

CowScout UserGuide



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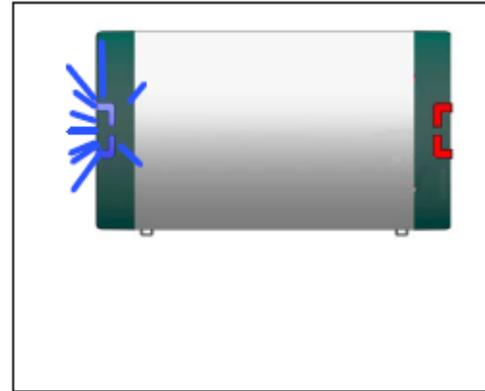
VPU/ power supply

Indicator lights

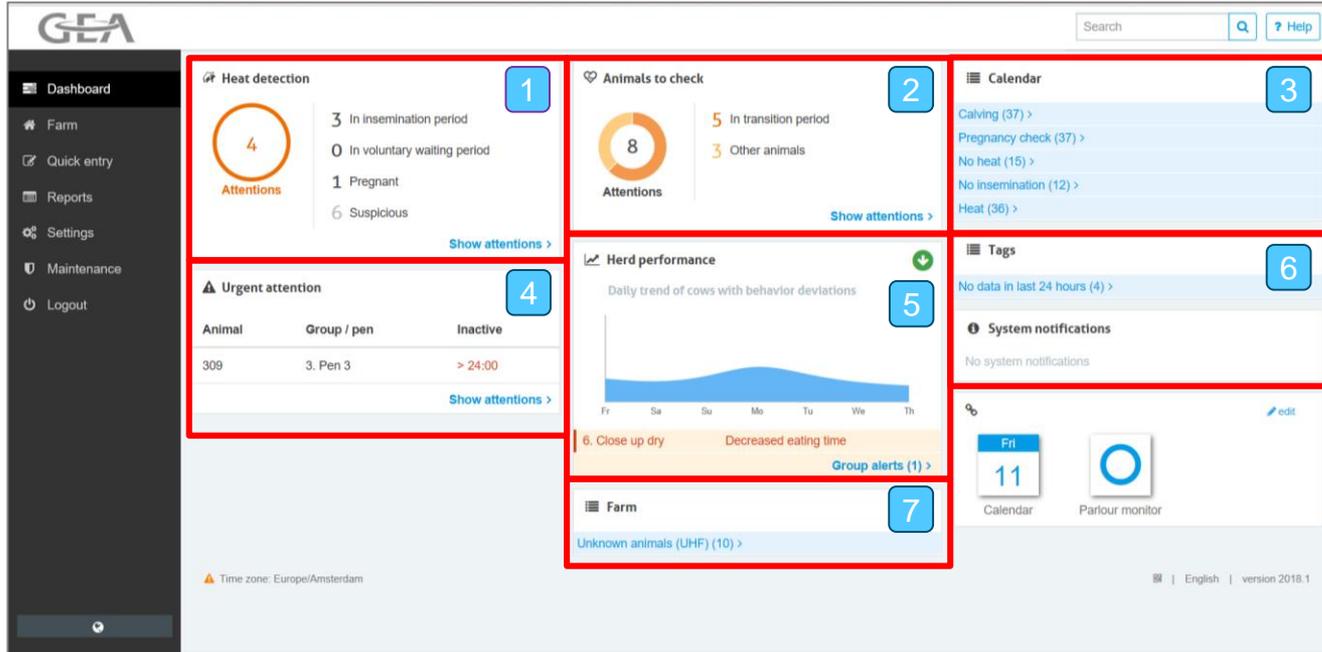
The blue light on the left of the housing indicates that the power supply is switched on.

If the blue light flashes quickly, this indicates a malfunction.

The red light on the right of the housing indicates a message for high or low activity cows.



