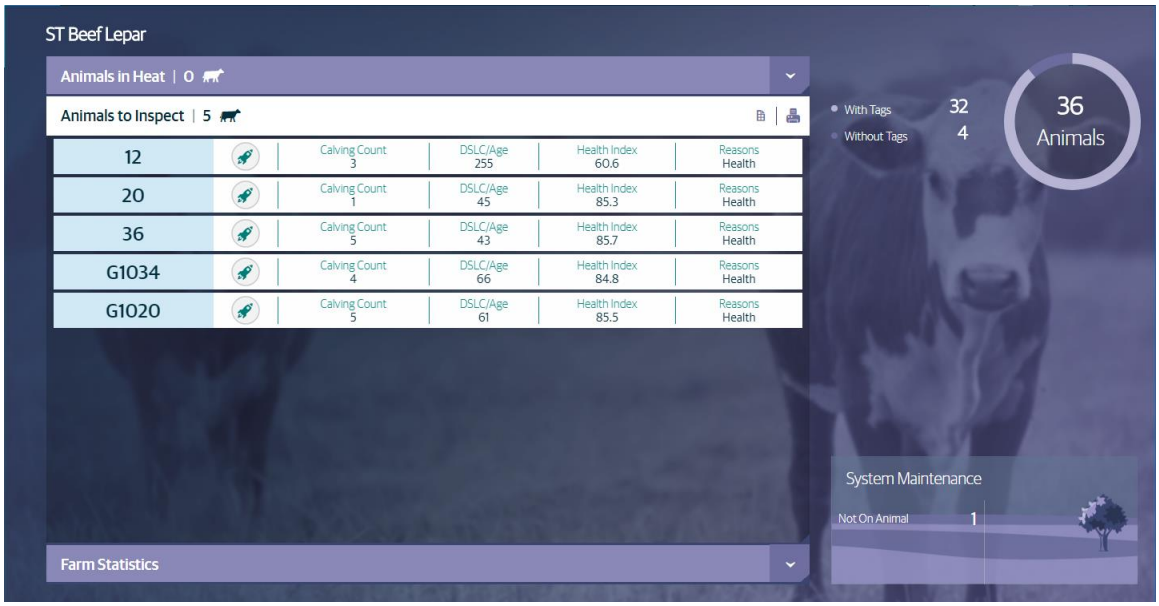
3.1 Overview/Dashboard

Click on the SenseHub™ Icon on the desktop

, the login page appears.

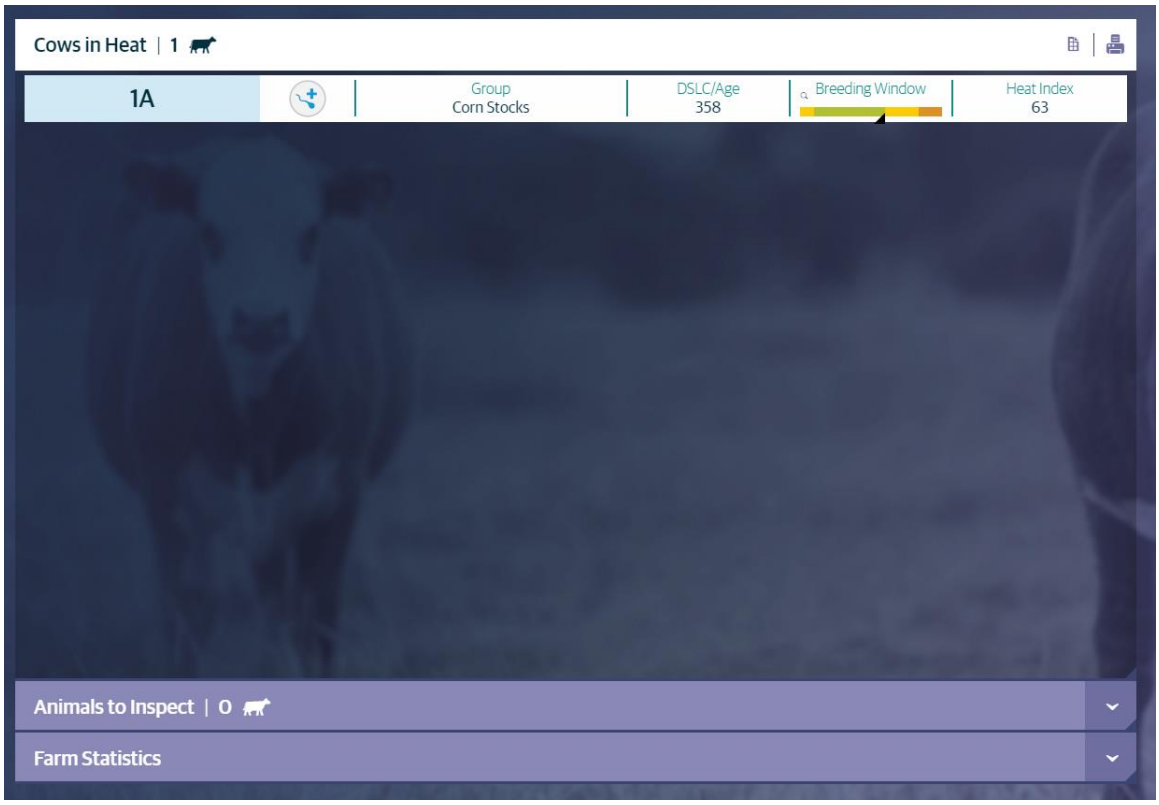


Enter the User Name and Password you configured when you set up and registered your SenseHub™ along with the Farm ID that was assigned during registration and click Login. The SenseHub™ Dashboard appears.



3.1.1 Accordion/Widgets

This part of the dashboard contains three important blocks of information.



- Animals that are in Heat.
- Animals that require further attention.
- Vital Farm Statistics.

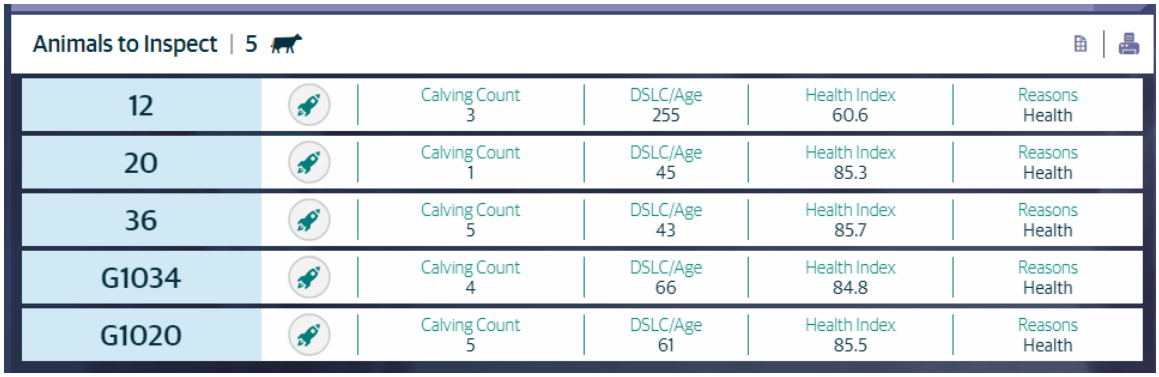
3.1.2 Animals in Heat

The cows in Heat section displays the cows that are currently in heat. This information is taken directly from the Cow in Heat Report.

3.1.3 Animals to Inspect

The Cows to Inspect portion contains cows from many different reports. By default, cows from the Health and Distress Reports appear here. Other reports can be added:

- Early Fresh Cows Report
- Suspected for Abortion Report
- Anestrus Cows Report
- Irregular Heat Report

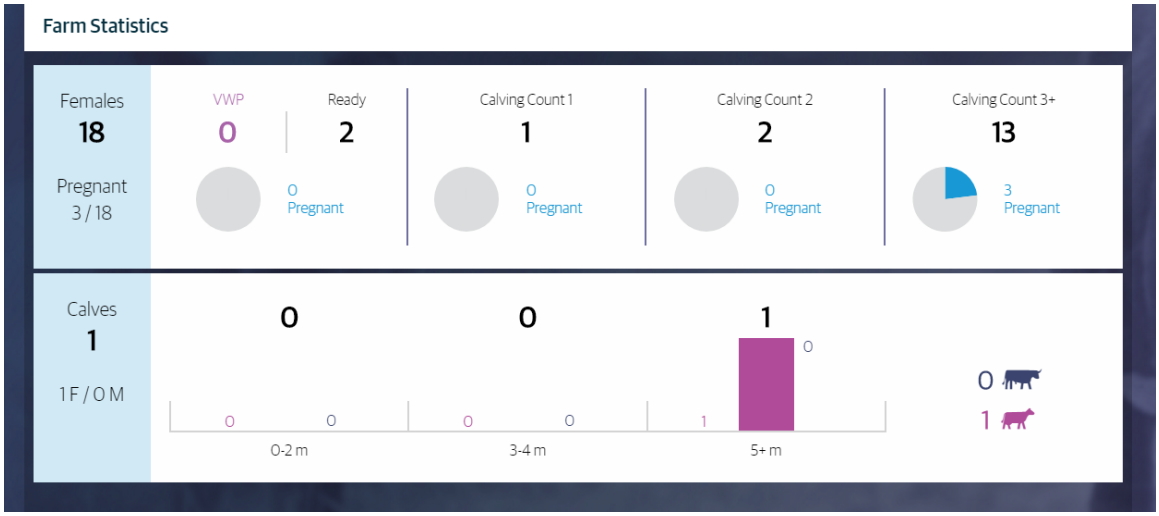


NOTE

The manual describes all possible reports and graphs. The reports and graphs available on the farm depend on the Application Plan enabled on the farm.

3.1.4 Farm Statistics

The Farm Statistics Widget displays important summary information that gives an overview of the farm, “at a glance.”



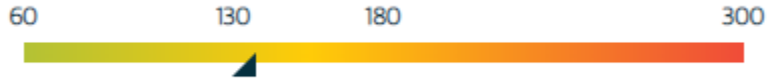
- Females – This line summarizes by calving count the females on the farm and the percent of them that are pregnant.
- Calves – This line displays the number of calves by age group, both females and males in each of the group are displayed.

The numbers here and their relationship give an instant snapshot as to the continuity and viability of the herd on your farm.

3.1.5 Key Performance Indicators - KPIs

This section displays Key Performance Indicators about the farm.

- Days Open – The number of days from calving until the Effective Insemination.



- This KPI takes time before it is available on the farm:
  - Small Farms – up to 100 Animals with tags – 90 days.
  - Medium Farms – up to 500 Animals with tags – 60 days.
  - Large farms – 501 and over – 30 days.
- At least 10 cows are required for each measurement.

NOTE

This KPI is available when using the Starter Application Plan.

- Health Rate – The Health Rate is the average percent of Animals, with tags, that are healthy on the farm over the last week.

- At least 10 cows are required for this measurement.

NOTE

The Health Rate KPI is available on farms using the Advanced Application Plan.

- Group Consistency – The amount the Daily Average Rumination of groups varies or differs from day to day over the last 10 days.

- Animal Daily Consistency – The variability of rumination minutes between cows during the same day in the Milking and Default Cows Branches.

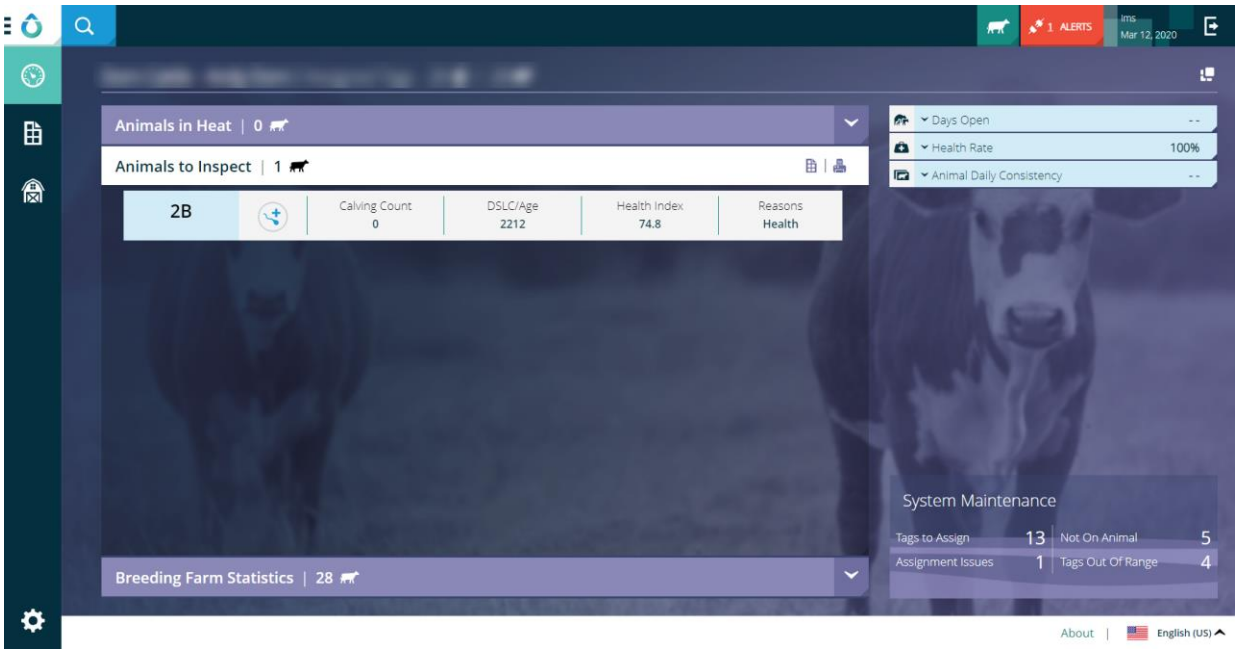
- At least 10 cows are required for each measurement.

NOTE

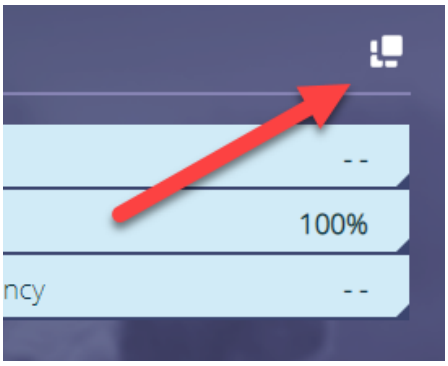
These 2 additional KPIs are available on farms using the Premium Application Plan.

3.1.6 Dashboard Configuration

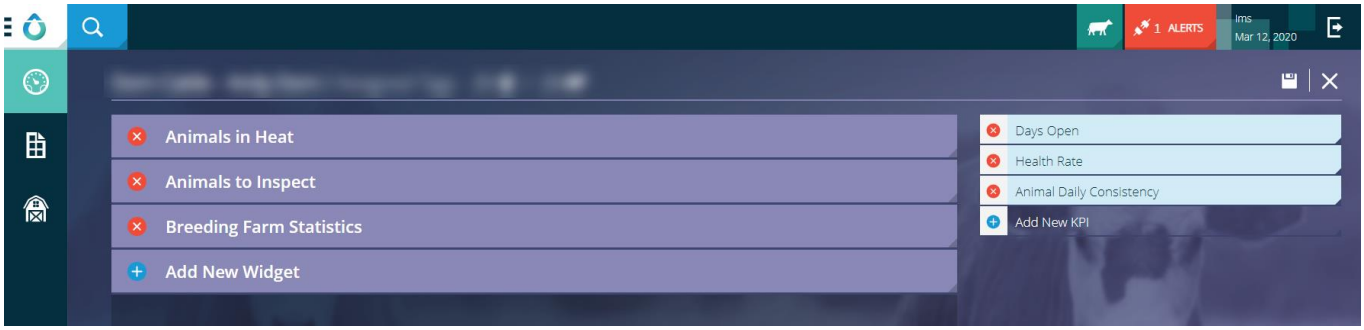
The widget and KPI displays can be configured to give a customized view for the farm.

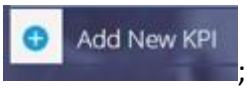


1. Click on Dashboard Configuration to open the Dashboard Configuration Zone.

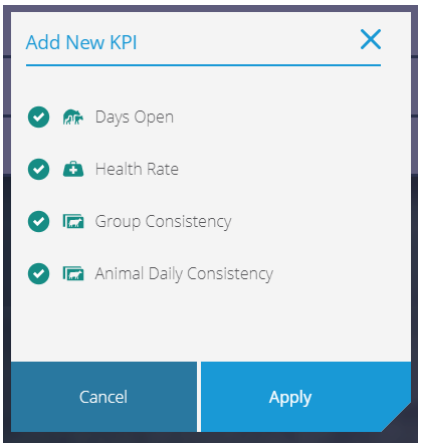


Both the widget and KPI areas are now unlocked for configuration.



2. Click on 

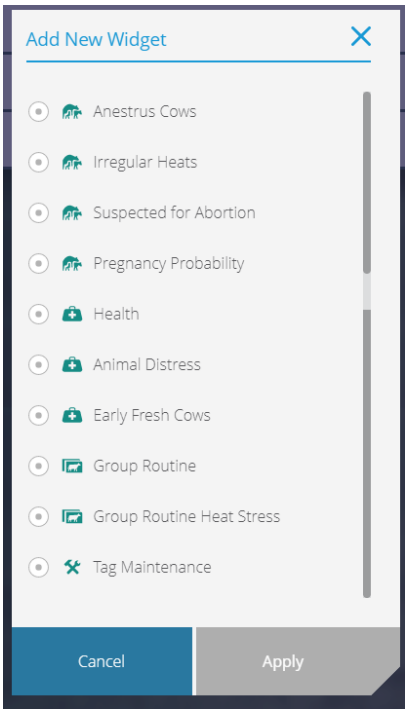
; the Add New KPI dialogue appears.



   a. Choose the desired KPIs and when complete click Apply.

3. Click on

; the Add New Widget dialogue appears.



   a. Choose the desired reports for the widget. Up to 4 different reports can be selected.

   b. When complete click Apply.

4. When the configuration of the Dashboard is complete, click
save to save the configuration.

3.1.7 System Maintenance

The System Maintenance area displays important information about maintenance that may be required from time to time in SenseHub™.

- Tags to Assign – These tags are declaring that they are on a cow and the SenseHub™ system has no record of them being paired or assigned to a cow. Review these tags and pair them with cows.
- Assignment Issues - These tags are assigned to a cow but no data has been received from them since they were assigned. Review these numbers in the system, perhaps these numbers need to be corrected.
- Tags to Replace – The tags that are declaring that their battery is low. These tags should be replaced.
- Not on Animal – These tags are assigned to a animal and are declaring that they are not on any animal. These tags may have become separated from their animal. Look for them so they can be attached again to the correct animal or a new tag needs to be assigned.

Changing tags, if required, is described on page 107.

3.2 SenseHub™ Alerts

SenseHub™ generates many kinds of Alerts. These alerts are divided into 2 categories:

- Animal Alerts
- System Alerts

3.2.1 Cow Alerts

4 different types of alerts can appear in this area:

- Pre-calving distress.
- Post-calving distress.
- High Activity from the Daily Activity Group Graph.
- Low Rumination from the Daily Rumination Group Graph.

NOTE

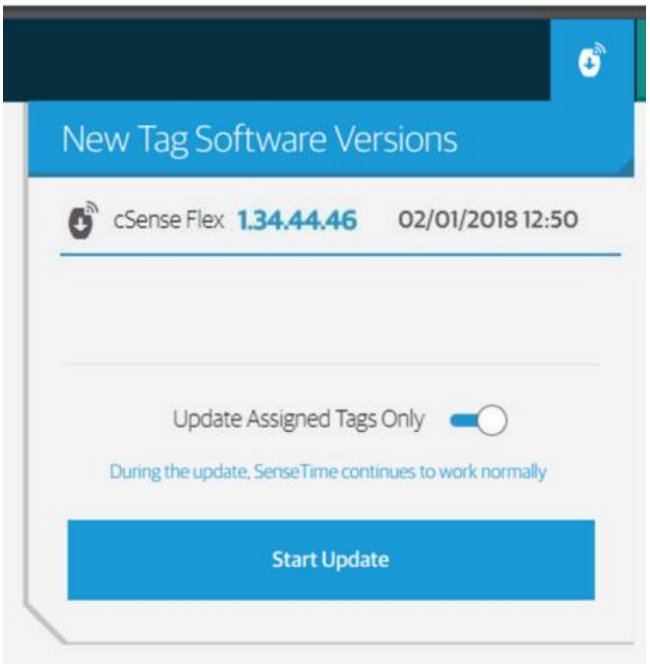
The manual describes all possible alerts, reports and graphs. The alerts, reports and graphs available on the farm depend on the Application Plan enabled on the farm.

3.2.2 Tag Software Version Alerts

When SenseHub receives the signal that a new software version is available for the tags currently in use on the farm, the New Tag Software Alert appears.

Click on the Tag Update Icon to begin the update process.

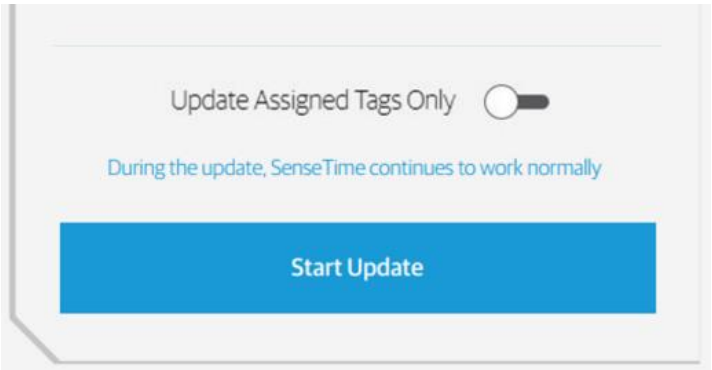
1. The system displays the Tag type and version that is available for update. Click Start Update when ready to begin the update. During this process SenseHub continues to work normally.



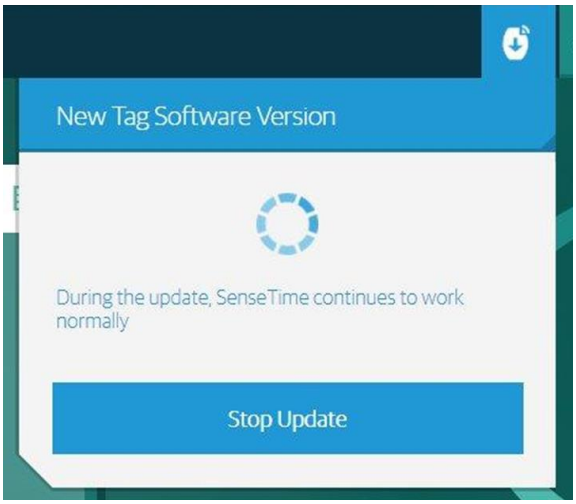
NOTE

By default, only assigned tags are updated.

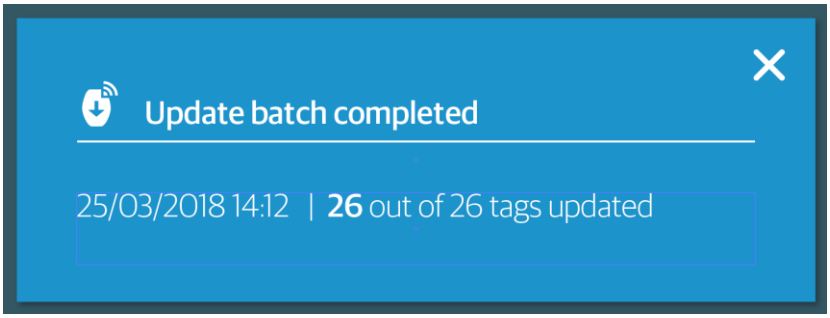
If you wish to update Unassigned Tags at the same time, slide the slider to the right and the update of Assigned and Unassigned Tags is enabled.



2. You can check on the Tag Update process while it is running.



3. When the process completes, a message is displayed.



3.2.3 System Alerts

Alerts concerning the system and/or the connectivity of the system are displayed here.

System Alert	Description	Suggested Action
No Tag Data from any Tag	No data is received from any tag. In normal configuration, this appears after 1 hour of no data from assigned tags. In grazing configuration, this appears after 24 hours of no data from assigned tags.	Contact your dealer for technical support
RF Configuration Error	The antenna is not accepting its configuration	Contact your dealer for technical support
General Controller Error	The controller is generating a general error	Contact your dealer for technical support the affected device may require replacement
Antenna Disconnected	There is no response from an installed antenna	Check the network connectivity between the Controller and the Antenna
Device Overheated	The Controller is too hot	Contact your dealer for technical support
RF Module Error	One of the RF modules is not working correctly	Contact your dealer for technical support
Device Storage Error	Data is not being stored internally	Contact your dealer for technical support

Connectivity Alert	Description	Suggested Action
Cloud is Disconnected	There is no connectivity with the Cloud	Check local connectivity
No Herd Management Synchronization	It has been more than 25 hours since there was synchronization of your Herd Management system and SenseHub™	Synchronize your Herd Management System
Herd Management Synchronization Issues	This indicates one or more herd management issues; Duplicate Cow Cards, Duplicate Tags, too many cows culled	Check the data being sent by the Herd Management System
Local Backup Error	There is an issue preventing the creation of the local backup	Contact your dealer for technical support
Cloud Backup Error	There is an issue preventing the backup being copied to the cloud. This error will only show if the local internet connection is functioning.	Contact your dealer for technical support

3.3 SenseHub™ Reports

Click on the Reports Icon, the reports menu appears.