This is the Main Dashboard from where you can see at a glance the current activity & Health status of your Herd



1. Cows in Heat
2. Cows to check for Health issues
3. Vet Lists
4. Urgent attention required e.g. inactivity
5. Herd trend & Group Alerts
6. Miscellaneous e.g. inactive tags
7. Unknown Animals e.g. newly added tags



Heat detection - Dashboard segment

1. This segment shows Cows that are possibly on Heat due to their high activity
2. In total 4 cows are showing high activity
3. 3 of these cows are active after the voluntary waiting period
4. In this example NO cows are active within the voluntary waiting period
5. 1 cow has high activity but is already Pregnant
6. Separately there are 6 cows who are showing suspicious activity i.e. not full blown activity however it is worth checking these cows for signs of Heat
7. Click on Show attentions to see the complete list.



Animals to check - Dashboard segment

1. The Animals to check segment shows animals to check for health issues
2. All animals with unusual behaviour are listed here, including animals with an urgent attention. Click on Show attentions to see the complete list.
3. The colour indicates if the animals to check are in a critical period (transition period) or not. The orange part indicates the animals in the transition period, the yellow part shows the number of animals in other periods. The number in the circle indicates the total number of animals on the Animals to check list.
4. In this example a total 8 cows require attention
5. 5 are in the transition period i.e. the period just before and after calving
6. 3 other animals require attention are outside the transition period

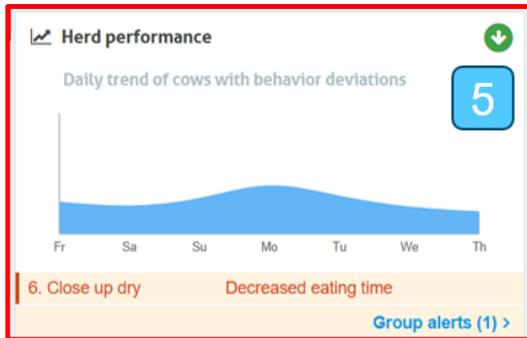
▲ Urgent attention		
Animal	Group / pen	Inactive
3512	1.	22:04
4248	1.	> 24:00
623	1.	21:04

[Show attentions \(5\) >](#)

4

Urgent attention - Dashboard segment

1. An Urgent attention appears when an animal shows a sudden or significant change to her normal behaviour pattern and immediate action is required!
2. Urgent attention may result from Milk Fever , E Coli or other diseases
3. In this example , 3 cows require Urgent attention
4. Once the cow shows normal behaviour she is removed from the list
5. Click on Show attentions to see the complete list.



5

Herd Performance - Dashboard segment

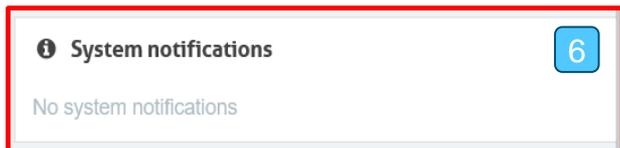
1. The graph shows how many animals of the complete herd (in %) show unusual behaviour. All animals with unusual behaviour are included, even when they do not have a health attention yet.
2. Ideally the level of the daily trend should be as low and as level as possible
3. Deviations may indicate external influences or management issues e.g. feeding strategy or issues with access to feed, housing conditions ,milking patterns etc.
4. It also shows if a particular Group is showing unusual behaviour . In this example Group 6



☰ Tags 6
No data in last 24 hours (7) >

Tags - Dashboard Segment

1. When a problem occurs with a CowScout an attention is generated. The attention indicates what is wrong with the CowScout. Click on the attention to see more information and to solve the CowScout problem.