The Reports menu is divided into different sections:

- Favorites – This area contains all the reports that are marked as your favorite.
- Reproduction – this area contains all the reports related to Reproduction:
  - Anestrus
  - Irregular Heats
  - Suspected for Abortion
  - Cows in Heat
- Health - this area contains all the reports related to Health:
  - Health
  - Animal Distress
  - Early Fresh Cows
  - Animals to Inspect
- Group – This area contains all the Group related reports.
  - Group Routine
  - Group Routine Heat Stress
- Maintenance – This area contains all the Maintenance related reports.
  - Tag Maintenance.

There are several different reports available in the SenseHub™ System. These reports should access on a daily, Weekly, or Monthly basis.

NOTE

The manual describes all possible reports and graphs. The reports and graphs available on the farm depend on the Application Plan enabled on the farm.

3.3.1 Adding a Report to Your Favorites

For easier access add a report to Your Favorites.

1. Click on the Reports Icon, the reports menu appears.
2. Click on the White Star next to the report that you wish to add to Your Favorites.

3. The star changes color from white to green, signifying that the report is added to Your Favorites.

3.3.2 Removing a Report from your Favorites

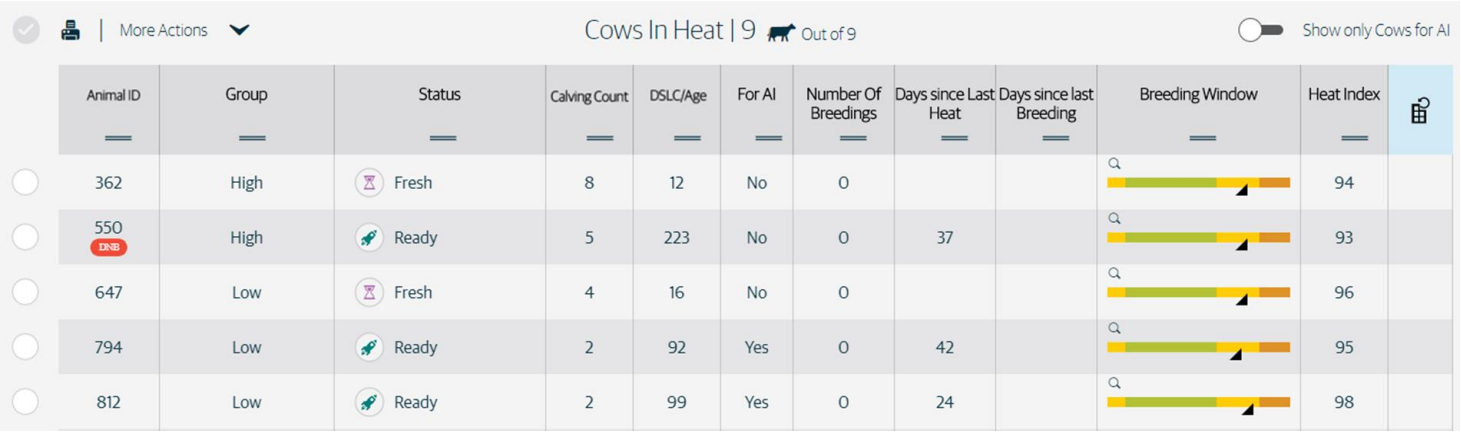
Users may want to remove a report from Your Favorites.

1. Click on the Reports Icon, the reports menu appears.
2. Click on the Green Star next to the report that you wish to remove from Your Favorites.

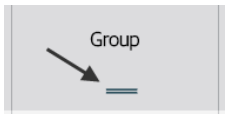
3. The star changes from Green to white, signifying that the report is removed from Your Favorites.

3.3.3 Sorting and Filtering Reports

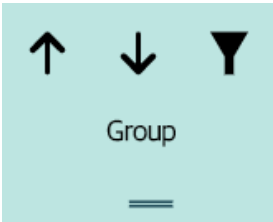
Reports in SenseHub can be Sorted and/or Filtered.



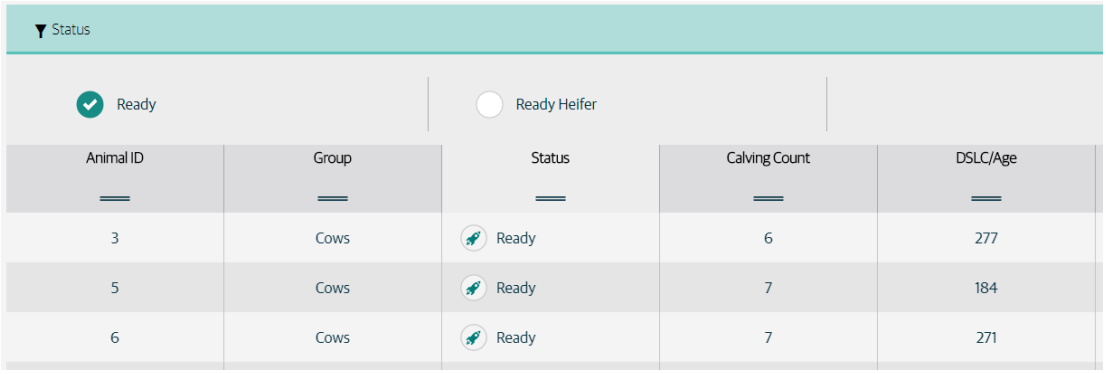
Animal ID	Group	Status	Calving Count	DSLC/Age	For AI	Number Of Breedings	Days since Last Heat	Days since last Breeding	Breeding Window	Heat Index
362	High	Fresh	8	12	No	0				94
550 DNB	High	Ready	5	223	No	0	37			93
647	Low	Fresh	4	16	No	0				96
794	Low	Ready	2	92	Yes	0	42			95
812	Low	Ready	2	99	Yes	0	24			98

1. Click 

to open the Column Action Menu. The Column Action Menu appears.

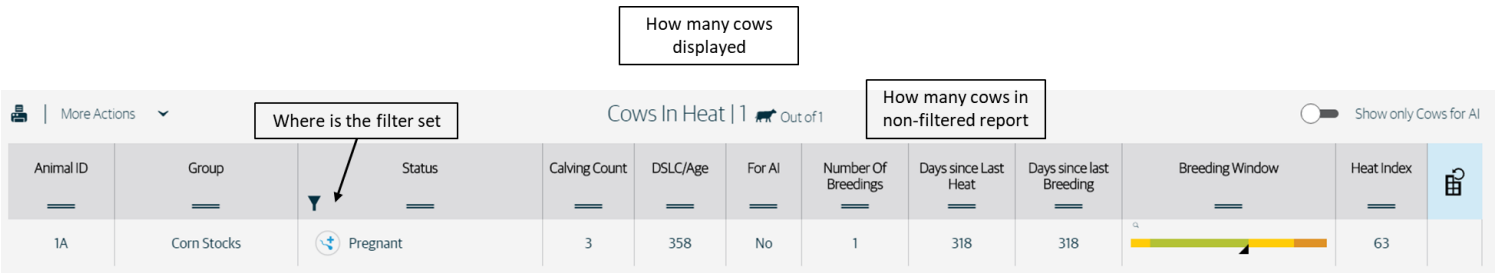


2. The Column Action Menu allows you to:
   a. Sort Ascending – Sort the report according to this column from lowest value to highest.
   b. Sort Descending – Sort the report according to this column from highest to lowest.
   c. Create a Filter – Create a filter from the items in this column that only displays the cows in the report according to the values chosen.

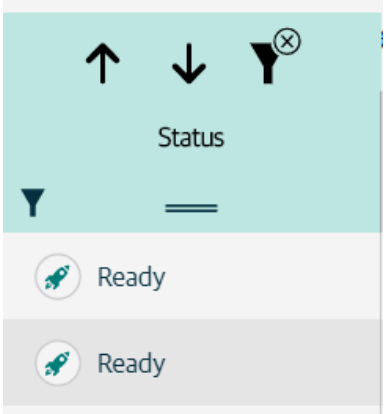


Animal ID	Group	Status	Calving Count	DSLC/Age
3	Cows	Ready	6	277
5	Cows	Ready	7	184
6	Cows	Ready	7	271

3. The report is now displayed according to the filter created.

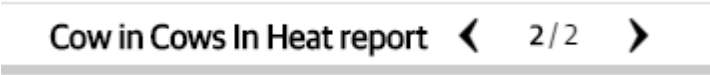


4. To cancel the filter, click on the Column Action Menu and click on the funnel with the X.



3.3.4 Navigating within Reports

Clicking on the Cow ID of any cow in any takes you to the related Graph of that cow in the cow card.



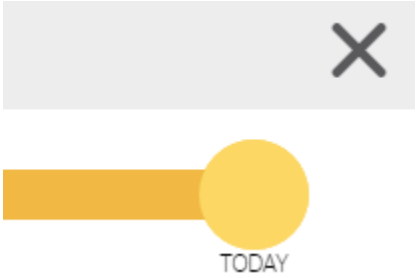
Once you have accessed the graphs related to the report you can browse through the graphs of only those cows that are in the report.

Press refresh to refresh the cows in the report.

NOTE

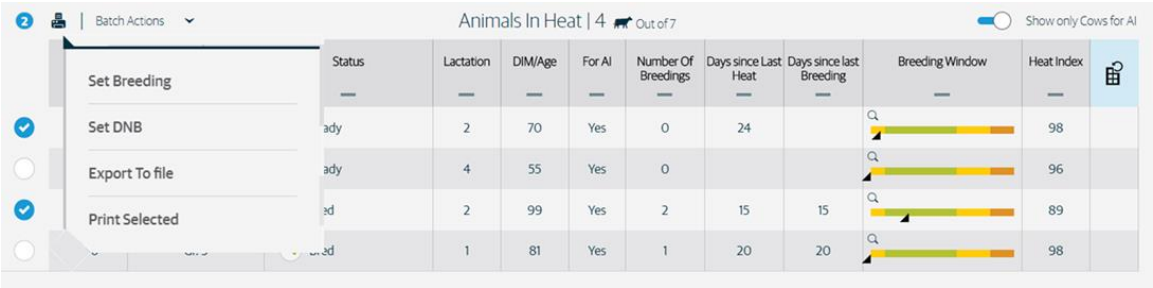
Once a report is opened in SenseHub™ it will not be refreshed automatically. Reports are only refreshed when the refresh button is pressed or when the report is opened.

Click on the to Exit the graph view of this report and return to the report.



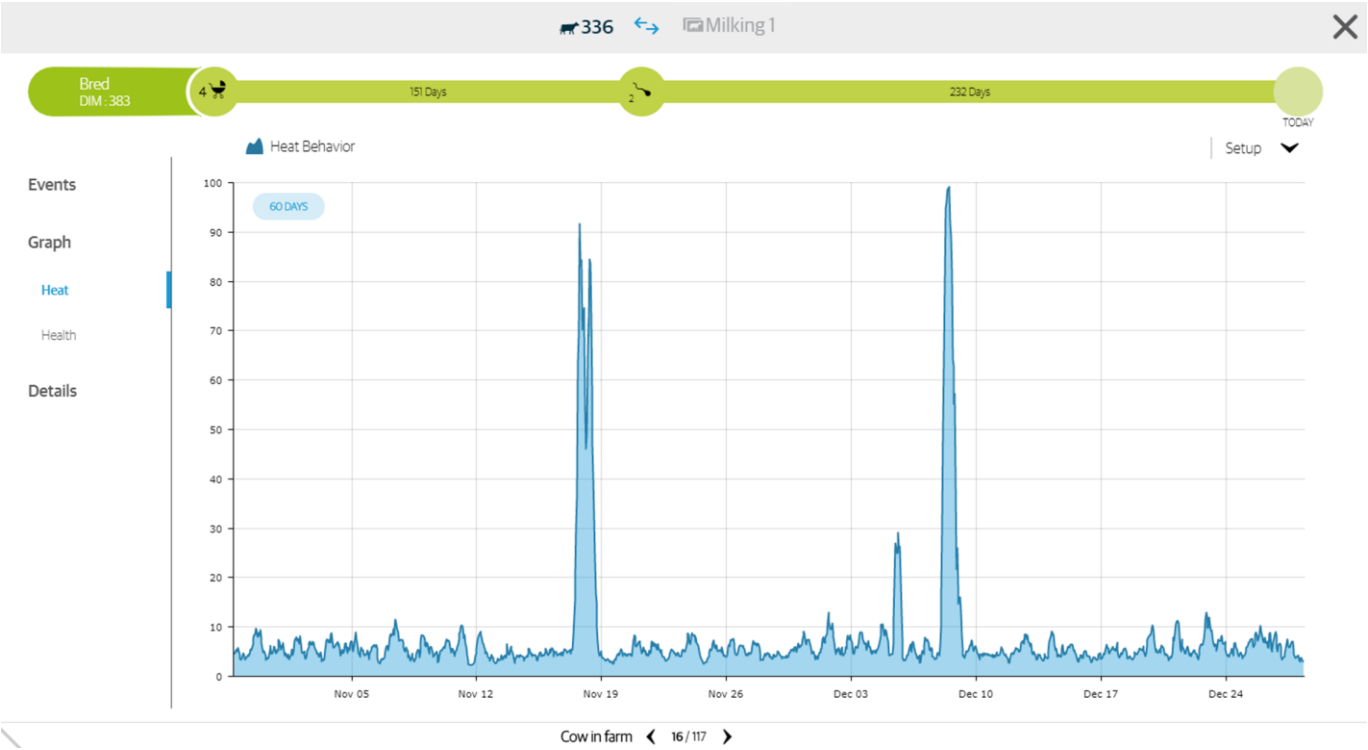
3.3.5 Batch Events from Reports

Batch events are available from reports. The event/s available depend on the report. For example, Breeding Events can be reported as a batch from the Animals in Heat Report.



3.4 SenseHub™ Graphs

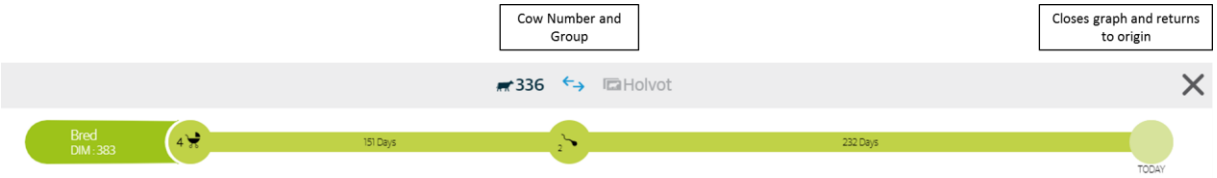
SenseHub™ Graphs display a great deal of information and have several available series and options.



NOTE

The available series and options are determined by the Application Plan enabled for the farm: Starter, Advanced, and Premium.

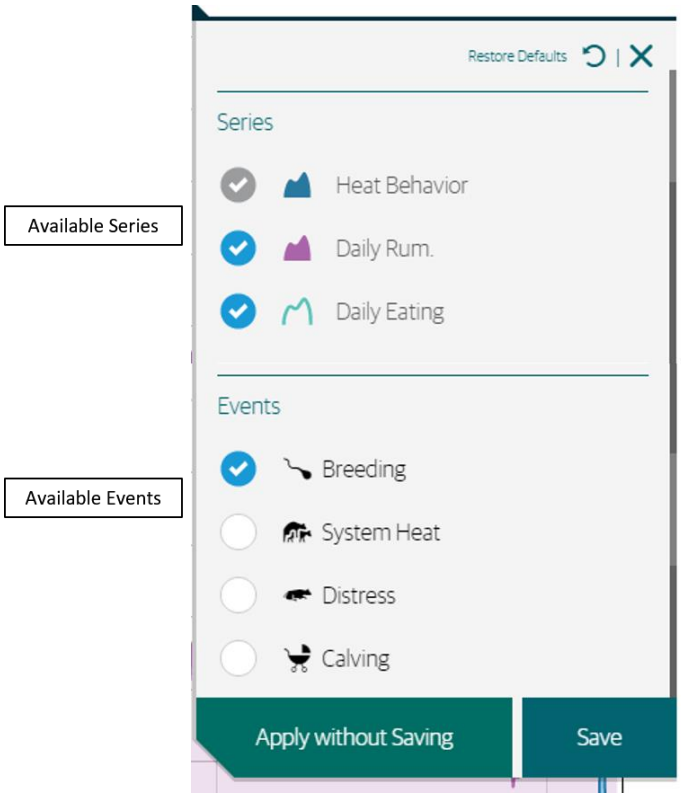
1. The top of the graph contains the current lactation timeline and other information about the cow



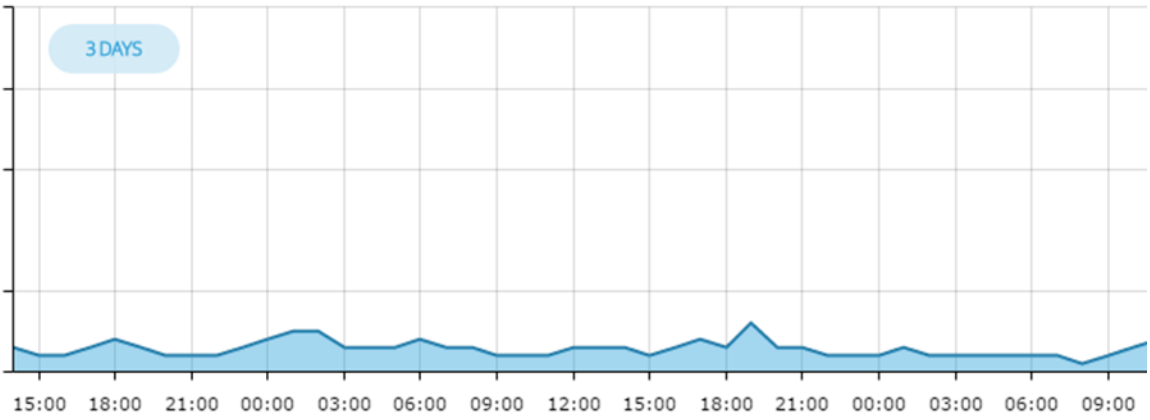
2. Displayed Series and the Timeframe. This portion of the graph informs us of the series that is displayed and the timeframe of the graph

3. The cursor on graphs become a cross hair. Moving the cross hair displays the current Date/Time Stamp as well as the current value for the displayed series.

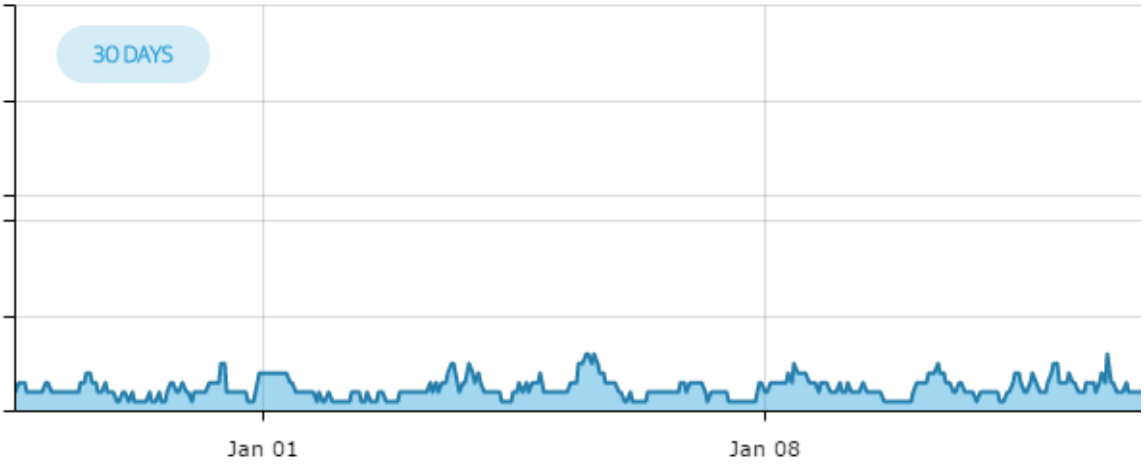
4. Clicking on Setup displays the options available for this graph.



5. Timeframe – The displayed ticks correspond always to the chosen Timeframe.



As the Timeframe increases so does the distance between each tick on the graph.



NOTE

The manual describes all possible reports and graphs. The reports and graphs available on the farm depend on the Application Plan enabled on the farm.

3.5 Daily Tasks

These reports should be reviewed every day.

Report	Description
Animals in Heat	This report displays the cows that are in heat including the cows that are ready for AI.
Reading the Health Report	This report displays the cows that have possible health issues.
Reading the Animal Distress Report	Identify cows in distress that need immediate attention.
Reading Animals to Inspect Report	This is a collection of cows from several different reports.
Reading the Daily Activity/Rumination Routine Graph	This graph displays the daily average of Rumination or Activity compared to the previous 2-week average.
Reading the Heat Stress Routine Graph	This graph displays the effect of Heat Stress on the various groups in the herd.

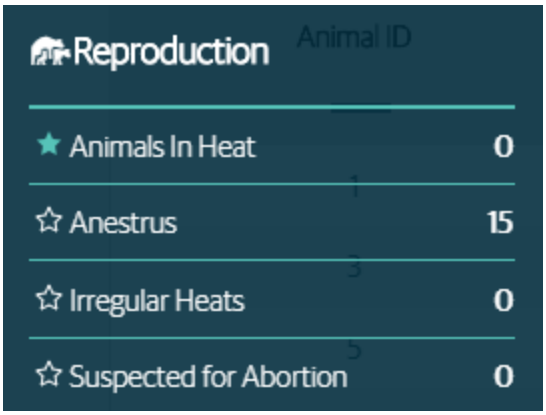
NOTE

The manual describes all possible reports and graphs. The reports and graphs available on the farm depend on the Application Plan enabled on the farm.

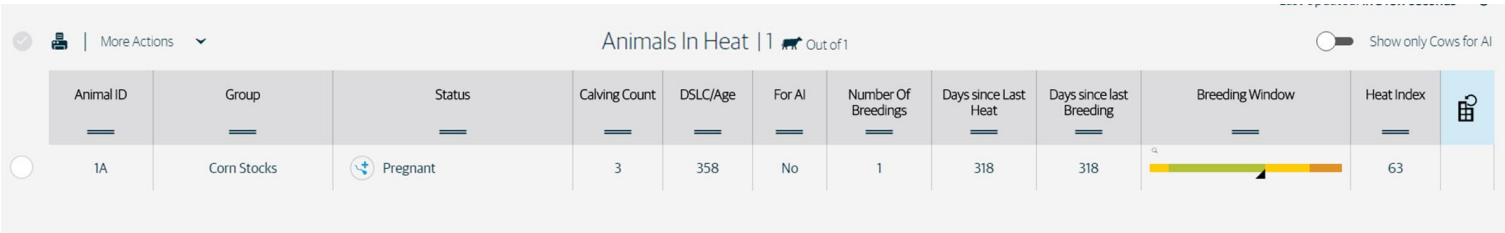
3.5.1 Reading the Animals in Heat Report

The Animals in Heat report displays all the cows in heat with a quick filter that shows just those cows that are ready to bred, the cows that have completed their voluntary waiting period.

1. Click on the Reports Menu Icon and the Browse Report drawer appears.



2. Click on Animals in Heat; the Animals in Heat Report appears.

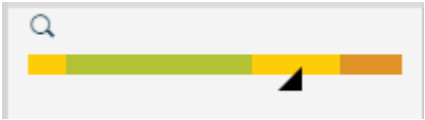


3. Move the Slider to the right and only the Cows that are Ready for AI are displayed. Cows Ready for AI are those cows that have completed the configured Voluntary Waiting Period, are not pregnant, and of course are not tagged as Do Not Breed, DNB. See page 126 for details.

Field	Description
Animal ID	The Identification number assigned to the animal in SenseHub™
Group	The group where the animal is assigned
Status	The status of the animal. Statuses are explained on page 35.
Calving Count	The number of times the cow has given birth or calved
DSLC/Age	The number of days since the cow has last calved, or if she is a Heifer/Calf, the number of days old the Heifer/Calf is.
DNB	Do not Breed. This is the designation for cows that the farmer no longer wants their offspring.
For AI	This cow is available for breeding. For example, cows that have not yet completed their Voluntary Waiting Period, described on page 126, will be designated here, No.
Number of Breedings	The number of time this cow has been bred during the current lactation
Days since Last Heat	The number of days since the last heat recorded for this cow in the current lactation
Days since Last Breeding	The number of days since the cow was last bred in the current lactation
Breeding Window	The Breeding Window, described on page 71, describes the optimum time for inseminating the cow.
Heat Index	This is a score that combines all the outputs from the tags, and the cow's heat history. This results in a score, Heat Index, that is equal to the strength of the current heat.