ⓘ System notifications 6
No system notifications

System notifications - Dashboard Segment

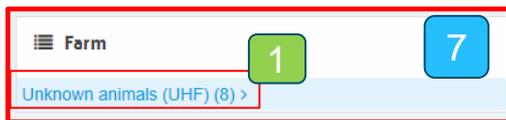
1. System notifications are shown for example when there is new CowScout software available , time for making a back-up, or there maybe an issue with one of the CowScout system components



☰ Farm 7
Unknown animals (UHF) (10) >

Farm – Unknown animals - Dashboard segment

1. This shows the number of CowScout tags that have been read by the antenna which are not assigned to any cow
2. This maybe because tags left in their box are within range of the antenna
3. Tags are on the cows but haven't been entered on the system against a cow
4. A neighbour also has CowScout and the tags are within the range of the antenna



This shows a List of any Responder numbers that the system has detected, but do not have a cow number assigned to them yet

Tip :some numbers may be responders which have not yet been fitted to cows but may have been removed from the foil packet

A screenshot of the 'Unknown animals' page in the GEA system. The page shows a table with columns: Tag, Animal number, Life No, Location group, Birth date, Calving date, and Lactation. The first row is highlighted with a red box. A red arrow points from the 'Animal number' input field in the first row to the 'Submit' button at the bottom right of the page. A yellow callout box with a red border and a green circle containing the number '2' is positioned to the left of the table, containing instructions on how to add a cow record.

Tag	Animal number	Life No	Location group	Birth date	Calving date	Lactation
<input type="checkbox"/>	984000714382044	1234	0. Farm	06-01-2015	26-06-2018	1
<input type="checkbox"/>	984000714382045		0. Farm			1
<input type="checkbox"/>	984000714536661		0. Farm			1

Here you can create a cow record

1. Add Cow number against relevant responder number
2. Add any other info such as Ear Tag no., Calving Date
3. Then Submit
4. Repeat for next cow

Tip: NOT required if Data is being entered in Dairyplan & sync'd to CowScout

The CowScout antenna may pick up unwanted tags . For example unused tags that are still in a bag, tags from a neighbouring farm. These tags can be 'hidden'

The screenshot shows the 'Unknown animals' page in the GEA Farm system. A sidebar on the left contains navigation options: Dashboard, Farm, Quick entry, Reports, Settings, Maintenance, and Logout. The main content area has a search bar at the top right and a table of unknown animals. A dropdown menu is open under the 'Actions' button, showing 'Remove' and 'hide' options. At the bottom right, there are 'Show hidden responders' and 'Submit' buttons. A red arrow points from a text box to the 'Show hidden responders' button.

	Animal number	Life No	Location group	Birth date	Calving date	Lactation
<input type="checkbox"/>	Not a smarttag		0. Farm			1
<input type="checkbox"/>			0. Farm			1
<input checked="" type="checkbox"/>	984000714536661		0. Farm			1

Here you can unhide previously hidden tags

Heat Detection - List

Heat detection

4
Attentions

- 3 In insemination period
- 0 In voluntary waiting period
- 1 Pregnant
- 6 Suspicious

Show attentions >

1

These lists show cows with Increased **Heat Attention** – Cows with Increased Activity , probable Heat **Heat Suspicious** -- Cows with slightly Raised Activity (check)

Tip: Cows with high activity can also be viewed in DairyPlan if connected

2

Enter relevant action for animal

Tip: For CowScout systems that are synchronised with DairyPlan enter SEEN if you want to remove cow from Heat Detection list. Other actions Inseminations / Heat / No Heat etc. should be entered in DairyPlan

GEA

Dashboard

Farm

Quick entry

Reports

Settings

Maintenance

Logout

Heat detection

Attentions 4 Handled Suspicious 12

Show: All Youngstock (0) Dairy cows (4)

Animal	Group / pen	Lact. days	Heat days	Insem. days	# Insem.	Pregnant	Optimal insemination moment	Actions
7529	1. Fresh	58	36	-	-			Actions
5193	1. Fresh	86	43	43	2			Actions
65804	1. Fresh	42	-	-	-			Actions
5322	1. Fresh	50	41	-	-			Actions