3.5.1.1 Breeding Window Explained

The Breeding Window is a graphic representation of the optimal time for inseminating the cow and the current position of the cow on this timeline.

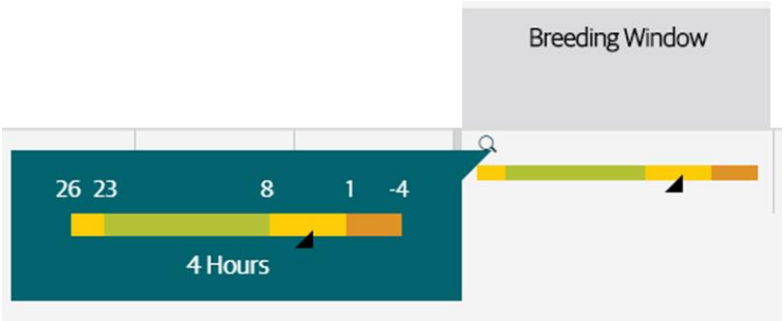


This timeline is made up of 4 zones:

Breeding Window Zone	Description
First Yellow Zone	26-23 Hours. Breeding during this timeframe may result in lower conception rates.
Green Zone	23-8 Hours. This is optimum Breeding Window. Breeding during this time may result in the highest conception rates.
Second Yellow Zone	8-1 Hours. Breeding during this timeframe may result in lower conception rates.
Red Zone	1-(-4) Hours. Breeding during this timeframe may result in the lowest conception rates.

Occasionally you may see a cow in the Cows in Heat Report with a Breeding Window as above. This means that the Heat Index of the cow has not yet reached its highest value. Breeding cows like this may result in lower conception rates.

Clicking on the magnifying glass explains the current position within the breeding window.



3.5.2 Reading the Health Report

Animals that have a drop in Rumination, Eating, and/or Activity will have a decrease in their Health Index and appear in the Health Report.

More Actions

Health | 1 Out of 1

Animal ID	Group	Status	Calving Count	DSLC/Age	Daily Rumination	Health Index
3	Cows	Ready	6	268	418	84.2

The Health Index value for entry into the Health Report is configured on page 127.

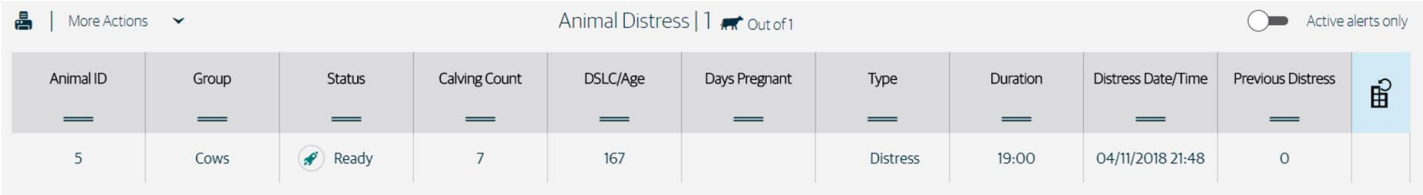
Field	Description
Animal ID	The Identification number assigned to the animal in SenseHub™
Group	The group where the animal is assigned
Status	The status of the animal. Statuses are explained on page 35.
Calving Count	The number of times the cow has given birth or calved
DSLC/Age	The number of days since the cow has last calved, or if she is a Heifer/Calf, the number of days old the Heifer/Calf is.
Health Index	The current Health Index for this cow. This filed is colored RED when the Health Index is below the value set for a Marked Health Issue as explained in section 5.3.1 on page 127.

NOTE

Identify and observe cows with a Red Colored Health Index immediately.

3.5.3 Reading the Animal Distress Report

Animals appear in this report when they have not had sufficient rumination activity for an extended period, coupled with an absence of eating activity during that period. Cows around the time of calving that are in Pre and/or Post Calving Distress should be given special attention to help prevent metabolic and calving diseases.



By default only those cows in active distress appear in the report. Slide the quick filter to the left to see all cows that were in distress during the previous 24 hours.

Field	Description
Animal ID	The Identification number assigned to the animal in SenseHub™
Group	The group where the animal is assigned
Status	The status of the animal. Statuses are explained on page 35.
Calving Count	The number of times the cow has given birth or calved
DSLC/Age	The number of days since the cow has last calved, or if she is a Heifer/Calf, the number of days old the Heifer/Calf is.
Type	If the cow is detected to be in General Distress, Pre-calving Distress, or Post-Calving Distress This field is colored RED when the cow is in active Pre or Post calving distress. This filed is colored YELLOW when the cow is in active distress that is not associated with calving.
Duration	How long the cow was in Distress this time
Distress Date/Time	The time and date when the cow was labeled as
Previous Distress	How many times around this calving event was this cow in distress.

NOTE

All cows that were in distress in the previous 24 hours appear in this report.

3.5.4 Reading Animals to Inspect Report

The Animals to Inspect report is made up of animals that appear in other reports. The Health and Animal in Distress reports are included by default, other reports can be included as configured.

More Actions | Animals To Inspect | 1 Out of 1 | Include in Report

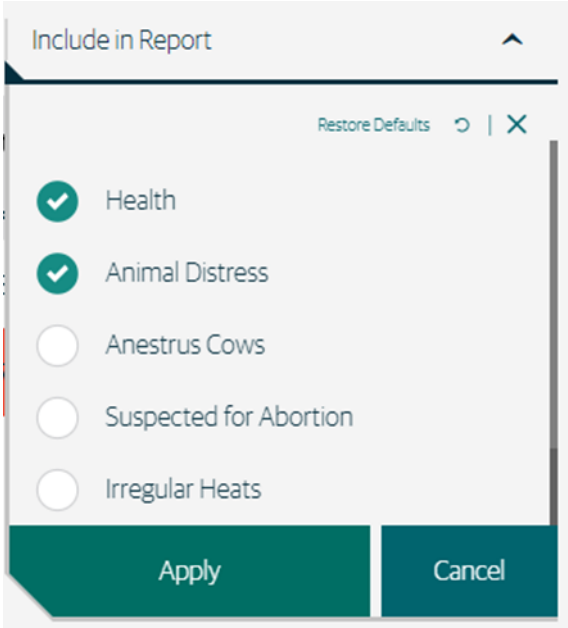
Animal ID	Group	Status	Calving Count	DSLC/Age	Days since Last Heat	Days Pregnant	Health Index	Reasons
3207	Corn Stocks	Pregnant	9	373	290	290	82.8	Health

Field	Description
Animal ID	The Identification number assigned to the animals in SenseHub™
Group	The group where the animal is assigned
Status	The status of the animal. Statuses are explained on page 35.
Calving Count	The number of times the cow has given birth or calved
DSLC/Age	The number of days since the cow has last calved, or if she is a Heifer/Calf, the number of days old the Heifer/Calf is.
Days since last Heat	The number of days since the cow was last determined to be in heat.
Days Pregnant	When the cow has a recorded positive pregnancy check, the number of days since the effective breeding.
Health Index	The current Health Index of the cow
Reasons	The report/s where the cow is listed are the reason/s the cow appears in the Cows to Inspect Report.

3.5.4.1 Changing the Reports that appear in the Animals to Inspect Report

It is possible to see and edit the reports that are included in the Animals to Inspect Report; Click on Animals to Inspect in the Dashboard Widget and then Click on the Report Icon, the Animals to Inspect Report Appears.

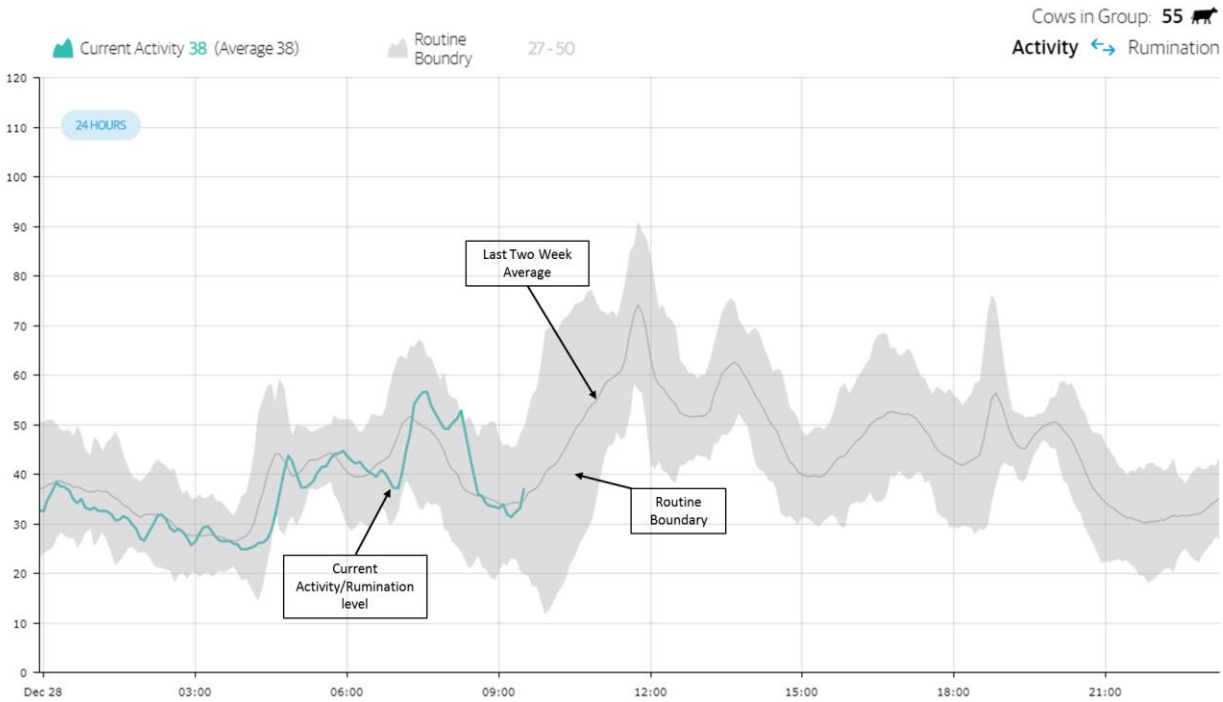
Click on the arrow next to Include in Report. The reports included in the Animals to Inspect Report are listed with a check mark next to their name.



Check or Uncheck reports as desired and click apply to save the desired configuration.

3.5.5 Reading the Daily Activity/Rumination Routine Graph

The Daily Activity/Rumination Routine graph displays the average activity or rumination from the past two weeks over the past 24 or 48 hours.

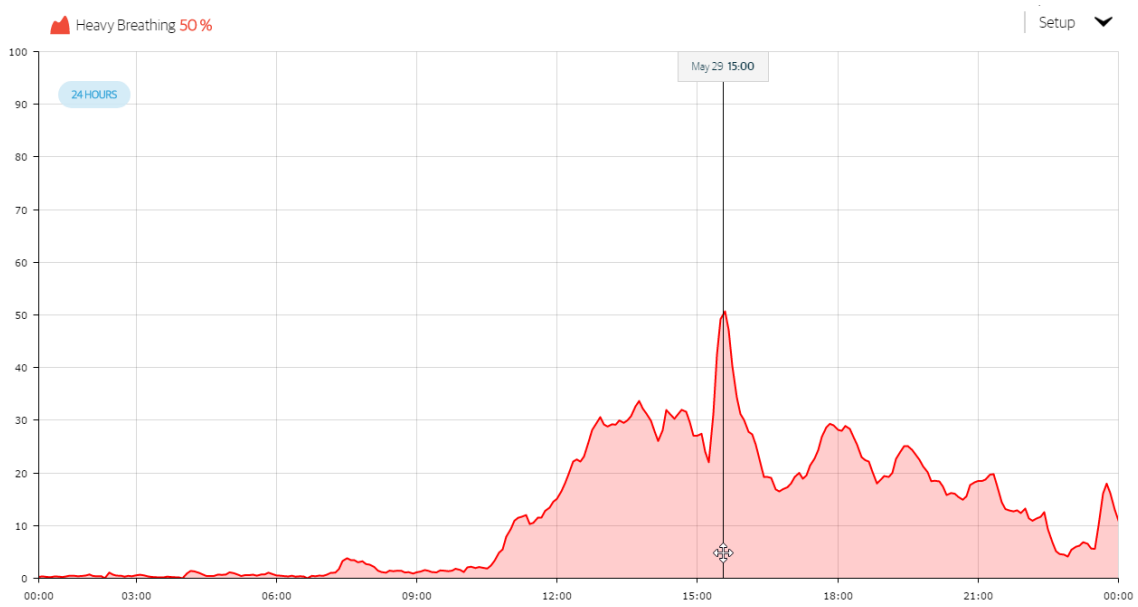


This graph clear identifies when the current Activity or Rumination level ventures outside of the routine boundary.

This graph displays information only if there are at least 20 cows with tags in the group and these tags have been paired with the cows for at least 14 days. In addition to those two conditions, the farm must also be subscribed to the appropriate Application Plan.

3.5.6 Reading the Heat Stress Routine Graph

The Heat Stress Routine graph shows the amount of heavy breathing among the cows in the various groups in the herd. This graphs helps to understand when the heavy breathing occurs during the daily farm routine and if the policies set down on the farm for cooling and feeding are being effective.



This graph displays information only if there are at least 20 cows with tags in the specific group, and these tags have been paired with the cows for at least 24 hours. In addition to the above the farm must also be subscribed to the appropriate Application Plan.

3.6 Weekly Tasks

These SenseHub™ reports/graphs should be reviewed at least once a week.

Report	Description
Reading the Anestrus Cows Report	Cows that have not displayed a heat during the last 50 days.
Reading the Irregular Heats Report	Cows with 3 or more heats during the last 30 days.
Reading the Suspected for Abortion Report	Cows that may have aborted or dropped their calf very early.
Understanding the Group Consistency Trend Graph	This graph displays the average daily rumination along with the total variability within the group. Higher variability might signal something that is stressing the group or the herd.
Understanding the Group Heat Stress Trend Graph	When the weather demands, this report should be accessed more often.
Reading the Tag Maintenance Report	Check weekly to make sure there are no outstanding issues with the tags.

NOTE

The manual describes all possible reports and graphs. The reports and graphs available on the farm depend on the Application Plan enabled on the farm.

3.6.1 Reading the Anestrus Cows Report

The Anestrus Cows Report displays any cow that has completed the configured Voluntary Waiting Period, VMP, and has not been detected in heat for the last 50 days; the cow must also have the tag for at least 30 days.

More Actions

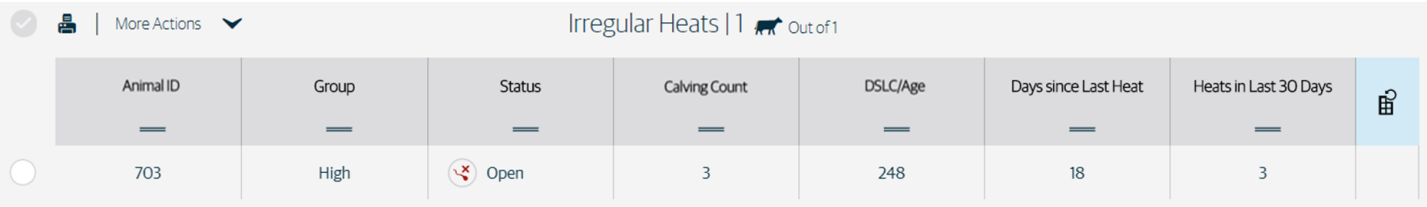
Anestrus Cows | 2 Out of 2

Animal ID	Group	Status	Calving Count	DSLC/Age	Days since Last Heat	Days since last Breeding
2B	Corn Stocks	Open	3	371	318	318
776D	Corn Stocks	Ready Heifer	0	408		

Field	Description
Animal ID	The Identification number assigned to the animal in SenseHub™
Group	The group where the animal is assigned
Status	The status of the animal. Statuses are explained on page 35.
Calving Count	The number of times the cow has given birth or calved
DSLC/Age	The number of days since the cow has last calved, or if she is a Heifer/Calf, the number of days old the Heifer/Calf is.
Days since last Heat	The number of days since the cow was last determined to be in heat.
Days Since Last Breeding	The number of days since the cow was last inseminated.

3.6.2 Reading the Irregular Heats Report

The Cows with Irregular Heat Report displays any cows that have three or more heats in the past 30 days.



Field	Description
Animal ID	The Identification number assigned to the animal in SenseHub™
Group	The group where the animal is assigned
Status	The status of the animal. Statuses are explained on page 35.
Calving Count	The number of times the cow has given birth or calved
DSLC/Age	The number of days since the cow has last calved, or if she is a Heifer/Calf, the number of days old the Heifer/Calf is.
Days since last Heat	The number of days since the cow was last determined to be in heat.
Heats in Last 30 Days	The number of times the cow has been recorded in Heat during the past 30 days.

3.6.3 Reading the Pregnancy Probability Report

The Pregnancy Probability Report shows cows with their Pregnancy Probability Ranking. Cows appear in the report from 27 days after last breeding and until a pregnancy check result, positive or negative, is entered for them.

More Actions

Pregnancy Probability | 27 out of 27

Animal ID	Group	Status	Lactation	DIM/Age	Days since Last Breeding	Pregnancy Probability
223	Gr. 3	Bred Heifer	0	755	262	Medium
507	Gr. 5	Bred Heifer	0	743	248	High
732	Gr. 3	Bred Heifer	0	731	245	High
366	Gr. 3	Bred	2	350	244	High
542	Gr. 5	Bred Heifer	0	694	223	High
729	Gr. 3	Bred Heifer	0	728	203	High
411	Gr. 3	Bred	2	96	37	Low
165	Gr. 3	Bred	3	141	37	Medium
386	Gr. 3	Bred	2	111	35	Medium
693	Gr. 2	Bred	1	89	34	Medium

Field	Description
Animal ID	The Identification number assigned to the animal in SenseHub™
Group	The group where the animal is assigned
Status	The status of the animal. Statuses are explained on page 35.
Lactation	The number of times the cow has given birth or calved
DIM/Age	The number of days since the cow has last given birth, or if she is a Heifer/Calf, the number of days old the Heifer/Calf is.
Days since Last Breeding	The number of days since the cow was last bred.
Pregnancy Probability	The probability the cow is pregnant measured in 4 ranks: NP – Not Pregnant, Low = Maybe Pregnant, Med – Probably Pregnant, High = High Probability of Pregnancy.

NOTE

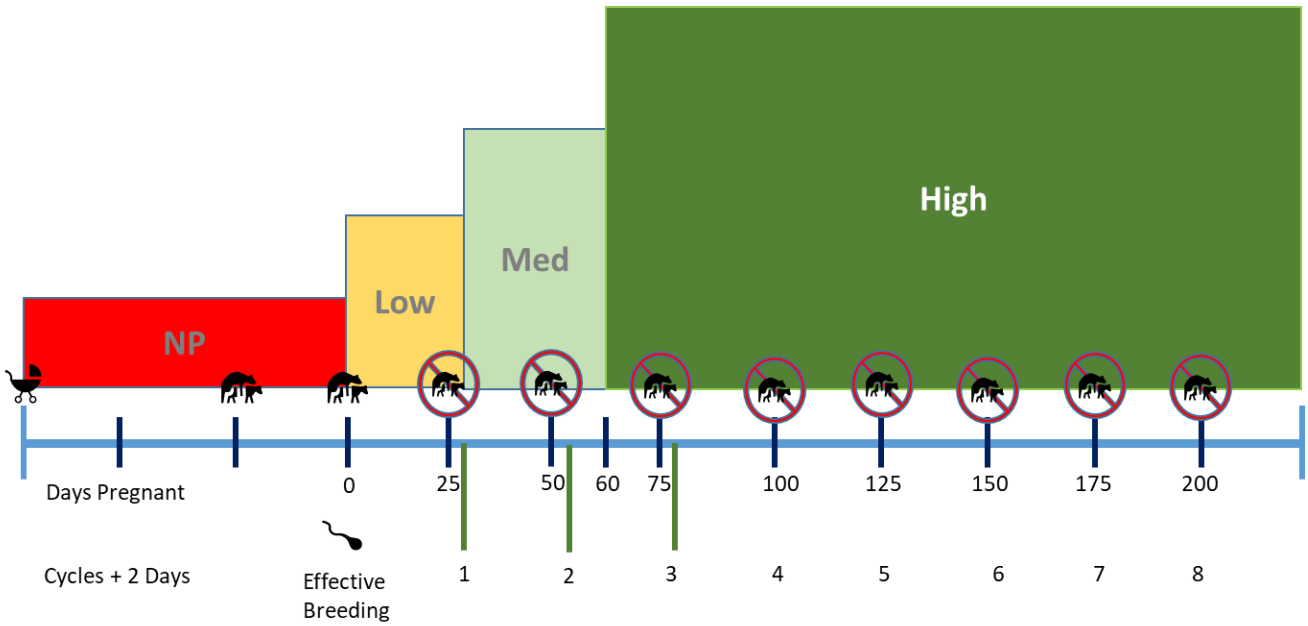
The Pregnancy Probability calculation and rankings are described on page 83.

3.6.3.1 Pregnancy Probability Explained

The Pregnancy Probability calculation used in the Pregnancy Probability Report allows farmers to better chose the cows for pregnancy testing. By focusing on the cows that need to be tested allows for better control of the open/empty days in the herd and reduces labor.

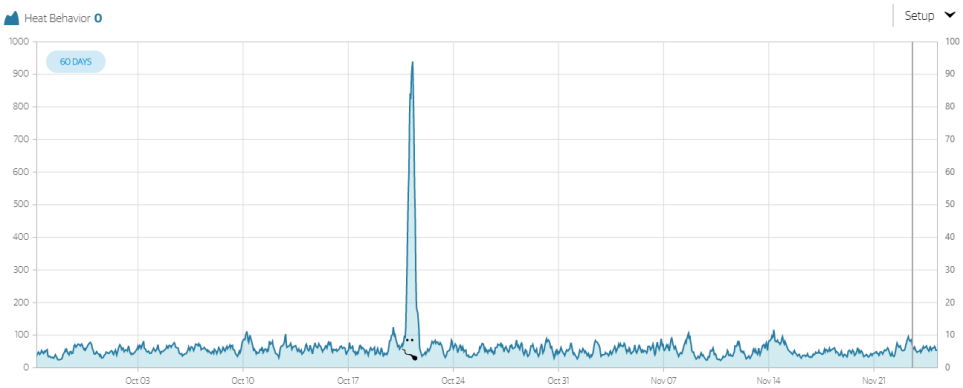
The Pregnancy Probability calculation gives the best results when all events occurring in the lactation are entered into the system correctly and in a timely manner. Data continuity is also important not just in terms of system coverage, but also in terms of keeping tags on the cows continuously, from calving to calving.

Pregnancy Probability Ranking	Explanation
NP-Not Pregnant	Cows are not pregnant after: Calving, No Insemination, Negative Pregnancy Check, Abortion, more than 300 days since last breeding. This Pregnancy Probability rank does not appear in the report.
Low-Maybe Pregnant	From Breeding until one missed 25 Days Cycle + 2 days. Normally this Pregnancy Probability rank does not appear in the report unless there are cows that are more than 27 days since last breeding and have experienced a system heat.
Medium – Probably Pregnant	From after the first missed cycle + 2 days until 60 days. Cows that are more than 60 days since breeding but have recently experienced a system heat will have this Pregnancy Probability rank.
High – High Probability of Pregnancy	From 60 days after last breeding.

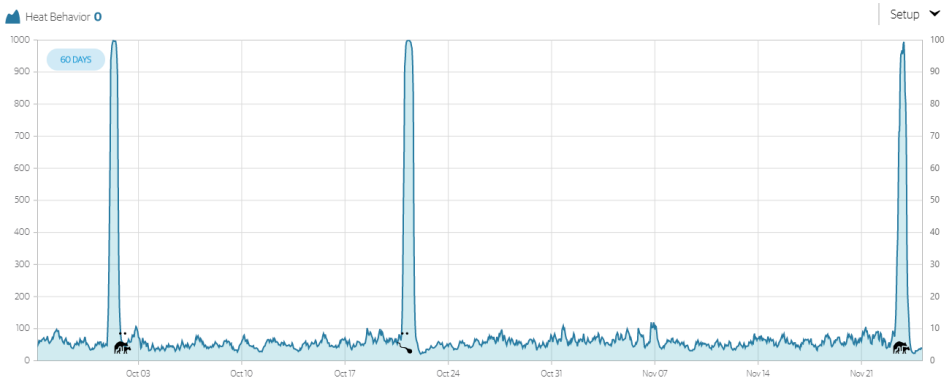


When we take a closer look at the report above there are two cows, 411 and 165, isolated above, with the same number of days since last breeding, but their Pregnancy Probability Ranks are different, one is Low and the other is Med, why?

Heat Graph for Cow 165



Heat Graph for Cow 411



Examining the Heat Graphs for each cow helps explain why these cows have a different Pregnancy Probability Ranking. Cow 165 is 37 days since the last breeding and has no signs of estrus or heat activity. According to the calculation she has a Medium Pregnancy Probability Rank.

Cow 411 recently experienced heat. According to the calculations this takes her Pregnancy Probability down one level to Low.

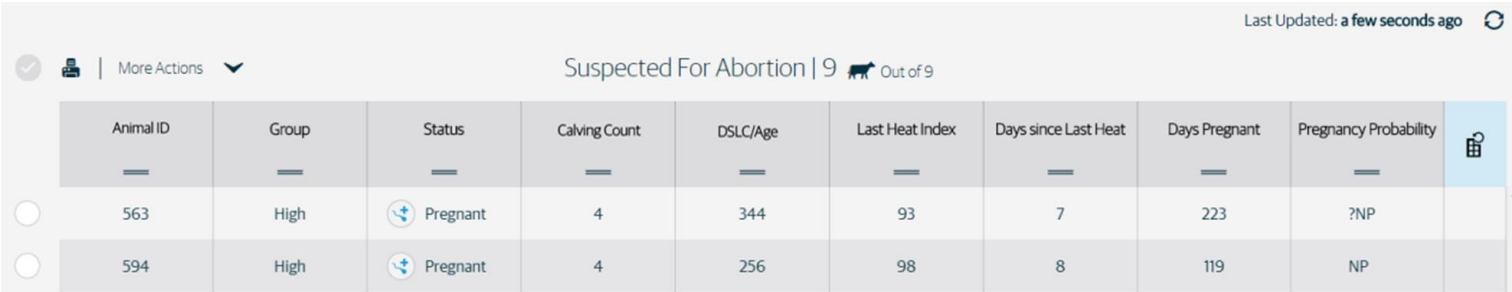
The day after the Pregnancy Probability report, when these cows were Pregnancy Checked and the results entered, Cow 165 was found to be pregnant, and Cow 411 was found to be not pregnant.

Date	Name	DIM/Age
11/26/2019 12:59 AM	Negative	96

Date	Name	DIM/Age
11/26/2019 12:59 AM	Positive	141

3.6.4 Reading the Suspected for Abortion Report

The suspect for Abortion Report displays cows that may have aborted. This report is dependent on entering breedings and Positive Pregnancy Checks in SenseHub™. Cows remain in this report for 30 days after the “Abortion” heat.

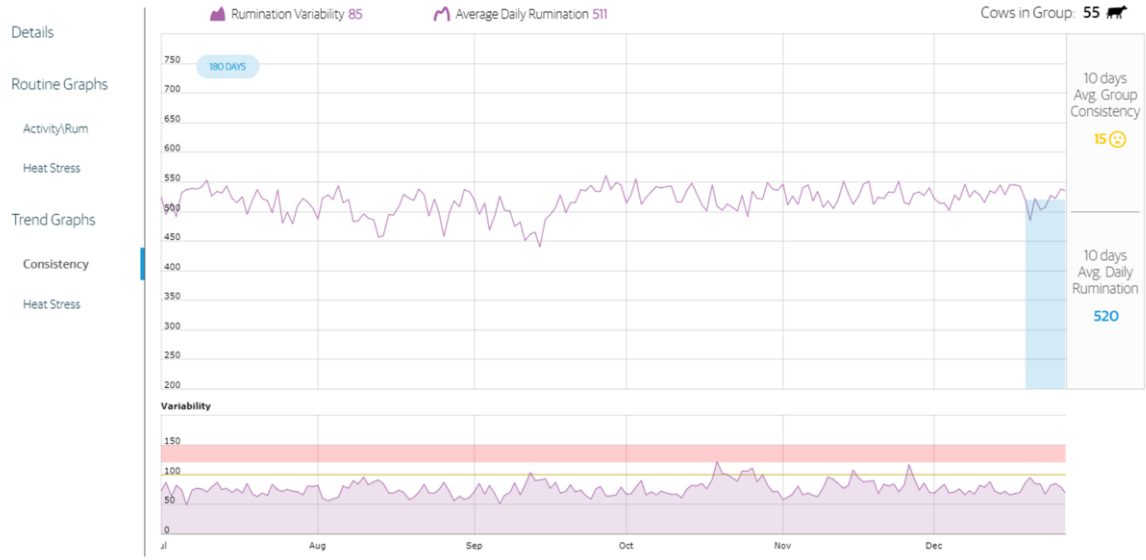


Animal ID	Group	Status	Calving Count	DSLC/Age	Last Heat Index	Days since Last Heat	Days Pregnant	Pregnancy Probability
563	High	Pregnant	4	344	93	7	223	?NP
594	High	Pregnant	4	256	98	8	119	NP

Field	Description
Animal ID	The Identification number assigned to the animal in SenseHub™
Group	The group where the animal is assigned
Status	The status of the animal. Statuses are explained on page 35.
Calving Count	The number of times the cow has given birth or calved
DSLC/Age	The number of days since the cow has last calved, or if she is a Heifer/Calf, the number of days old the Heifer/Calf is.
Last Heat Index	The last Heat Index for the most recent heat for this cow.
Days since last Heat	The number of days since the cow was last determined to be in heat.
Days Pregnant	When the cow has a recorded positive pregnancy check, the number of days since the effective breeding.
Pregnancy Probability	The probability that the cow is no longer pregnant. NP = Not Pregnant ?NP =Possibly Not Pregnant

3.6.5 Understanding the Group Consistency Trend Graph

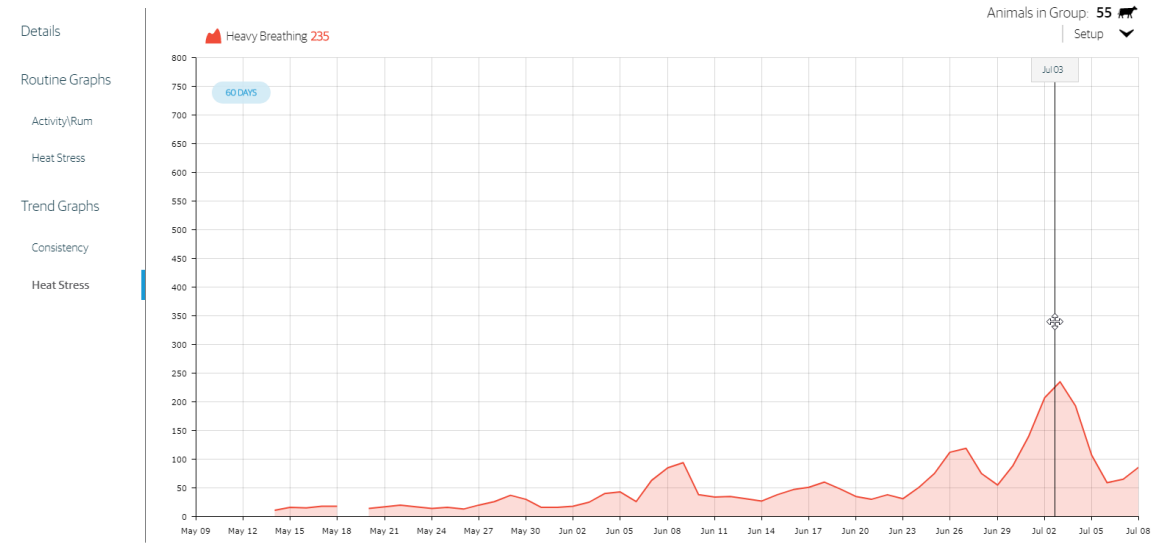
This graph displays the average daily rumination for the group in minutes along with the total variability of that average within the group. Variability within the group might signal something that is stressing the group or the herd.



This graph displays information only if there are at least 10 cows with tags in the group and these tags have been paired with the cows for at least 7 days. In addition to the above the farm must also be subscribed to the appropriate Application Plan.

3.6.6 Understanding the Group Heat Stress Trend Graph

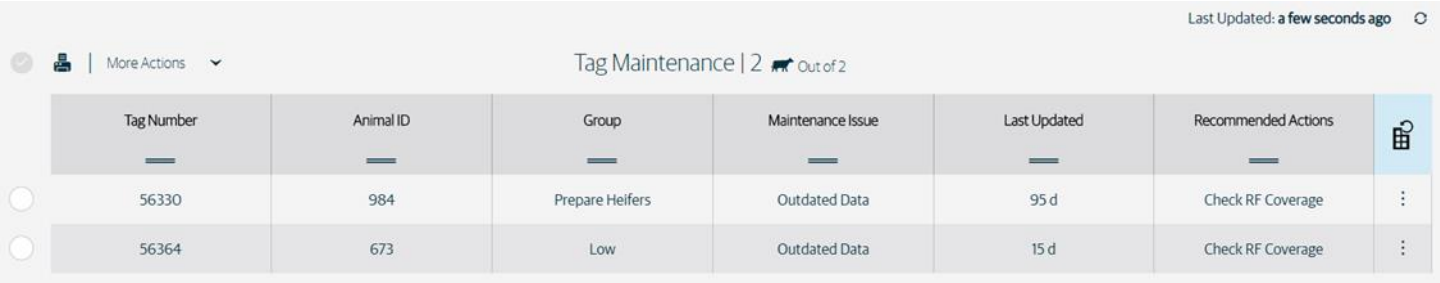
This graph shows the effect of Heat Stress on the herd over time. This graph shows the effect of heat stress over a much larger horizon than the Daily Heat Stress Routine graph.



This graph displays information only if there are at least 10 cows with tags in the group and these tags have been paired with the cows for at least 1 day. In addition to the above the farm must also be subscribed to the appropriate Application Plan.

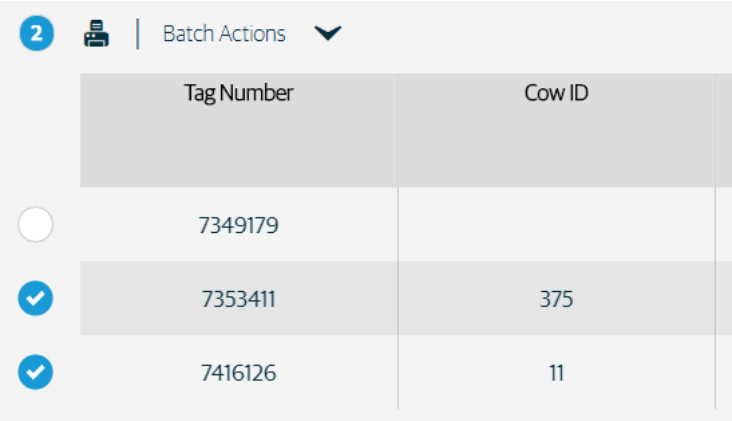
3.6.7 Reading the Tag Maintenance Report

This report contains all the identified Tag Issues and how to resolve these issues.



Field	Description
Tag Number	The number of the SCR Tag.
Cow ID	The Identification number assigned to the cow in SenseHub™.
Group	The group where the cow is assigned.
Maintenance Issue	The identified issue with the tag.
Last Updated	The last time the tag was seen by the system if there is such a record.
Recommended Actions	Perform this recommended action to resolve this issue.

Click the checkboxes on the left side to select records to create a printed list to take with to the barn or strings to find the cow and/or tag.



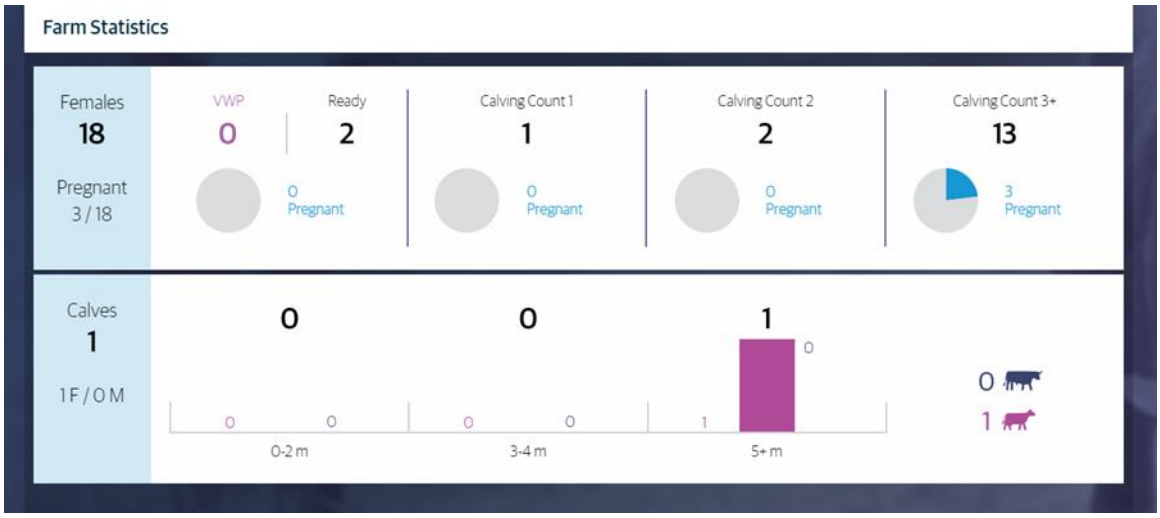
3.7 Monthly Tasks

These SenseHub™ reports/graphs should be reviewed at least once a week.

Report	Description
Understanding the Farm Statistics	Review the relationships between the number of the different types and ages of cows on the farm.
Checking Group Membership	Review the cows to ensure that they are registered in the correct groups.

3.7.1 Understanding the Farm Statistics

The Farm Statistics Widget on the SenseHub™ Dashboard gives at-a-glance important information about the herd. It is important to check this each month, more often if required, to make sure that your herd is currently “configured” to meet its economic potential as well as your business needs.



3.7.2 Checking Group Membership

Review the list of cows in each of the groups. This will insure that all the cows are registered where they are and will also allow to review other important information about the herd.

Group Number 1 Branch Cows Heat Index Threshold 50

More Actions

Animal Total: 20	Status Pregnant: 0%	Calving Count Average: 3.3	DSLC / Age DSLC calculation: 252	Days Since Last Heat	Days Pregnant Average: 0	SCR Tag Total: 20	
333	Bred	5	128	95		9002715	⋮
4B	Bred	3	175	77		9001854	⋮
410	Bred	7	149	77		9000939	⋮
1W	Ready	6	170			9000781	⋮

Field	Description
Animal / Total	What is the total number of Animals in this group.
Status / Pregnant	The status of the cows and what percentage of the cows are pregnant in the group.
Calving Count / Average	Calving Count and what is the average Calving Count for the group.
DSLC/Age DSLC Calculation	Days since Last Calving or Age and what is the average of the DSLC for the cows in the group.
Days since Last Heat	The number of days since the cow was in heat.
Days Pregnant / Average	The number of days the cow is pregnant and the average number of days pregnant for the pregnant cows in the group.
SCR Tag / Total	The total number of SCR tags on the cows in the group.

3.8 Recurring Tasks

There are a few tasks associated with the SenseHub™ System that may happen at any time.

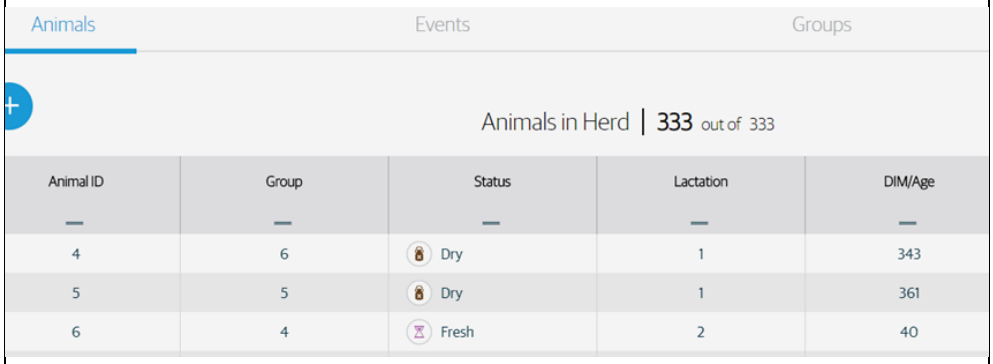
Task	Description
Adding Animals from File	Adding additional animals to SenseHub using a CSV File

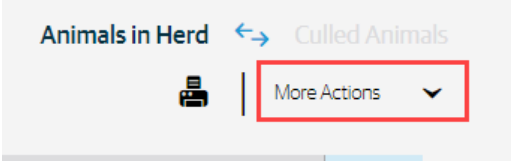
3.8.1 Adding Animals from File

How to unpair SCR Tags from the cow

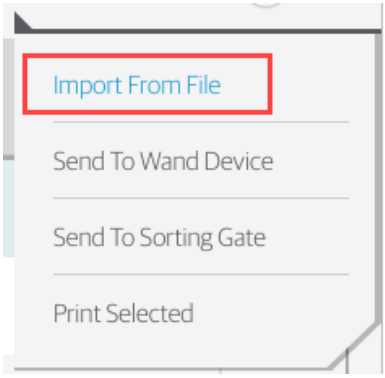
From time to time farmers add animals to their herd from the outside, new animals that were not born on the farm. Farmers can choose to add animals using the interface, a step by step explanation is found from page **Error! Bookmark not defined.**. Some users may find it easier to add new animals using a CSV File.

1. From the Dashboard go to Farm → Animals.

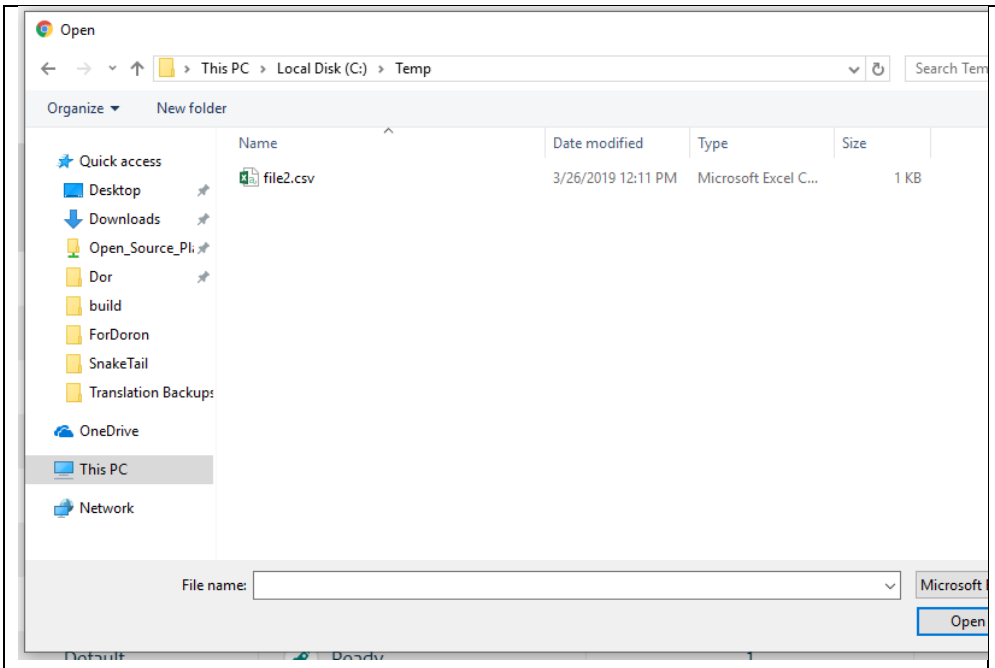


2. Click on More Actions; 

the More Actions menu appears.
3. Choose Import from File from the menu.



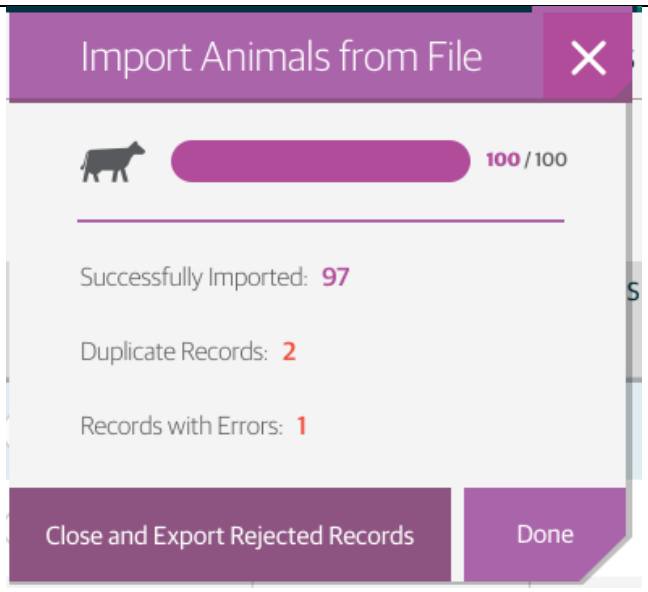
4. Browse to the location on your PC where you created and saved the CSV file with the new animals.



5. A New Icon appear on the top notification bar.

6. Click the purple icon to see the progress of the CSV file import.

7. When complete the Progress tag opens.



If there are no errors, Click Done. If there are errors, you can choose to export these rejected records for editing and loading again later.

3.8.1.1 CSV File Format

This CSV format is different that the format used when migrating animals from Heatime HR system to SenseHub.

Only three of these columns are required;

- Sex
- Animal ID
- Current Group Number.

The other columns are not required, but cows uploaded without a Birth Date and/or Calving Date may not be accepted by SenseHub.

Column	Name in CSV File	Value Type	Required
Sex	Sex	M/F (String)	Yes
Animal ID	ID	String	Yes
Current Lactation Number	Lactation Number	Number	
Current Group Number	Current Group	Number	Yes

Registration Number	Registration Number	String	
Birth Date	Birth Date	DD/MM/YYYY	
Last Calving Date	Calving Date	DD/MM/YYYY	
Last Insemination Date	Insemination Date	DD/MM/YYYY	
Last Insemination Number	Insemination Number	Number	
Last Pregnancy Check Date	Pregnancy Check Date	DD/MM/YYYY	
Last Pregnancy Check Result	Pregnancy Check Result	+/-/? (String)	
Last Dry-off Date	Dry-off Date	DD/MM/YYYY	
EID Tag Number	EID Tag Number	String	
SCR Tag Number	SCR Tag Number	Number	

The values from Name in CSV File must appear in the first line of the CSV file

A	B	C	D	E	F	G	H	I	J	K
	ID	Lactation Number	Current Group	Registration Number	Birth Date	Calving Date	Insemination Date	Insemination Number	Pregnancy Check Date	Pregna Check Result

These items can appear in any order, in any CSV File, but must be consistent throughout the CSV File

Explanation:

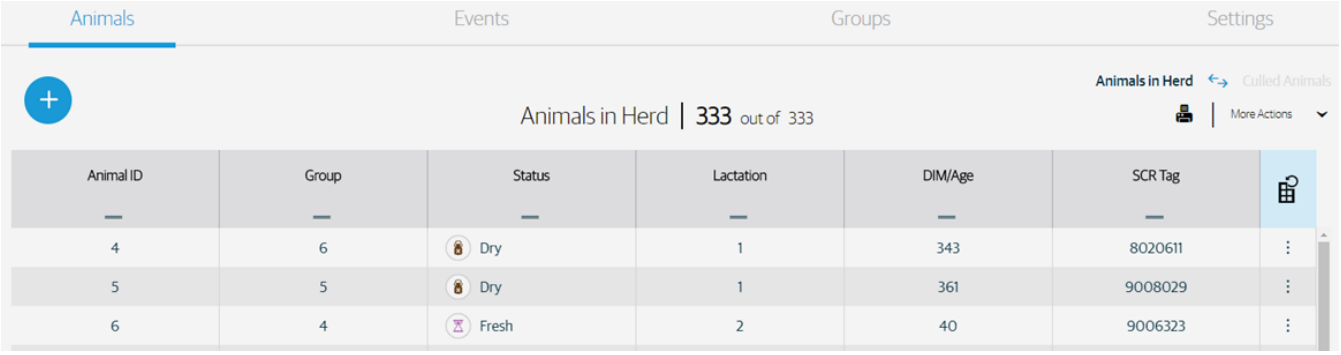
- Number – Integer equal or greater than 0
- Date – always in DD/MM/YYYY Format
- Pregnancy Check Result – Only the characters, + - ? are accepted
- Columns headers must be written as in the above table or they will not be processed into SenseHub and each animal may be rejected.

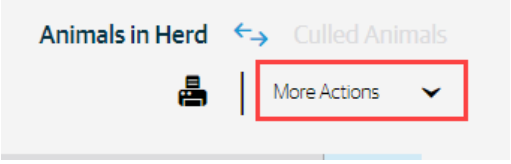
Task	Description
NOTE **Lactation Number in the CSV File equals Calving Count in SenseHub Beef.** Unpairing Tags	
Changing Tags	How to change the paired SCR tag

3.8.2 Adding Animals from File

From time to time farmers add animals to their herd from the outside, new animals that were not born on the farm. Farmers can choose to add animals using the interface, a step by step explanation is found from page **Error! Bookmark not defined.**. Some users may find it easier to add new animals using a CSV File.