Time zone: Europe/London

service | version 2018.4

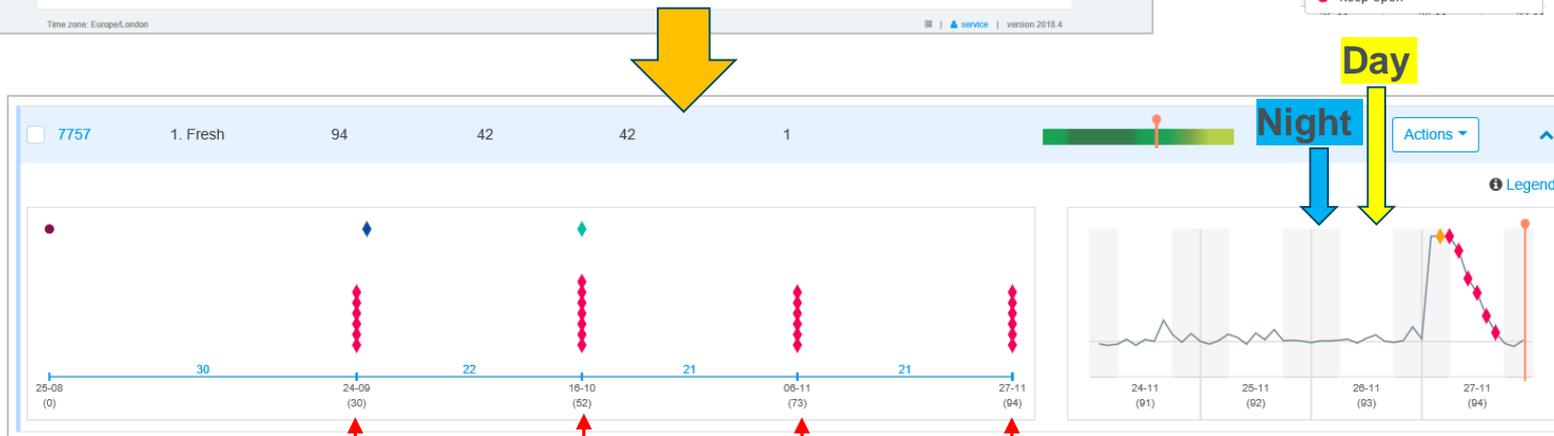
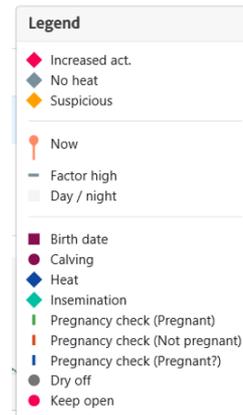
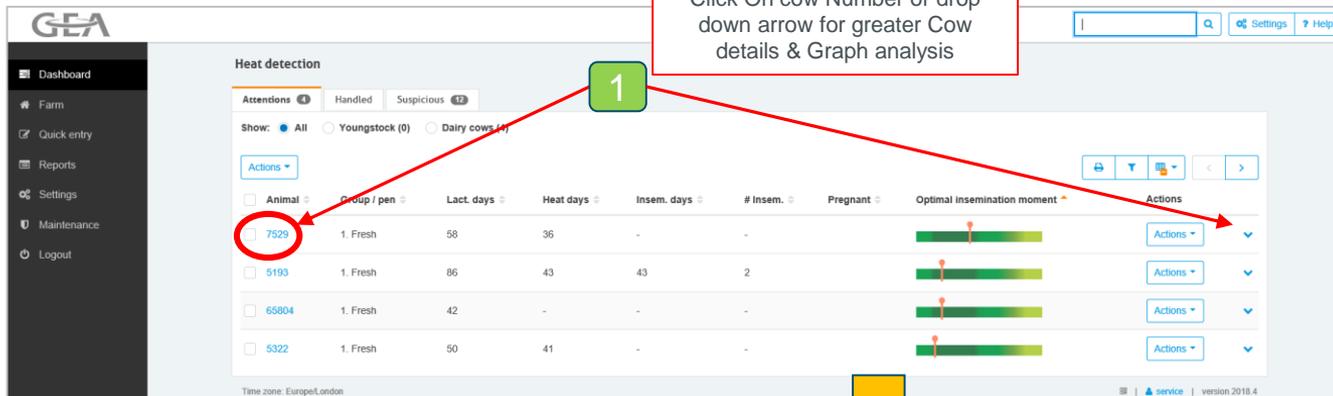
3

The Light Green - Dark Green - Yellow Bar with Orange bar

The Orange bar indicates the time since start of the heat

The optimum Insemination time is with the Orange bar in the centre of Dark Green area

Heat Detection - Graph (continued)



Shows activity since start of lactation. Red diamonds indicate period of high activity

Shows activity in last few days

1

There are 3 tabs to choose from in the Heat Detection section:

Attentions – High activity cows

Handled – Cows that you have processed i.e. entered an action such as SEEN, HEAT , Inseminated etc.