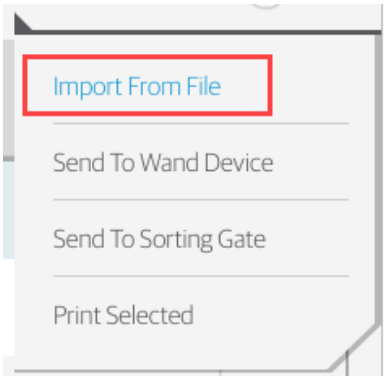
8. From the Dashboard go to Farm → Animals.



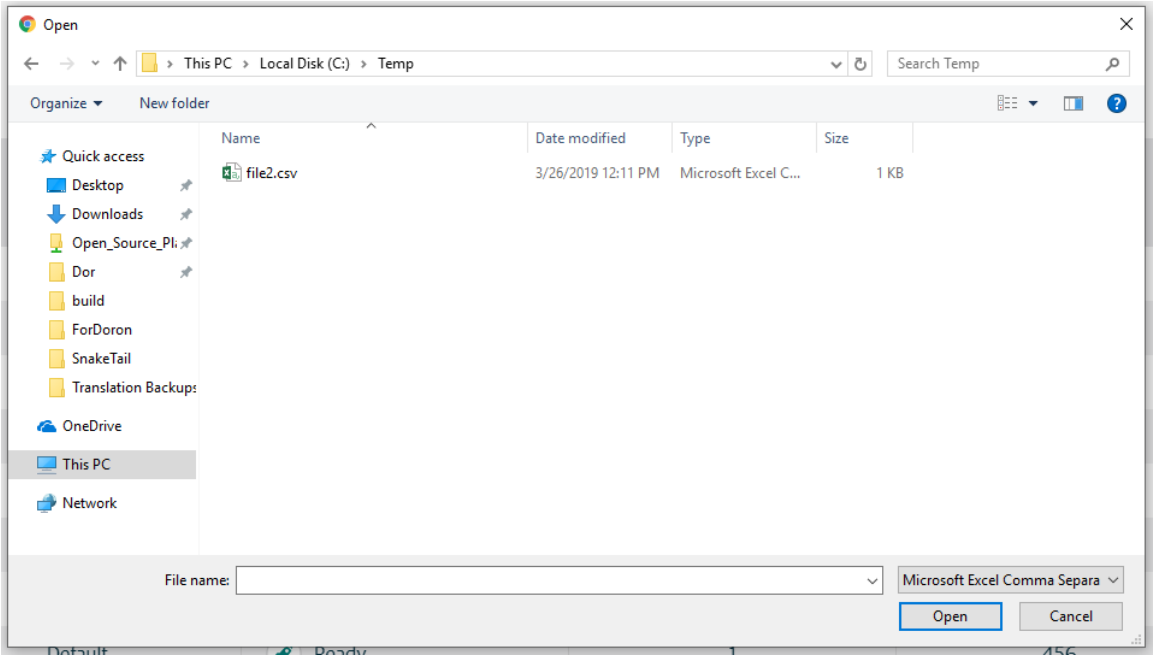
9. Click on More Actions; 

the More Actions menu appears.

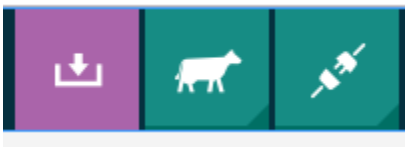
10. Choose Import from File from the menu.



11. Browse to the location on your PC where you created and saved the CSV file with the new animals.

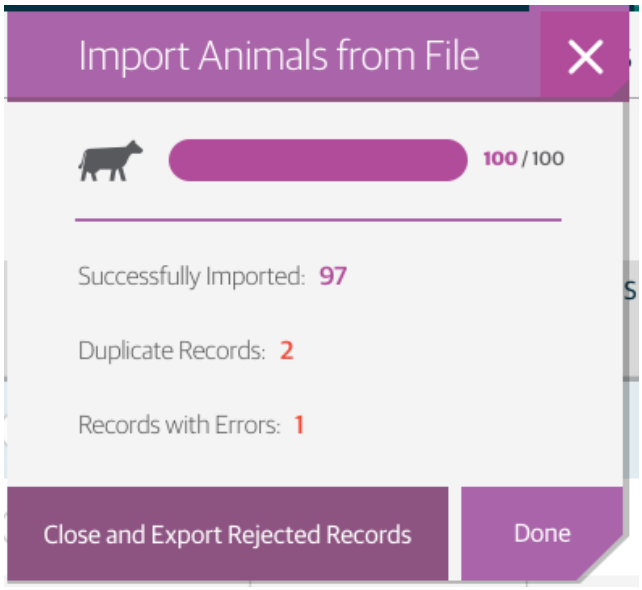


12. A New Icon appear on the top notification bar.



13. Click the purple icon to see the progress of the CSV file import.

14. When complete the Progress tag opens.



If there are no errors, Click Done. If there are errors, you can choose to export these rejected records for editing and loading again later.

3.8.2.1 CSV File Format

This CSV format is different that the format used when migrating animals from Heatime HR system to SenseHub.

Only three of these columns are required;

- Sex
- Animal ID
- Current Group Number.

The other columns are not required, but cows uploaded without a Birth Date and/or Calving Date may not be accepted by SenseHub.

Column	Name in CSV File	Value Type	Required
Sex	Sex	M/F (String)	Yes
Animal ID	ID	String	Yes
Current Lactation Number	Lactation Number	Number	
Current Group Number	Current Group	Number	Yes
Registration Number	Registration Number	String	
Birth Date	Birth Date	DD/MM/YYYY	
Last Calving Date	Calving Date	DD/MM/YYYY	
Last Insemination Date	Insemination Date	DD/MM/YYYY	
Last Insemination Number	Insemination Number	Number	
Last Pregnancy Check Date	Pregnancy Check Date	DD/MM/YYYY	
Last Pregnancy Check Result	Pregnancy Check Result	+/-/? (String)	
Last Dry-off Date	Dry-off Date	DD/MM/YYYY	
EID Tag Number	EID Tag Number	String	
SCR Tag Number	SCR Tag Number	Number	

The values from Name in CSV File must appear in the first line of the CSV file

A	B	C	D	E	F	G	H	I	J	K	L	M	N
Sex	ID	Lactation Number	Current Group	Registration Number	Birth Date	Calving Date	Insemination Date	Insemination Number	Pregnancy Check Date	Pregnancy Check Result	Dry-off Date	EID Tag Number	SCR Tag Number

These items can appear in any order, in any CSV File, but must be consistent throughout the CSV File

Explanation:

- Number – Integer equal or greater than 0
- Date – always in DD/MM/YYYY Format
- Pregnancy Check Result – Only the characters, + - ? are accepted
- Columns headers must be written as in the above table or they will not be processed into SenseHub and each animal may be rejected.

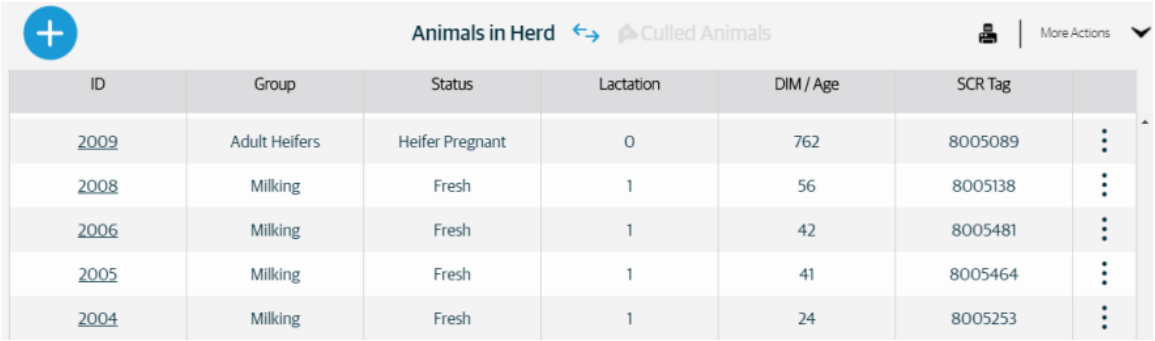
NOTE

Lactation Number in the CSV File equals Calving Count in SenseHub Beef.

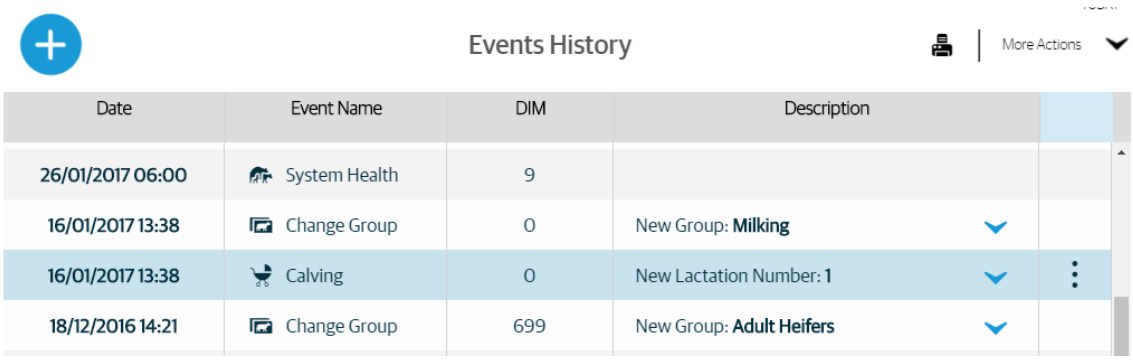
3.8.3 Unpairing Tags

Occasionally you may need to “unpair” or remove a monitoring Tag from a cow. These instructions explain how to remove an SCR Tag from a cow.

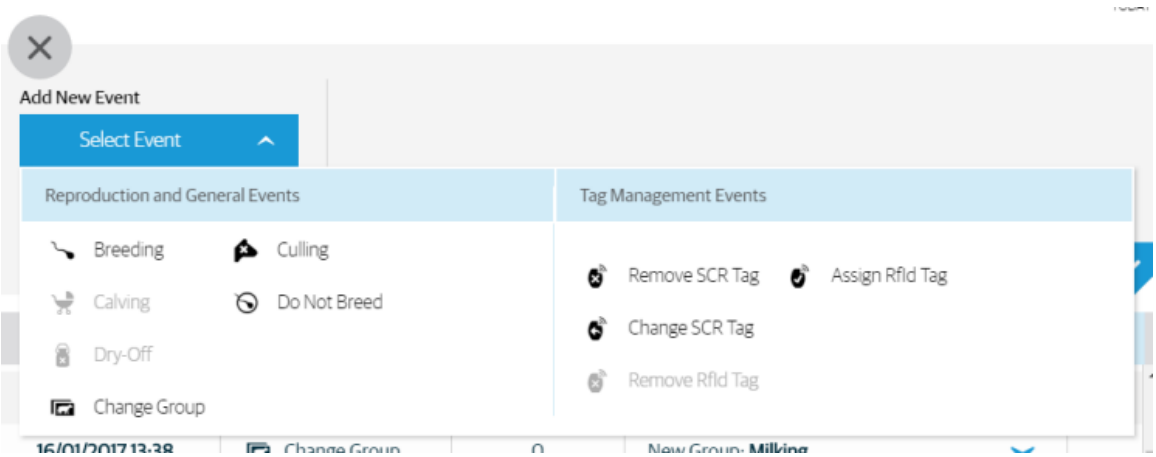
1. From the Dashboard click Farm and then Animals, the Animals in Herd list appears.



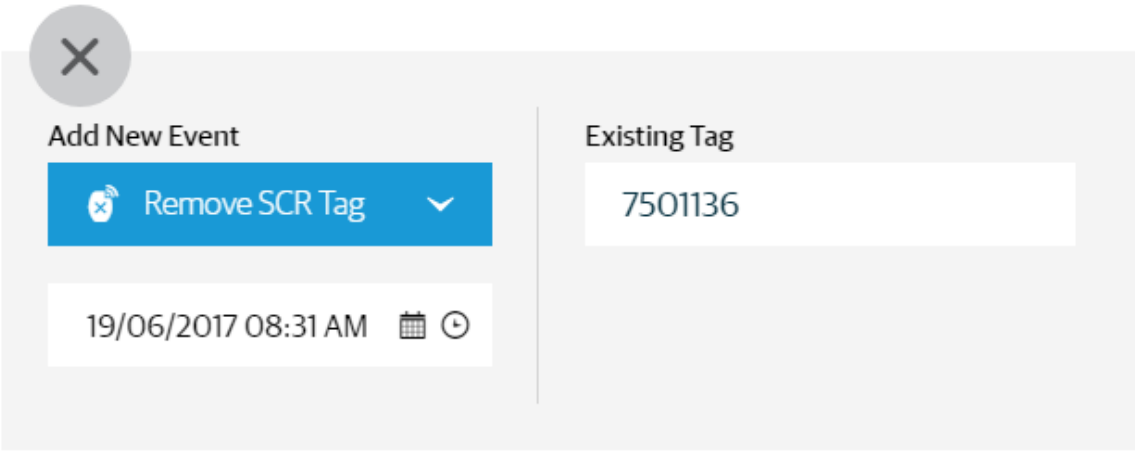
2. Click on the cow in question; the Events History on the Cow Card of this cow appears.



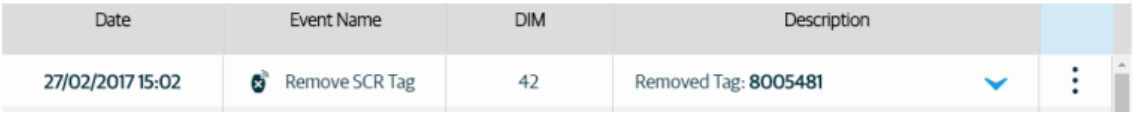
3. Click Add New Event; the new event window appears.



4. Choose Remove SCR Tag from the available Tag Management Events.



5. Review the details and click Save Now to save the event.
6. The event now appears in the Event History for this cow.

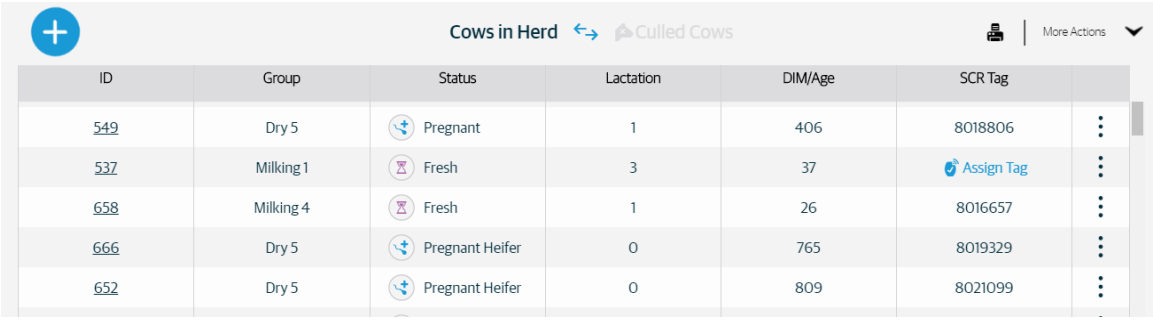


Date	Event Name	DIM	Description
27/02/2017 15:02	Remove SCR Tag	42	Removed Tag: **8005481**

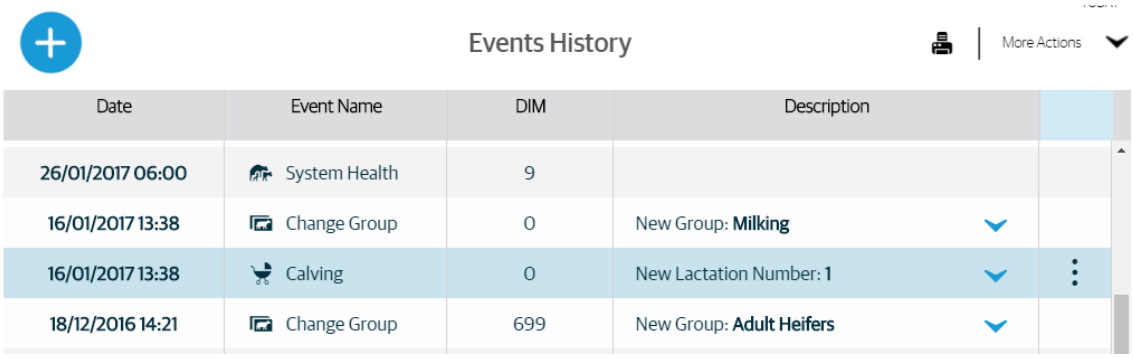
3.8.4 Changing Tags

When directed by the Tag Maintenance Report, follow these instructions when changing a tag paired with a cow in SenseHub™.

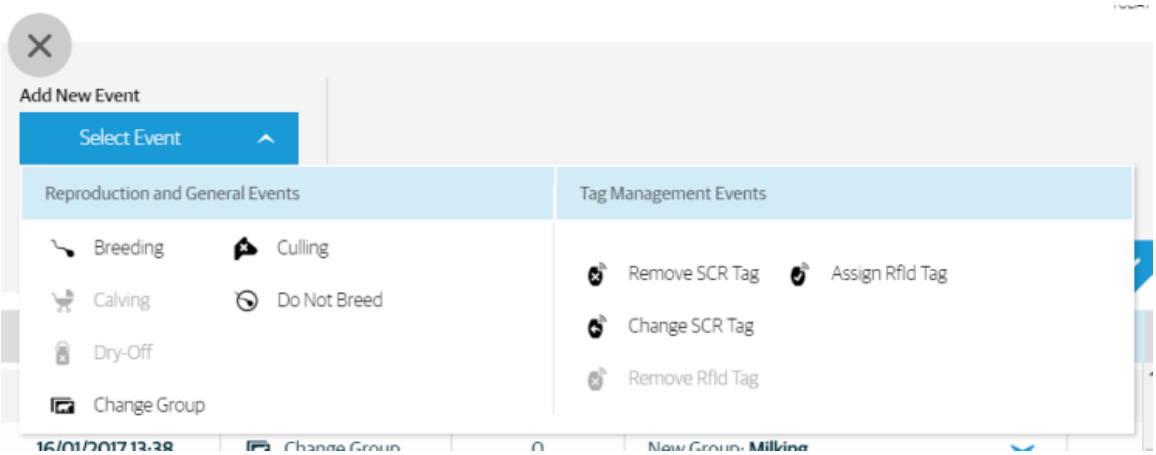
1. From the Dashboard click Farm and then Cows, the Cows in Herd list appears.



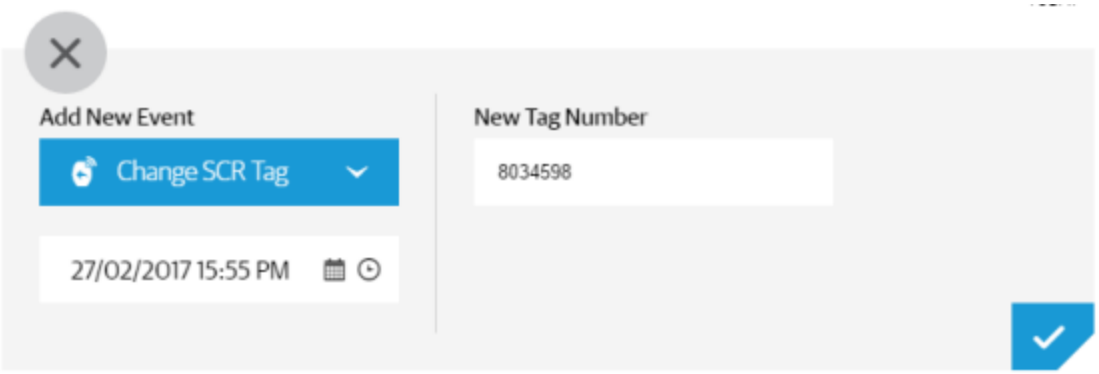
2. Click on the cow in question; the Events History on the Cow Card of this cow appears.



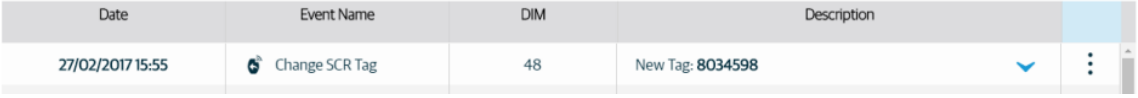
3. Click Add New Event; the new event window appears.



4. Chose Change SCR Tag from the available Tag Management Events.



5. Review the details and click Save Now to save the event.
6. The event now appears in the Event History for this cow.

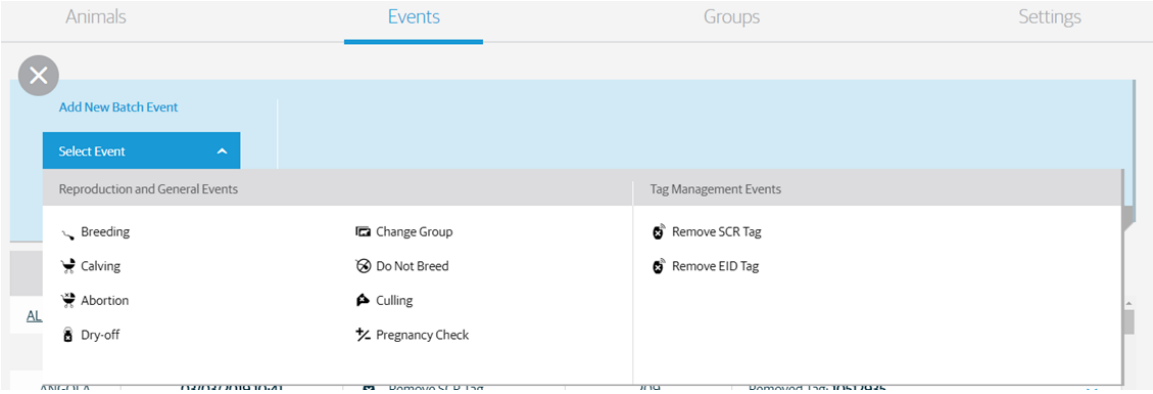


Date	Event Name	DIM	Description
27/02/2017 15:55	Change SCR Tag	48	New Tag: **8034598**

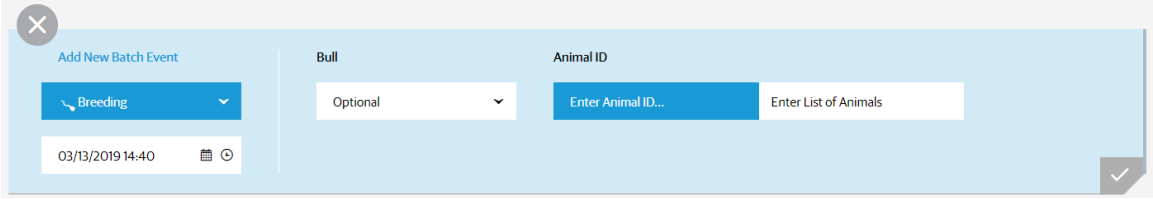
3.9 Batch Events

Entering Events in Batches, a list of cows that all need to have the same event, is easier and less time consuming then adding them one at a time.

1. To begin entering a Batch Event go to Farm → Events → and click on Add New Batch Event. The Batch Event Menu appears.



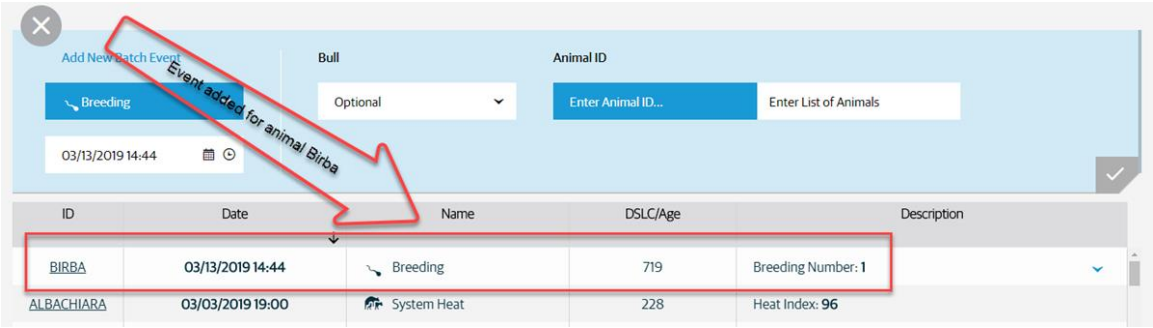
2. Choose the event you wish to enter as a Batch Event.



Adding the Bull is optional.

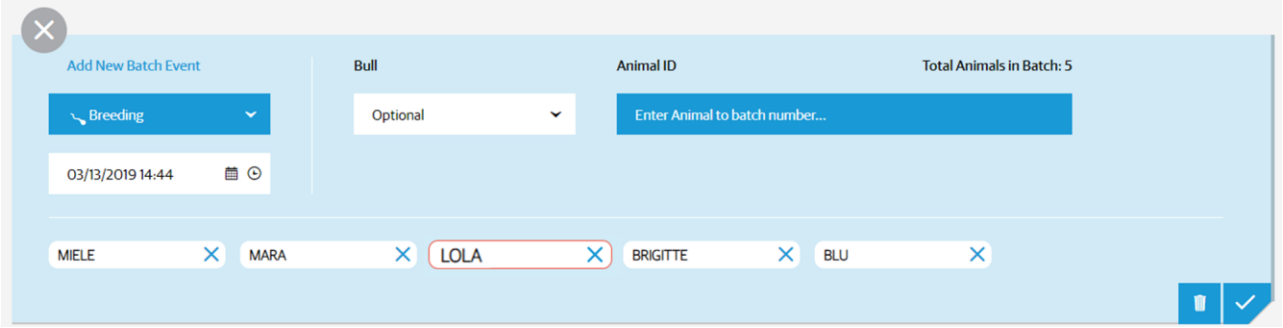
a. The Cows to be Bred can be entered one at a time, Using Enter Animal ID, or as a list by using Enter List of Animals.

3. Entering the Animals one at a time will add the event to the Events list for the farm and the animal with each entry.



a. You can continue to enter animals for this event until complete.

4. Entering the Animals as a list, creates a list.

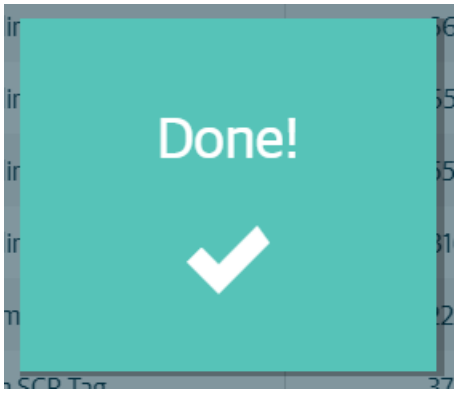


   a. The animals entered are validated as they are entered. An animal that appears with a red outline, like LOLA, did not pass the validation test. LOLA can be removed from the batch list by clicking on the X.

5. When you are ready click Enter and the batch event will be entered.

   a. If you want to discard the batch and start over, click delete; and the batch is deleted.

6. When the Batch Entry is complete a confirmation message appears.



The events appear in both the global event list and the event list for the individual animals.

BIRBA	03/13/2019 14:44	Breeding	719	Breeding Number: 1
BRIGITTE	03/13/2019 14:44	Breeding	665	Breeding Number: 1
BLU	03/13/2019 14:44	Breeding	657	Breeding Number: 1
MARA	03/13/2019 14:44	Breeding	557	Breeding Number: 2
MIELE	03/13/2019 14:44	Breeding	316	Breeding Number: 1

4 Which Wand and Which Device

The SenseHub Mobile app supports two Wand Devices:

- Allflex 420 NFC
- Agrident AWL Wands.

4.1 Using the Allflex 420 NFC Wand

The Allflex 420 NFC is a device that helps make work on the farm easier. The Wand works seamlessly with the Mobile Device where the SenseHub App is installed.

The minimum version required is the same as for the mobile app:

- 5.X for Android users.
- 10.X for iOS users.

4.2 Pair the Wand with your Smart Phone

Before the Allflex 420 NFC can be used it must first be paired with your Smart Phone.

Turn on Bluetooth on your smart phone, usually by tapping the Bluetooth Icon. Pair the Allflex 420 NFC Wand with your device. More detailed instructions are found below.

Android Phones will discover the Allflex 420 NFC and ask for a code. Enter the code that appears on the wand at Wand Settings → Bluetooth Settings → About Bluetooth. and the two devices will be paired.

iOS devices require different settings on the Wand. One the Wand long press to enter the menus → Bluetooth Settings → iPhone discoverable.

4.2.1 Pairing with an Android Smart Phone

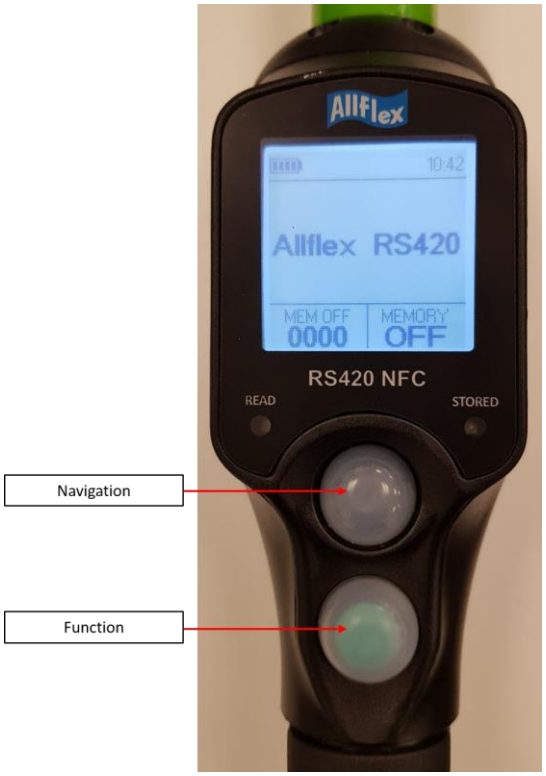
Follow these steps when using an Android smart phone.

1. Go to Bluetooth Settings in the Settings app; Settings → Bluetooth & Device Connection.
    a. Make sure the Wand is Turned on.
1. Turn Bluetooth on.
2. Search for a New Device available for pairing and select the Allflex 420 NFC from the list.
    a. If a PIN Code is required in is available on the Wand at Wand Settings → Bluetooth Settings → About Bluetooth.
3. The Wand is now paired with this smart phone.

4.2.2 Pairing with an iPhone

Follow these steps when using an iPhone smart phone.

1. On the Wand go to Wand Settings → Bluetooth Settings → iPhone Discoverable. DO NOT touch Yes until you finish the connection process.
2. On the iPhone go to Bluetooth Settings on the settings app; Settings → Bluetooth and select the Wand.
3. Wait until the Device Status is Connected.
4. Touch Yes on the Wand Device.



4.2.3 Differences in Wand Operation

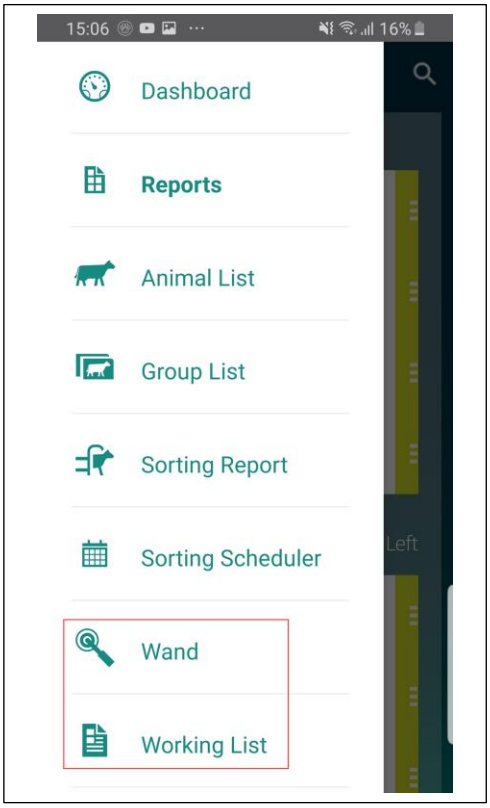
The Wand operates slightly different when connected to Android or iPhone Smart Phones.

	Android	iPhone
Wand Response when Tag Found	When not connected there is no response from the Wand	The Wand always responds even when not connected
Wand Sleep Mode	When connected, never enters sleep	Sleep after 5 minutes
Select Wand in SenseHub Mobile App	The application lists all Wands ever connected	The application lists only the last connected Wand

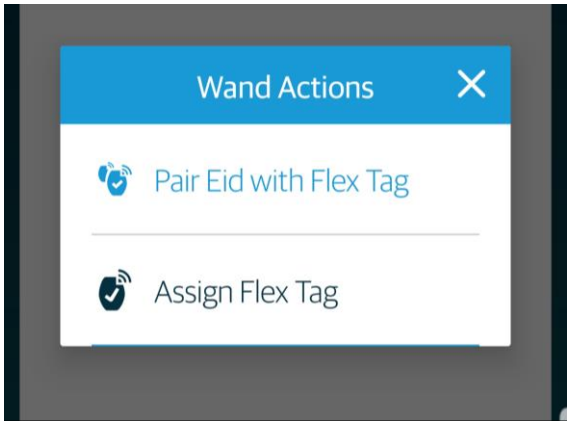
4.2.4 Assign and Pair Tags

Once the Wand is paired with your Smart Phone two new menu items appear in the SenseHub Application Menu:

- Wand
- Working List



Tap Wand and the Wand Actions Menu appears.



4.2.5 Pair EID tags with Flex Tags

Farms that use both EID and Flex Tags need to pair the tags, so they are both associated with the animal.

1. In the Mobile App go to the menu → Wand and then choose Pair EID with Flex Tag.
2. Press the green button to energize the wand. Move the wand first to the EID Tag on the cow. The wand will make a sound and vibrate.
3. Now move the wand to the Flex Tag on the cow. The wand will make a sound and vibrate.
4. The Flex tag is paired with the cow in the Animal Card in SenseHub.

NOTE

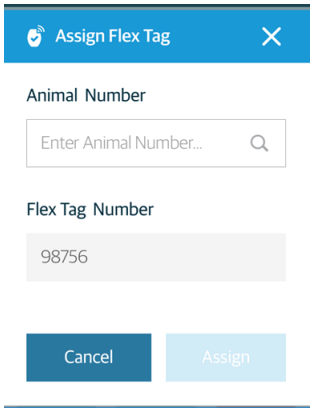
The cow must already have a record and the EID Tag needs to already be associated with the Cow in SenseHub.

4.2.6 Assign Flex Tags

The Allflex 420 NFC is a useful tool for error free tag assignment/pairing with animals.

1. In the Mobile App go to the menu → Wand and then choose Assign Flex Tag.

2. Press the green button to energize the wand. Move the wand to the Flex tag on the cow. The wand will make a sound and vibrate.
3. Enter an Animal number and tap Assign.
4. The Flex tax is now paired with the animal.



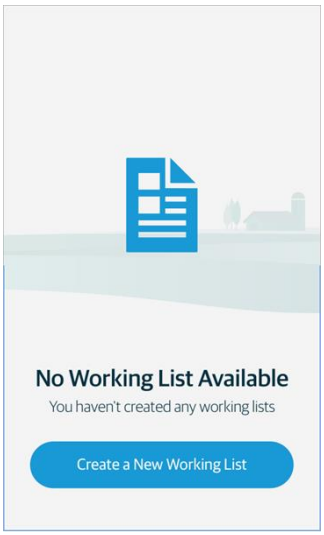
NOTE

The Assign button is available only after entering an Animal Number.

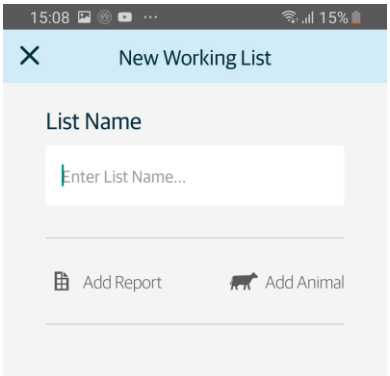
4.2.7 Creating Working Lists

Working Lists are a useful tool to help find and identify animals on the farm that require attention or treatment.

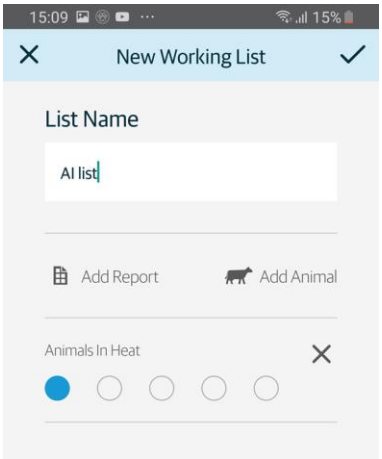
1. In the Mobile App go to the menu → Working List. Since there are no working lists this screen appears.



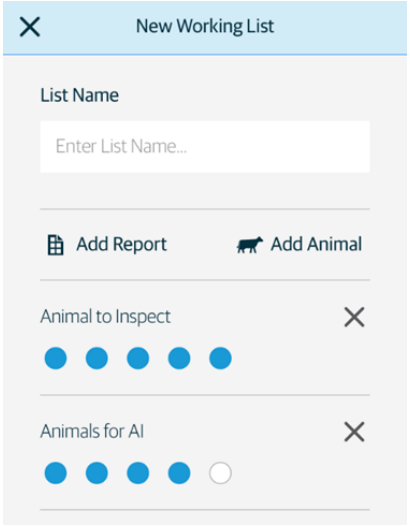
2. Tap Create a New Working List; the new working list wizard appears.



3. Give the List a name and then choose to add a Report or one or more animals.
4. Set the number of “beeps” or vibrations the Wand will use to signal that a cow from this specific report has been found.



   a. More than one report can be configured in a Working List. Each report is then assigned a different number of “beeps.”



5. When complete, tap to save the working list.

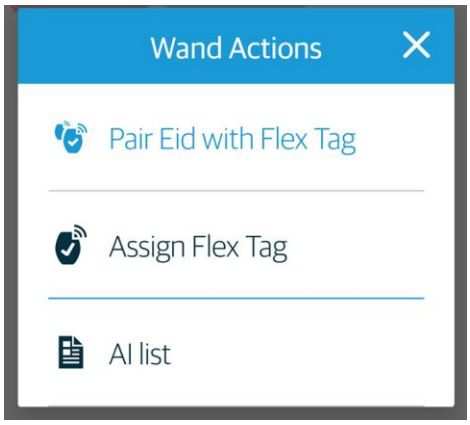
NOTE

Using reports means that the working list does not have to be recreated it is updated as the report updates.

4.2.8 Using Working Lists

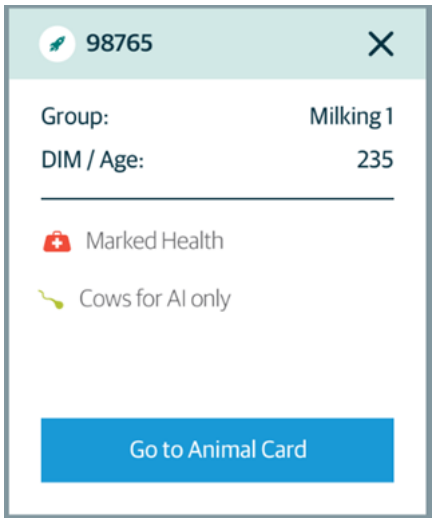
Once a Working List is created it can be reused.

1. To access a Working List on the Mobile App, go to the Menu → Working List, choose the working list to use.



   a. When returning to use the Wand after a break, a message appears asking if you wish to go back to the list that you were using.

2. Using the wand Identify an animal, the Wand will “beep” and vibrate and a screen appears on the mobile device identifying the animal, and the reason the Wand beeped.



If desired access the Animal Card or continue and identify the next cow.

4.2.9 Common Wand Device Error Messages

During normal wand device operation these error message may appear. They are described here with their cause.

Error Message	Description
Unassigned Tag	The scanned tag is not assigned, paired, to any animal.
No Working List Available	There are no working lists available.
No Paired Wand	There is no wand paired with this mobile device.
Wand is not compatible	The ALLFLEX 420NFC wand is not compatible and requires a version update.
Connection to Wand Failed	This error will appear when: The Wand is off Bluetooth is off on the Mobile Device Bluetooth is off on the Wand Device Bluetooth is not configured correctly on the Wand Device
Unsupported Action	Appears when trying to activate an action that is not supported by the current Wand.

4.3 Using the Agrident Wand

The Agrident is a device that helps make work on the farm easier. The Wand works seamlessly with the Mobile Device where the SenseHub App is installed.

The minimum version required is the same as for the mobile app:

- 5.X for Android users.

4.3.1 Pair the Wand with your Smart Phone

Before the Agrident Wand can be used it must first be paired with your Smart Phone.

Turn on Bluetooth on your smart phone, usually by tapping the Bluetooth Icon. Pair the Agrident Wand with your device. More detailed instructions are found below.

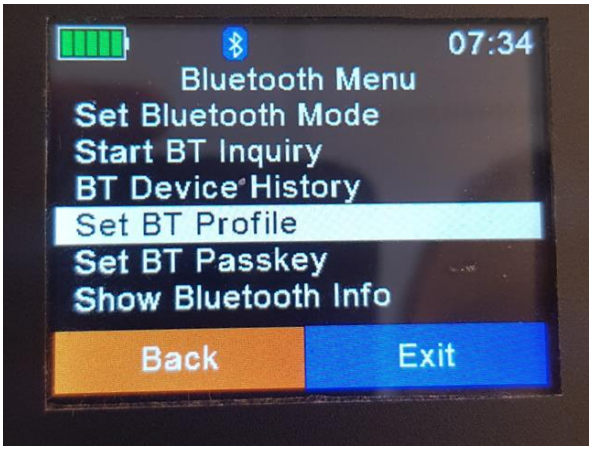
4.3.2 Configure Agrident Wand for the SenseHub Mobile App

The Agrident Wand must first be configured correctly for use with the SenseHub Mobile App.

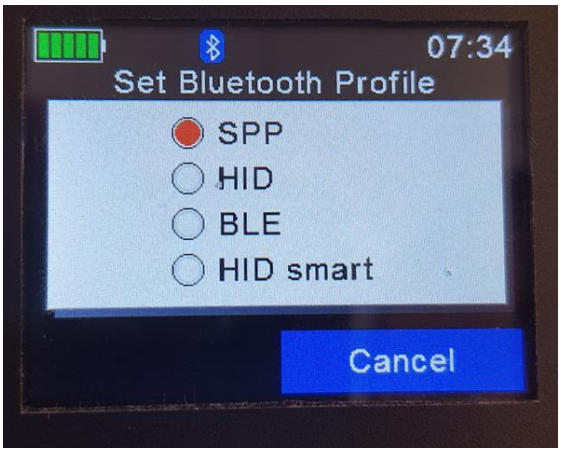
1. After the Bluetooth Icon turns blue, use the menu and go to Setup → Interface →Bluetooth → Bluetooth Mode→.

   a. Set the Bluetooth mode to Slave Mode.

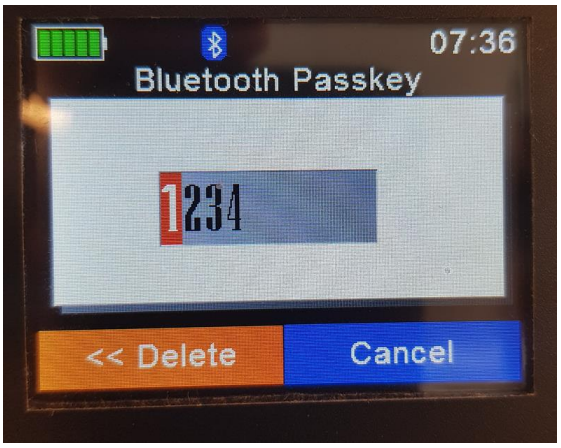
2. Back out from here and go back to the Bluetooth Menu and Choose Set BT Profile.



3. Choose SPP for the Bluetooth Profile.



   a. From here go back to the Bluetooth Menu and choose Set BT Passkey.

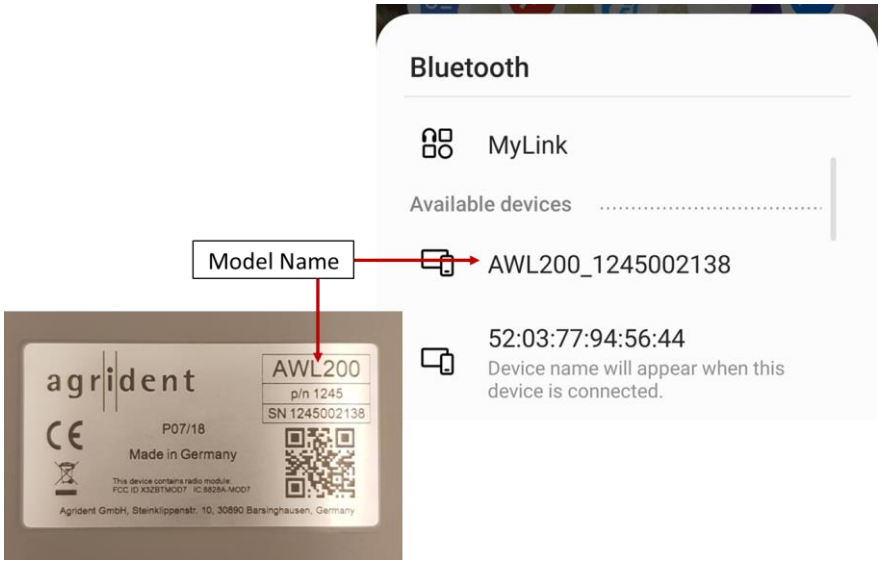


   b. Reset the passkey or use the default value when asked to enter it while pairing with your mobile device.

4.3.3 Pairing with an Android Smart Phone

Follow these steps when using an Android smart phone.

1. Go to Bluetooth Settings in the Settings app; Settings → Bluetooth & Device Connection.
    a. Make sure the Wand is Turned on.
2. Turn Bluetooth on.
3. Search for a New Device available for pairing and select the Agrident Wand from the list.

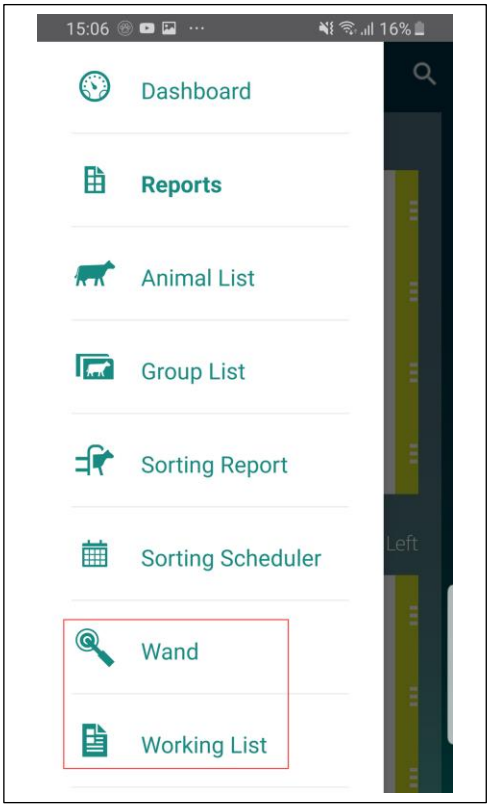


    a. See above for the location on the Agrident Wand of the required Passkey for first time pairing.
4. The Wand is now paired with this smart phone.

4.3.4 Working with the Agrident Wand

Once the Wand is paired with your Smart Phone new menu items appear in the SenseHub Application Menu:

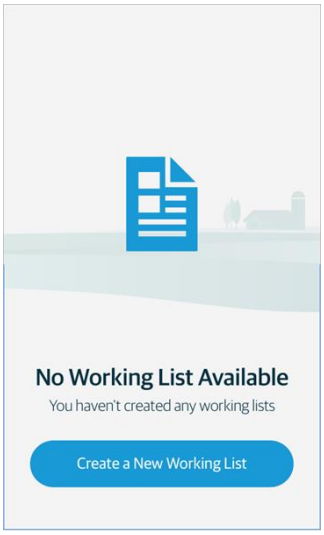
- Working List



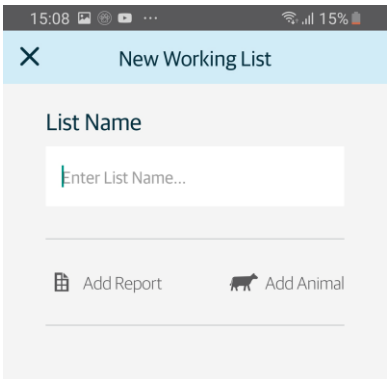
4.3.5 Creating Working Lists

Working Lists are a useful tool to help find and identify animals on the farm that require attention or treatment.

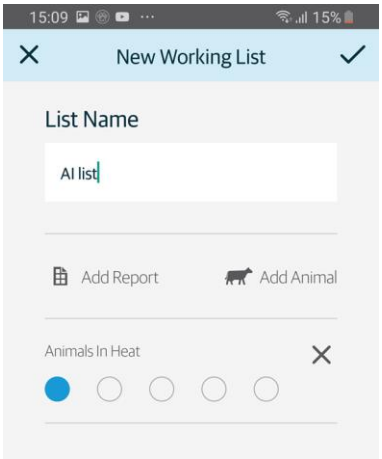
1. In the Mobile App go to the menu → Working List. Since there are no working lists this screen appears.