Suspicious - Cows with slightly Raised Activity (check)

Tip: Cows with high activity can also be viewed in DairyPlan if connected

2

Heat detection

Attentions 4 | Handled | Suspicious 12

Show: All | Youngstock (0) | Dairy cows (4)

Animal	Group / pen	Lact. days	Heat days	Insem. days	# Insem.	Pregnant	Optimal insemination moment	Actions
7529	1. Fresh	58	36	-	-			Actions
5193	1. Fresh	86	43	43	2			Actions
65804	1. Fresh	42	-	-	-			Actions
5322	1. Fresh	50	41	-	-			Actions

Handled

Suspicious

Click on drop down arrow to view the Activity graph

Heat detection

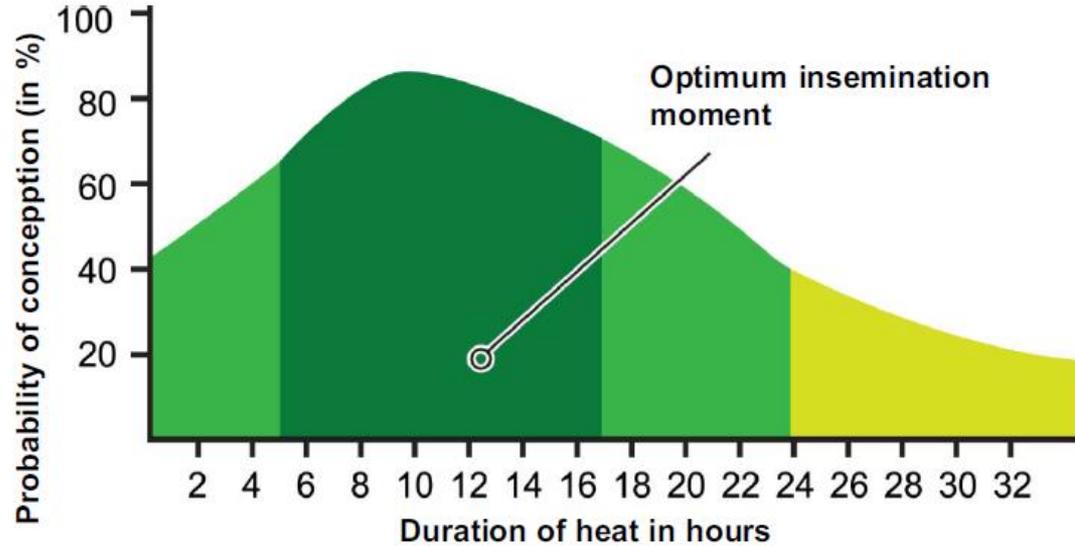
Attentions | **Handled** | Suspicious

Animal	Group / pen	Lact. days	Heat days	Attention date	Reason	Actions
606	4. Pen 4	-	280	26-11-2019 10:59	Seen	Actions
21	2. Pen 2	92	2	26-11-2019 10:59	Seen	Actions
939	1. Pen 1	66	23	26-11-2019 12:59	Seen	Actions

Heat detection

Attentions | Handled | **Suspicious**

Animal	Group / pen	Lact. days	Heat days	# Inseminations	Attention date	Actions
647	1. Pen 1	341	265	1	27-11-2019 07:59	Actions
165	3. Pen 3	149	67	1	27-11-2019 19:59	Actions
943	2. Pen 2	280	228	1	27-11-2019 23:59	Actions



- The optimum time to inseminate a cow is between 5 – 17 hours after 1st activity indication

From the Main dashboard > Urgent Attention , Click on Show attentions to see the complete list

Animal	Group / pen	Inactive
3512	1. Maenhir	22:04
4248	1. Maenhir	> 24:00
623	1. Maenhir	21:04

[Show attentions \(5\) >](#)

Period of inactivity

CowScout Neck with Rumination: cow is inactive longer than 6 hours.