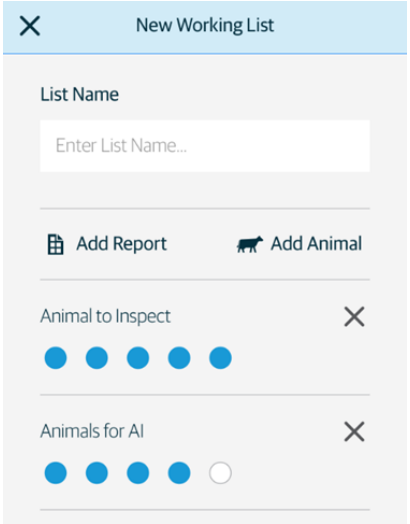
2. Tap Create a New Working List; the new working list wizard appears.



3. Give the List a name and then choose to add a Report or one or more animals.
4. Set the number of "beeps" or vibrations the Wand will use to signal that a cow from this specific report has been found.



   a. More than one report can be configured in a Working List. Each report is then assigned a different number of "beeps."



5. When complete, tap to save the working list.

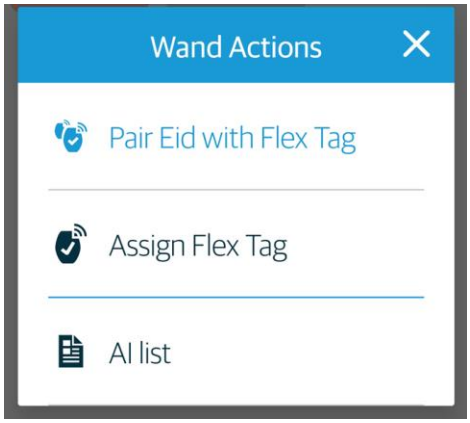
NOTE

Using reports means that the working list does not have to be recreated it is updated as the report updates.

4.3.6 Using Working Lists

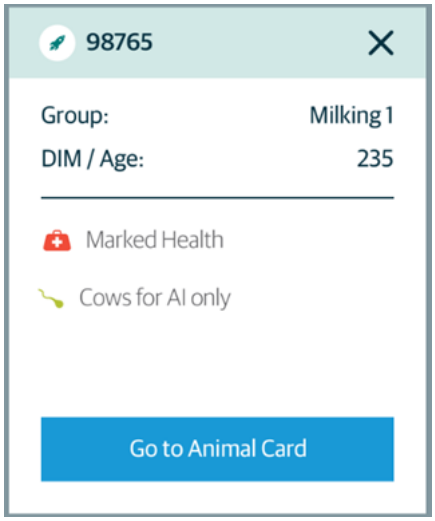
Once a Working List is created it can be reused.

1. To access a Working List on the Mobile App, go to the Menu → Working List, choose the working list to use.



   a. When returning to use the Wand after a break, a message appears asking if you wish to go back to the list that you were using.

2. Using the wand Identify an animal, the Wand will “beep” and vibrate and a screen appears on the mobile device identifying the animal, and the reason the Wand beeped.



If desired access the Animal Card or continue and identify the next cow.

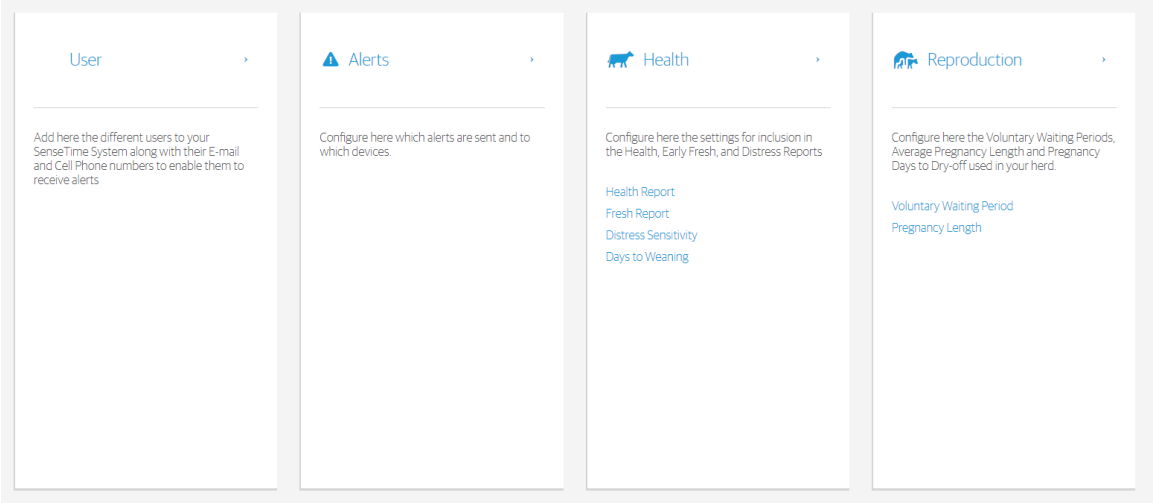
5 Farm Settings

This section describes how to configure SenseHub™ for the protocols and practices already in place on your farm.

NOTE

The Farm Settings available in your SenseHub™ System reflect the Application Plan subscription in place on the farm. Not all items described in this chapter are available in every SenseHub™ System.

Click on Manage and then Settings; the Farm Settings landing page appears.



This section is divided into 4 parts:

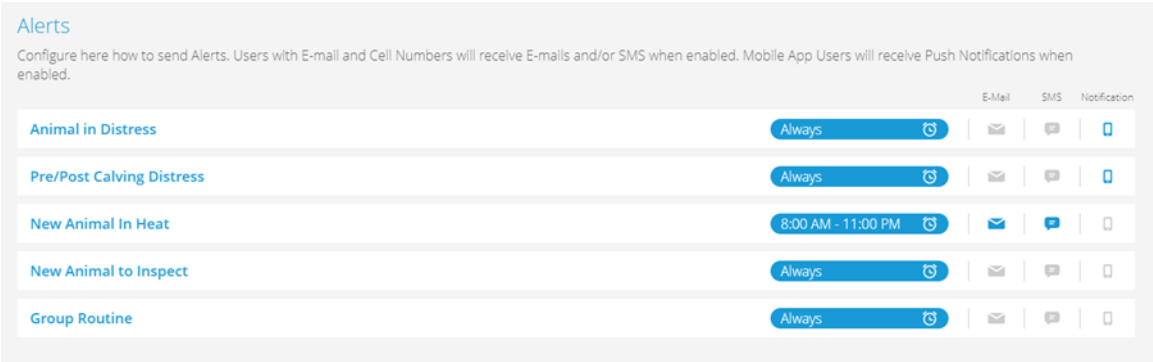
- Users: Configuration and permission level of each of the users of the SenseHub™ System.
- Alerts: Configuration of what Alerts each user receives.
- Reproduction: Configuration of the various reproduction related protocols that are already in use on your farm.
- Health: Configuration of the various Health related reports, and graphs.

NOTE

User configuration is only available if you are the SenseHub system Administrator.

5.1 Alerts

The alerts section configures which types of alerts are sent to which destinations, Email, SMS, or Push Notifications.



By Default, the only alert sent by SenseHub™ is the Pre/Post Calving Alert. This alert is sent to mobile application users only.

Click on to send this specific alert as an Email.

- SenseHub™ Users with a valid Email address will receive this alert in an Email.

Click on to send this specific alert as an SMS/Text Message.

- SenseHub™ Users with a valid E.164 Phone number will receive this alert in an SMS/Text Message.

NOTE

SMS/Text Messages for New Animal in Heat and New Animal in Animals to Inspect Report are aimed at farms that have less than 200 cows with assigned tags.

Click on to send this specific alert as Push Notification to the Mobile Application.

- Only registered Mobile Application users will receive these push notifications.

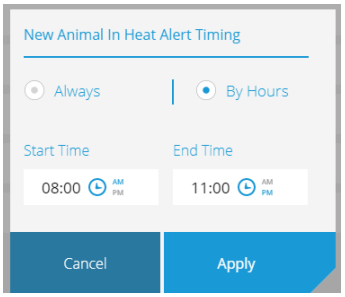
NOTE

Even if the Push Notification icon is selected, users that have not downloaded, installed, and logged in to the Mobile Application will not receive these push notifications.

Click on the Clock

to configure the time of day that these notifications will be sent.

- Always for always (24/7).
- By hours to only receive alerts between the Start and End Times.



5.2 Reproduction

Configure here various reproduction and pregnancy related values.

5.2.1 Voluntary Waiting Period

In this section configure:

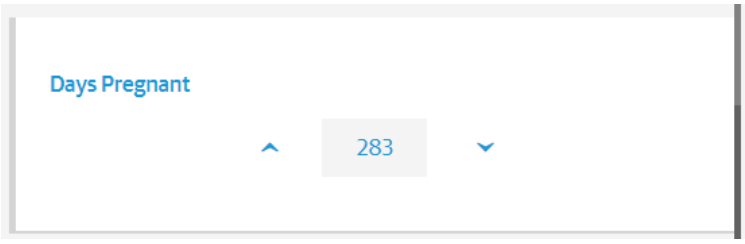
- Voluntary Waiting Period for each type of cow in the herd separately;
  - Heifer – Default 365 days of age
  - 1st Calving Cow – Default 30 days after calving
  - 2nd Calving Count and Higher Cow – Default 30 days after calving.

Cows that are in heat but have not yet reached and/or exceeded the number of days above will not appear as cows for AI.

5.2.2 Pregnancy Length

Configure here the Average Pregnancy Length for your herd.

- Pregnancy Length – default = 283 Days.
  - The average pregnancy length for the herd is 283 days from the last or effective insemination.

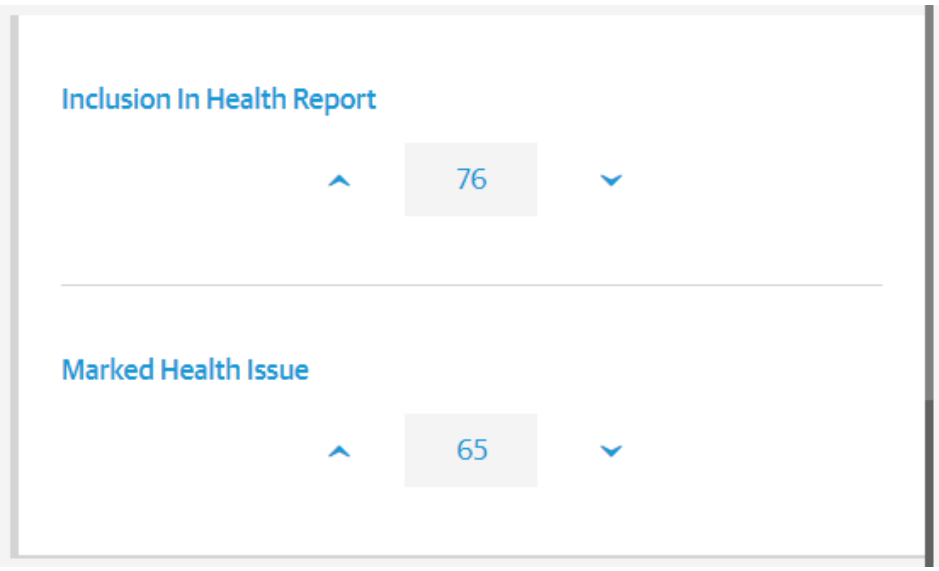


5.3 Health

Configure here parameters for inclusion in the various health related reports.

5.3.1 Health Report

- Inclusion in Health Report – default Health Index = 76.
  - Cows with a Health Index of 86 or lower will appear in the Health Report.
- Marked, significant, Health Issue – default Health Index = 65.
  - Cows with a Health Index of 65 or lower are highlighted and should be more closely examined.



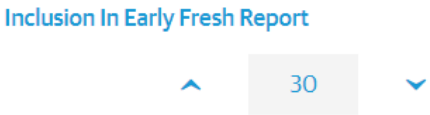
NOTE

The Farm Settings available in your SenseHub™ System reflect the Application Plan subscription in place on the farm. Not all items described in this chapter are available in every SenseHub™ System.

5.3.2 Early Fresh Cows Report

Configure here the number of days after calving for cows to appear in the early fresh report.

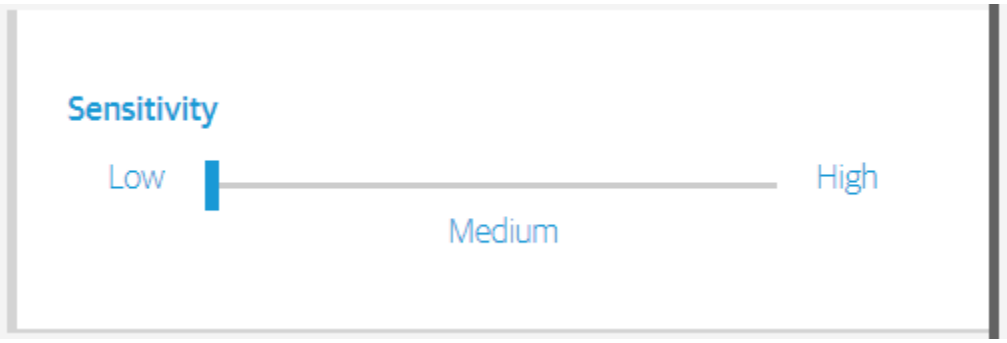
- Inclusion in Early Fresh Report – default 30 days.
  - Cows no matter their Health Index appear in the Early Fresh Cow report for this number of days.



5.3.3 Distress Sensitivity

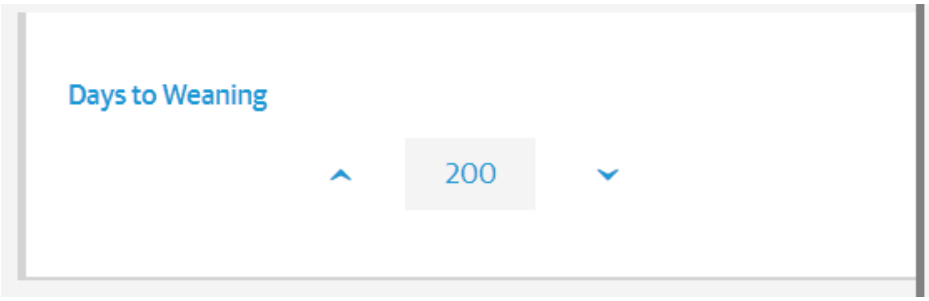
Configure here the sensitivity level of the distress alerts.

- Sliding this to MEDIUM or HIGH increases sensitivity and may result in more alerts, some of which may not actually be distress.



5.3.4 Days to Weaning

Configure here when, as a number of days, the calves in your operation are weaned and separated from their mothers. This number represents the days when the calves are separated from their mothers and will create an event on the health graph of the mother.



6 System Settings

The System Settings area has important information about the configuration and working environment of the SenseHub System.

6.1 System Dashboard

From the SenseHub Dashboard click on System; the System Dashboard appears.

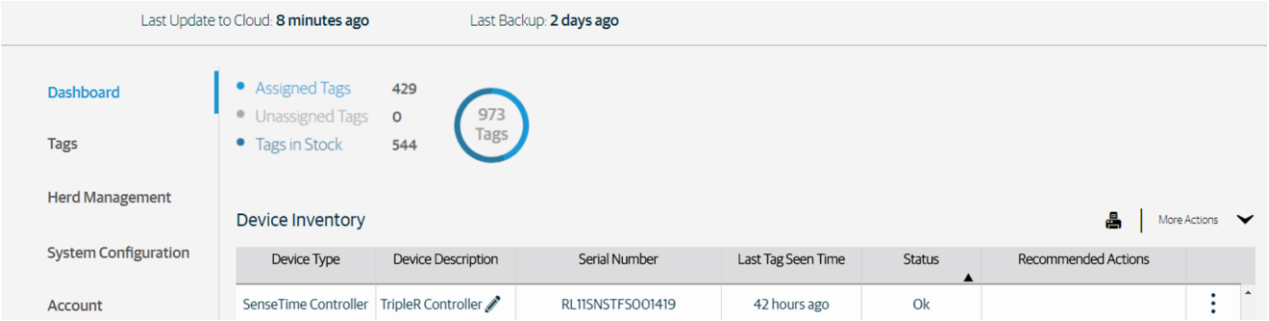
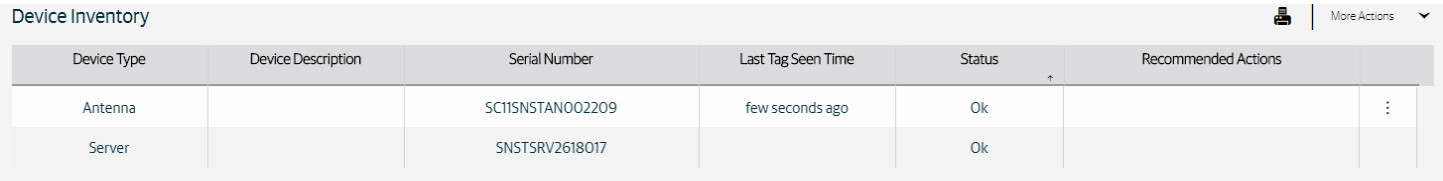


Table Item	Description
Last Update to Cloud	The last time the cloud was updated.
Last Backup	The last time the SenseHub system performed a backup.
Tag summary	A graphic summary of the tags in use on this farm.
Device Type	The type of the device.
Device Description	The description or name of the device. Click on to edit. Give the SenseHub Controller a significant name.
Serial Number	The serial number of the device.
Last Tag Seen Time	The last time a tag was identified by the device.
Status	The current status of the device.
Recommended Actions	Perform this recommended action to resolve this issue that appears in the Status column.
Last Management Sync (Not Shown)	The last time SenseHub sync'd with the configured Herd Management System. If there is no Herd Management System configured this does not appear.

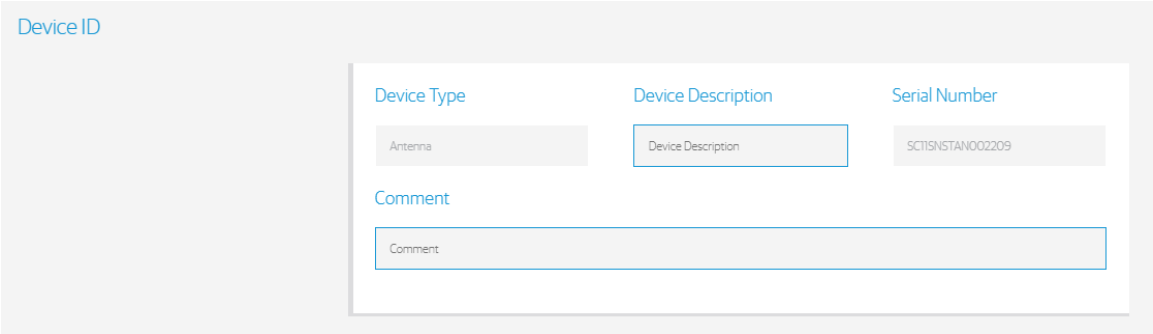
6.1.1 Device Details

Clicking on the Device in the Device Type column displays the Device Details.

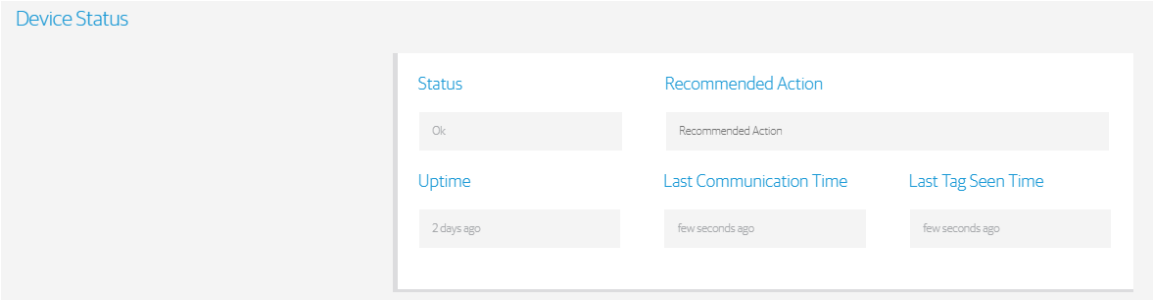


There are 4 sections here:

- Device ID: The type and name of the device.
- Device Status: the current status and correction action for this device.
- Device Versions: the version running on the device.
- Device Network: The network configuration and properties of this device.

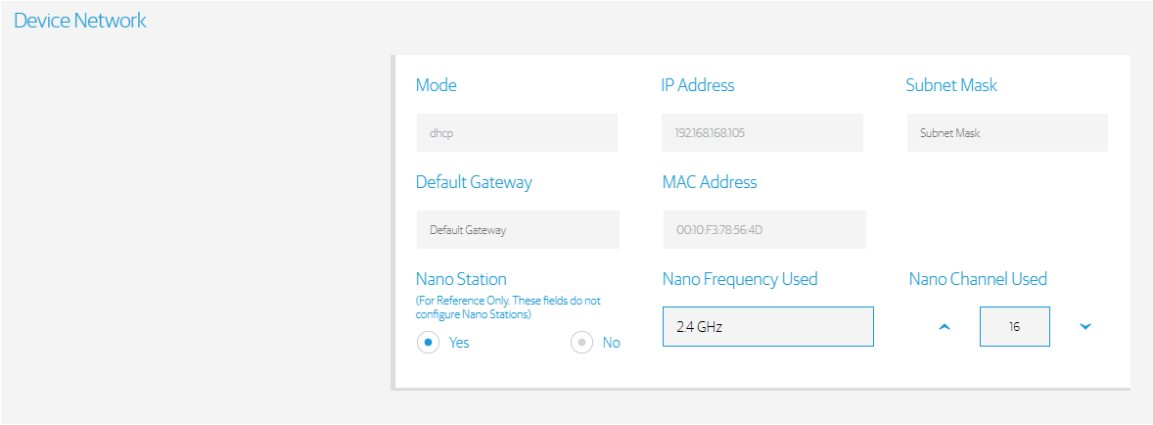


1. The type and ID of the device. It is recommended to enter information in the description and comment fields to help locate this device on the farm.



2. The current status along with recommended action is available in this section. This section also displays the current uptime of the operating system and communication time for this device as well as the last tag seen time.

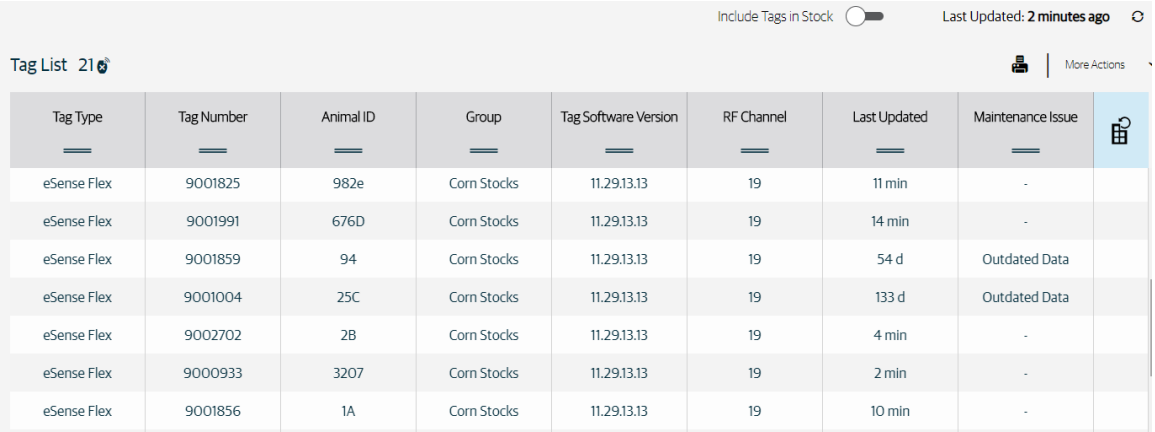
3. The Device Versions section displays the versions of the device and is device dependent.



4. The Device Network section displays information about the configuration of the network. There is also a section here for manually adding information about nano stations that may be in use on this farm.

6.2 Tag List

Click on Tags, the Tag List appears.

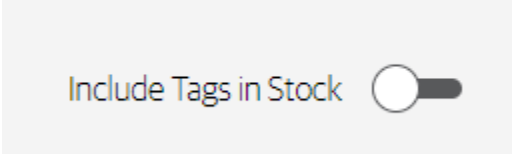


Tag Type	Tag Number	Animal ID	Group	Tag Software Version	RF Channel	Last Updated	Maintenance Issue
eSense Flex	9001825	982e	Corn Stocks	11.29.13.13	19	11 min	-
eSense Flex	9001991	676D	Corn Stocks	11.29.13.13	19	14 min	-
eSense Flex	9001859	94	Corn Stocks	11.29.13.13	19	54 d	Outdated Data
eSense Flex	9001004	25C	Corn Stocks	11.29.13.13	19	133 d	Outdated Data
eSense Flex	9002702	2B	Corn Stocks	11.29.13.13	19	4 min	-
eSense Flex	9000933	3207	Corn Stocks	11.29.13.13	19	2 min	-
eSense Flex	9001856	1A	Corn Stocks	11.29.13.13	19	10 min	-

Column Header	Description
Tag Type	The type of the tag/
Tag Number	The number of the tag.
Animal ID	The number of the animal that is paired with the tag.
Group	The group where the animal is.
Tag Software Version	The active software version running on the tag.
RF Channel	The configured RF Channel of this tag
Last Updated	The last time data was received from the tag.
Maintenance Issue	The current Maintenance Issue, if any, identified for this tag.

NOTE

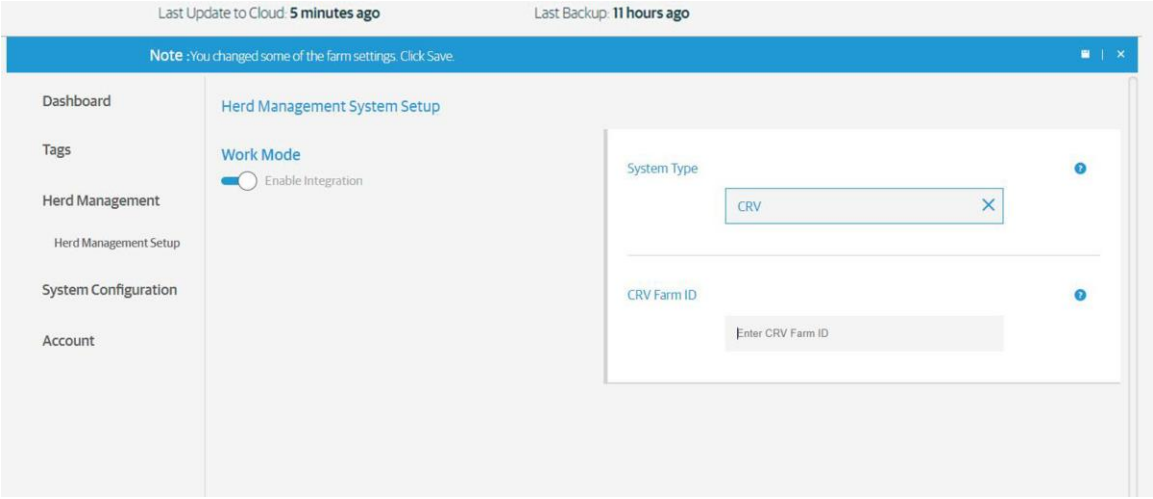
By default, this table only shows tags that are paired with cows/animals.



6.3 Herd Management Setup

The Herd Management Setup section identifies and defines the current system configuration. Is the system configured to work in SCR Mode, Stand alone, or is it configured to work integrated with a Herd Management System.

- If the Herd Management System was not configured during registration, go to System → Herd Management and choose the Herd Management System in use on the farm.



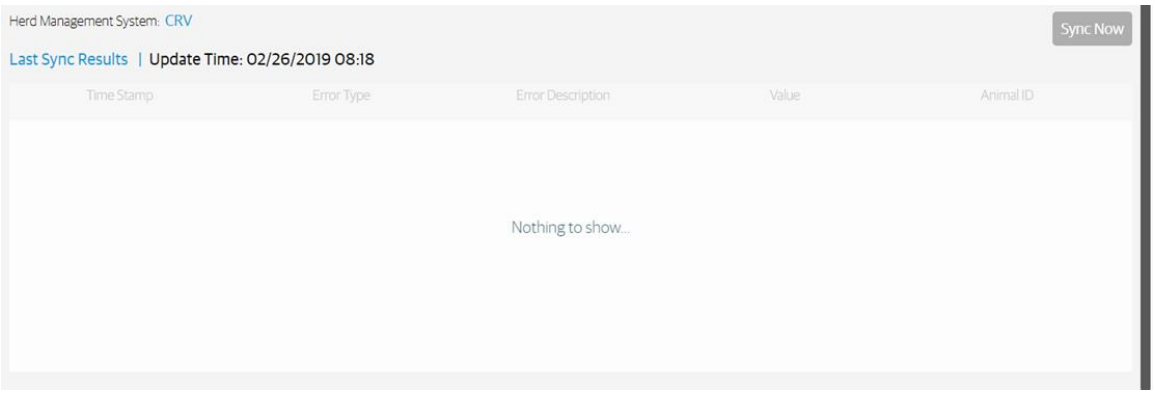
Depending on the Herd Management System you are using you will need to add additional information.

When configuration is complete click save to save the configuration.

6.3.1 Monitoring Herd Management

SenseHub monitors and reports on the status of the most recent synchronization with the Herd Management System.

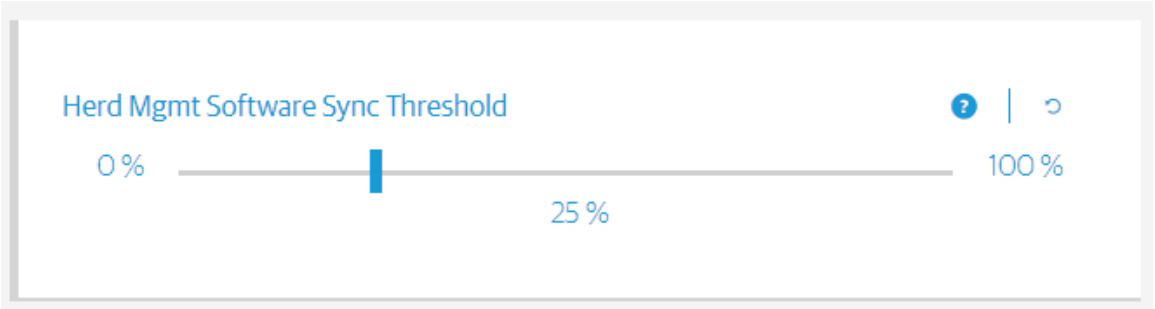
Go to System → Herd Management → Results the last Sync Results screen appears.



Field	Description
Time Stamp	The time the error occurred
Error Type	The type of Error
Error Description	Long Description of the error
Value	The value in error
Animal ID	The Animal ID record that contains the error

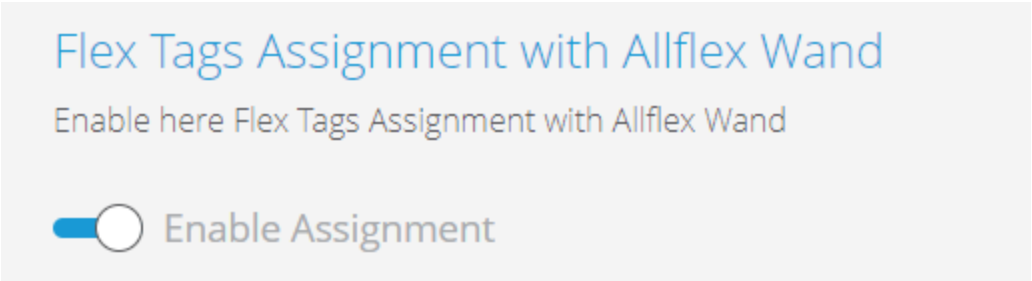
6.3.2 Herd Management Synchronization Threshold

This threshold defines the percentage of cows that may be culled because of a Herd Management Software synchronization.



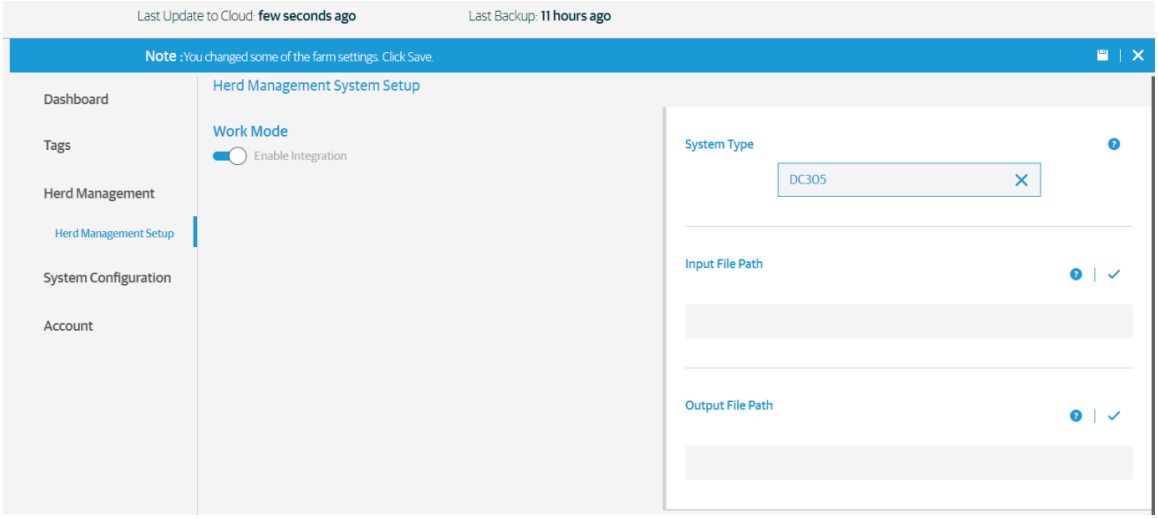
6.3.3 Flex Tag Assignment with Allflex Wand

When this is enabled, Flex Tags will be paired with animals when using the Allflex Wand. Pairing with the Allflex Wand will also overrule any pairing of Flex tags sent by the Herd Management Software.



6.3.4 Herd Management Setup – Status File

The Herd Management Setup section identifies and defines the current system configuration. Is the system configured to work in SCR Mode, Stand alone, or is it configured to work integrated with a Herd Management System.



- When choosing to work in DC305 or PC Dart Modes the input and output file paths must be defined. These are the file paths where DC305 / PC Dart places the Status File, Input File Path, and where SenseHub, Output File Path, places its output files.

- Create the Input and Output file paths on the same PC where the SenseHub Status File Service is installed. The installation is described on page 22.

- If SenseHub does not appear to be synchronizing with the Herd Management System you are using contact your SCR Dealer for assistance, Link Services may need to be enabled for your installation.

NOTE

It is highly recommended to browse on the local PC where the SenseHub Status File Service is installed using Windows Explorer to the correct file location and

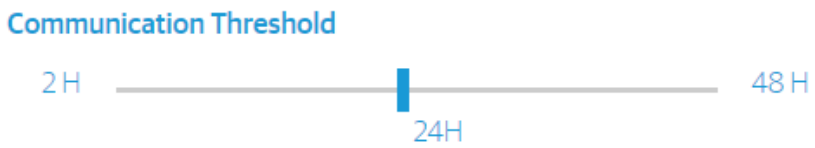
then copy that path to the correct window in the browser as the input or output file path as required.

6.4 System Configuration

This section contains configuration information about the SenseHub Operation Mode, Tag Communication Configuration, and Internal Algo Versions.

- SenseHub Operation Mode – Choose between SCR Mode and Minimal Validation Modes of operation. Using SCR Mode guarantees the full functionality of the system. The system will provide less utility when used in Minimal Validation mode.

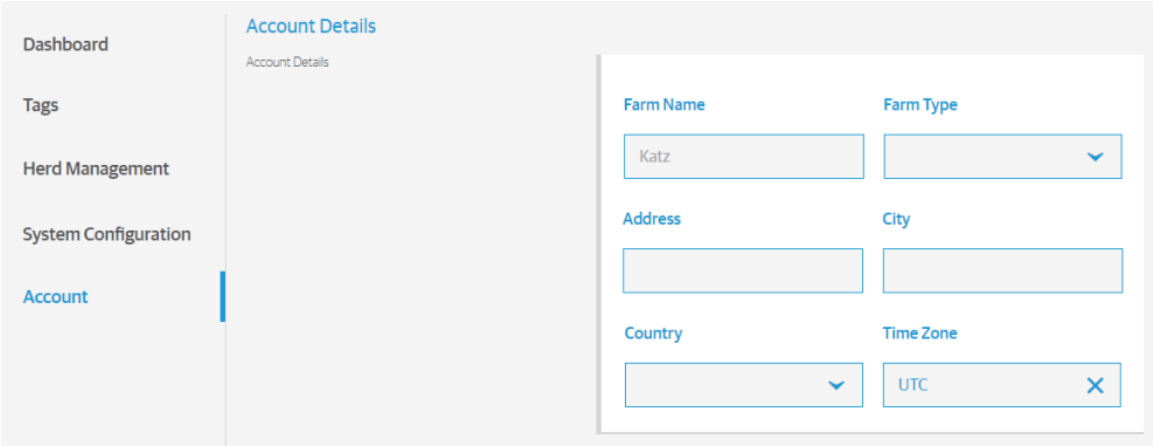
- Tag Communication Configuration – Configure when tags that have not identified since assignment and tags that have identified at least once since assignment but not in a while appear in the Tag Maintenance Report.



- Internal Versions – This section contains important information needed to communicate to Technical Support.

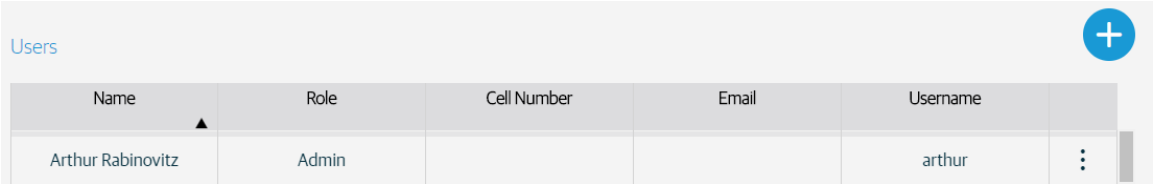
6.5 Account Details

This section contains the current configured account details.



6.5.1 Users

The users page is where Users to the local SenseHub™ system are added and managed.

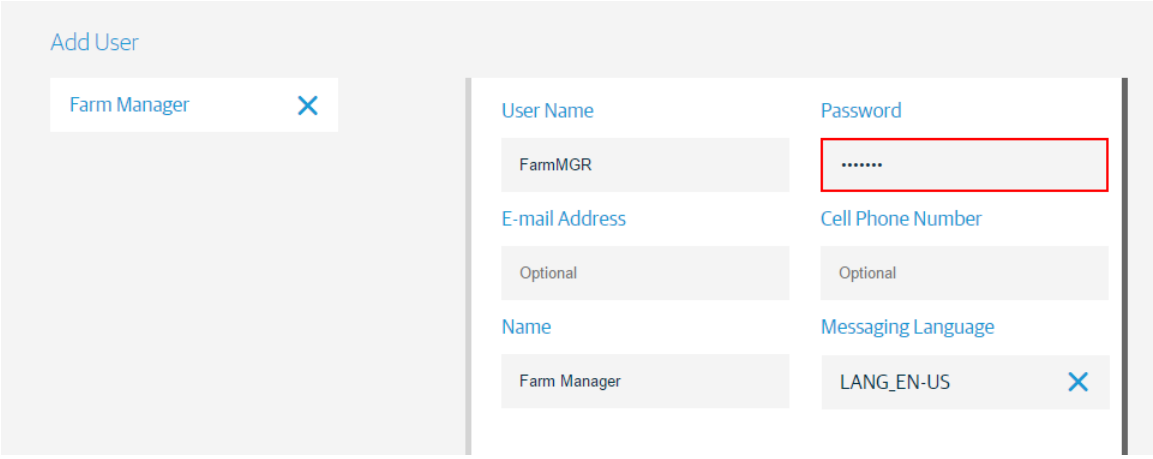


There are 4 user levels available on SenseHub™:

- Admin – the user that is created during registration is the system administrator and has access to edit everything in SenseHub™. There is only one Admin per SenseHub™.
- Farm Manager – This user can edit all settings related to the Farm, its operation and the cows. This user may not edit System Settings.
- Farmer –This user can enter events and view cows, reports, and graphs.
- External User – This type of user should be used for consultants and service providers to the farm like the breeder, veterinarian, and feeding consultant. With this user service providers/consultants can receive alerts from the system. They can also access the system but only as Read-only users.

To add a new user, click on Add, and then choose the type of user to add.

Complete the User Details and click Save.



Continue to Alerts to configure the types of alerts sent to the users, and on which devices.

Appendix A Migrating from Heatime® HR in Link Mode

Heatime® HR customers that are using the HC 24 system to enable a link between their Heatime® HR System and their Herd Management System can smoothly migrate from using Heatime® HR to using SenseHub™.

1. Disconnect your Heatime® HR Control Box from the internet.
2. Connect your new SenseHub™ Controller to the internet.
    a. See the SenseHub Install Guide.
3. Complete the SenseHub™ Registration. See page 18 for details and instructions.
    a. During the Registration note and generate a NEW code for your Herd Management System.
4. Replace the current code with the new code generated during SenseHub™ Registration.
5. If the Herd Management System has a feature to synchronize with the cloud at will, do that now.
    a. If your Herd Management system does not allow for at will synchronization, you should wait 12-24 hours for the complete synchronization of all cows and cow cards in the system.

Appendix B Certifications

telefication

TCB

GRANT OF EQUIPMENT
AUTHORIZATION

Certification
Issued Under the Authority of the
Federal Communications Commission
By:

TCB

Telefication B.V.
Edisonstraat 12a
Zevenaar, NL-6902 PK
Netherlands

Date of Grant: 01/16/2017

Application
Dated: 01/06/2017

SCR Engineers Ltd.
18 Hamelacha street, Poleg Industrial Zone
P.O. Box 13564,
Netanya, 42138
Israel

Attention: Eli Kamhine , VP Technologies

NOT TRANSFERABLE

EQUIPMENT AUTHORIZATION is hereby issued to the named GRANTEE, and is VALID ONLY for the equipment identified hereon for use under the Commission's Rules and Regulations listed below.

FCC IDENTIFIER:	AMUT04
Name of Grantee:	SCR Engineers Ltd.
Equipment Class:	**Part 15 Low Power Transceiver, Rx Verified**
Notes:	**eSense ear tag**

Grant Notes	FCC Rule Parts	Frequency Range (MHZ)	Output Watts	Frequency Tolerance	Emission Designator
	15C	**2405.0 - 2480.0**			

Certificate No.: 162185948/AA/00	Mark Chung Product Assessor	Mark Chung

telefication

TCB

GRANT OF EQUIPMENT
AUTHORIZATION

TCB

Certification
Issued Under the Authority of the
Federal Communications Commission
By:

Telefication B.V.
Edisonstraat 12a
Zevenaar, NL-6902 PK
Netherlands

Date of Grant: 01/13/2016

Application
Dated: 01/13/2016

SCR Engineers Ltd.
18 Hamelacha street, Poleg Industrial Zone
P.O. Box 13564,
Netanya, 42138
Israel

Attention: Eli Kamhine , VP Technologies

NOT TRANSFERABLE

EQUIPMENT AUTHORIZATION is hereby issued to the named GRANTEE, and is VALID ONLY for the equipment identified hereon for use under the Commission's Rules and Regulations listed below.

FCC IDENTIFIER:	AMUT03
Name of Grantee:	SCR Engineers Ltd.
Equipment Class:	**Part 15 Low Power Transceiver, Rx Verified**
Notes:	**Activity based tag**

Grant Notes	FCC Rule Parts	Frequency Range (MHZ)	Output Watts	Frequency Tolerance	Emission Designator
	15C	**2405.0 - 2480.0**			

Certificate No.: 152185079/AA/00	Mark Chung Product Assessor	Mark Chung

HERMON LABORATORIES

CERTIFICATE

CERTIFICATE OF CONFORMITY

With EN 301 489-3: V1.6.1: 2013, other than telecommunication center equipment and EN 301 489-1 V1.9.2: 2011, other than telecommunication center equipment Standards harmonized under article 3.1(b) of R&TTE Directive 1999/5/EC

With AS/NZS CISPR 22: 2009 + A1(10), Class B Standard

Certificate Number SCREMC_EN.26956C

This certificate of conformity has been granted to the applicant based on the results of tests and evaluations, performed by Hermon Laboratories from April 16 to May 4, 2015 on representative sample of the specified product.

Product description

Product name:	Activity based tag
Model:	HR-TAG-LDn
Serial number:	PO055798
Hardware version:	04.04
Software release:	001.002.021.026

Applicant/Manufacturer details

Name:	SCR Engineers Ltd.
Address:	18 Hamelacha street, Netanya, POB 13564, Israel
Telephone number:	+972 73 240 6053
Fax number:	+972 9865 0703

This is to certify that the tested product sample satisfies the requirements of the above listed standard/s.

Measurement/test results are contained in the test report: SCREMC_EN.26956.

The comments in the associated (if applicable) test report/s shall be taken into account and used in conjunction with this certificate

Michael Nikishin,
EMC & Radio Group Manager
Hermon Laboratories Ltd.

July 20, 2015 **Page 1 of 1**

EXPERTS IN GLOBAL COMPLIANCE SOLUTIONS

EMC Radio Telecom Environmental Product Safety International Approvals

Hermon Laboratories Ltd.
Hatachana St., POB 23, Binyamina 30500 Israel
Phone: +972 4 628 8001, Fax: +972 4 628 8277
Email: mail@hermonlabs.com, www.hermonlabs.com

HERMON LABORATORIES

CERTIFICATE OF CONFORMITY

CERTIFICATE

With EN 301 489-3: V1.6.1: 2013, other than telecommunication center equipment and EN 301 489-1 V1.9.2: 2011, other than telecommunication center equipment Standards harmonized under article 3.1(b) of R&TTE Directive 1999/5/EC

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Michael Nikishin,
EMC & Radio Group Manager
Hermon Laboratories Ltd.

July 20, 2015 **Page 1 of 1**

EXPERTS IN GLOBAL COMPLIANCE SOLUTIONS

EMC Radio Telecom Environmental Product Safety International Approvals

Hermon Laboratories Ltd.
Hatachana St., POB 23, Binyamina 30500 Israel
Phone: +972 4 628 8001, Fax: +972 4 628 8277
Email: mail@hermonlabs.com, www.hermonlabs.com

HERMON LABORATORIES

CERTIFICATE OF CONFORMITY

CERTIFICATE

With AS/NZS CISPR 22: 2009 + A1(10), Class B standard

With EN 301 489-3: V1.6.1: 2013, other than telecommunication center equipment and EN 301 489-1 V1.9.2: 2011, other than telecommunication center equipment standards harmonized under article 3.1(b) of R&TTE Directive 1999/5/EC

With EN 300 440-2 V1.4.1: 2010 standard harmonized under article 3(2) of R&TTE Directive 1999/5/EC

With AS/NZS 4268:2012 and AS/NZS 4268/Amdt1:2013 standards

Certificate Number SCREMC_RAD_28575C

This certificate of conformity has been granted to the applicant based on the results of tests and evaluations, performed by Hermon Laboratories from July 11 to 14, 2016 on representative sample of the specified product.

Product description

Product name:	eSense Ear TAG
Model:	AMUT04
Serial number:	QD0000145
Hardware version:	01.02.00
Software release:	110.07.05.06

Applicant/Manufacturer details

Name:	SCR Engineers Ltd.
Address:	18 Hamelacha street, Netanya, POB 13564, Israel
Telephone number:	+972 73 240 6053

This is to certify that the tested product sample satisfies the requirements of the above listed standard/s.

Measurement/test results are contained in the test reports:

SCREMC_28575, SCRRAD_EN.28575.

The comments in the associated (if applicable) test report/s shall be taken into account and used in conjunction with this certificate

Michael Nikishin,
EMC & Radio Group Manager
Hermon Laboratories Ltd.
November 16, 2016

Page 1 of 1

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EMC | Radio | Telecom | Environmental | Product Safety | International Approvals

Hermon Laboratories Ltd.
Hatachana St., POB 23, Binyamina 30500 Israel
Phone: +972 4 628 8001, Fax: +972 4 628 8277
Email: mail@hermonlabs.com, www.hermonlabs.com

HERMON LABORATORIES

CERTIFICATE

CERTIFICATE OF CONFORMITY

With EN 300 440-2 V1.4.1: 2010 Standard harmonized under article 3(2) of R&TTE Directive 1999/5/EC

With AS/NZS 4268:2012 and AS/NZS 4268/Amdt1:2013 Standard

Certificate Number SCRRAD_EN.26956C

This certificate of conformity has been granted to the applicant based on the results of tests and evaluations, performed by Hermon Laboratories from May 3 to 17, 2015 on representative sample of the specified product.

Product description

Product name:	Activity based tag
Model:	HR-TAG-LDn
Serial number:	PO055798
Hardware version:	04.04
Software release:	001.002.021.026

Applicant/Manufacturer details

Name:	SCR Engineers Ltd.
Address:	18 Hamelacha street, Netanya, POB 13564, Israel
Telephone number:	+972 73 240 6053
Fax number:	+972 9865 0703

This is to certify that the tested product sample satisfies the requirements of the above listed standards.

Measurement/test results are contained in the test report: SCRRAD_EN.26956.

The comments in the associated (if applicable) test report/s shall be taken into account and used in conjunction with this certificate

Michael Nikishin,
EMC & Radio Group Manager
Hermon Laboratories Ltd.

July 15, 2015 **Page 1 of 1**

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EMC Radio Telecom Environmental Product Safety International Approvals

Hermon Laboratories Ltd.
Hatachana St., POB 23, Binyamina 30500 Israel
Phone: +972 4 628 8001, Fax: +972 4 628 8277
Email: mail@hermonlabs.com, www.hermonlabs.com