CowScout Neck : cow has not been eating for more than 12 hours.

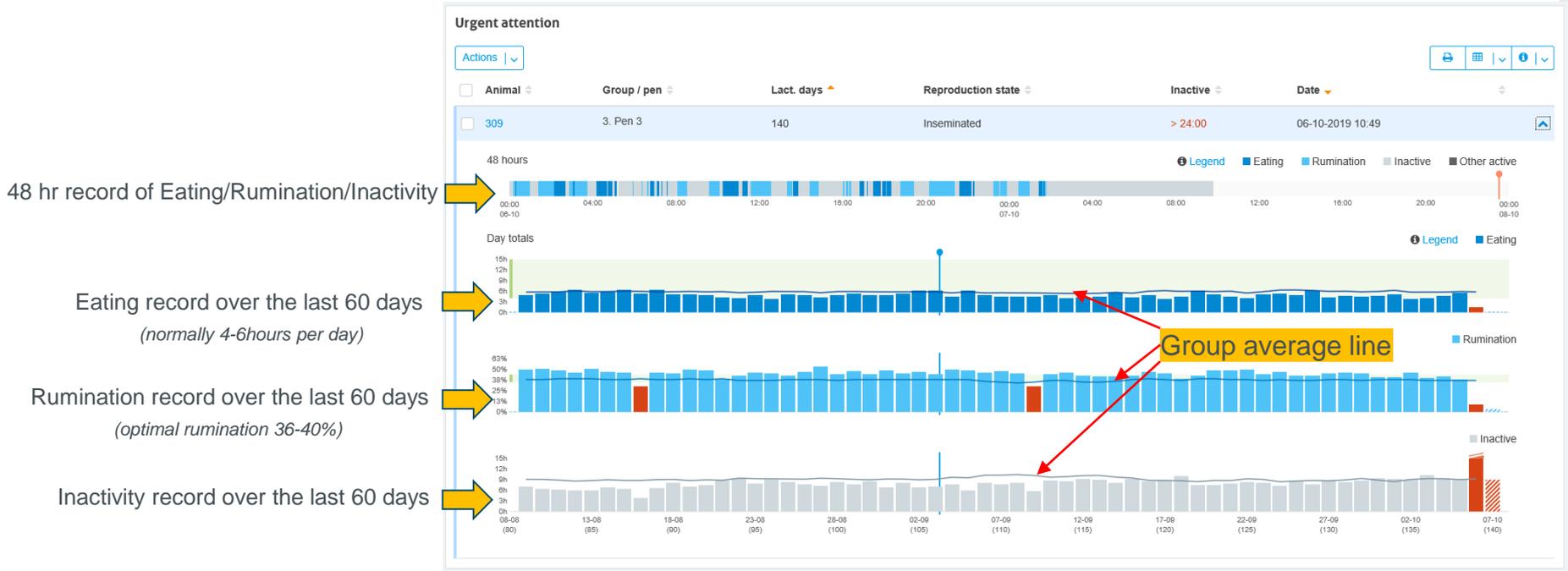
CowScout Leg: cow lies longer than 8 hours.

To change the time period for urgent attentions, click on the settings icon and move the slider bar

This symbol indicates a possible issue with the Tag

Animal	Group / pen	Lact. days	Reproduction state	Inactive	Date
3512	1.	354	Pregnant	22:04	01-10-2019 23:42
4248	1.	745	Open	> 24:00	01-10-2019 13:33
623	1.	53	Open	21:04	01-10-2019 11:43
3550	1.	367	Pregnant	> 24:00	01-10-2019 00:27
5189	1.	0	Unknown	> 24:00	29-09-2019 23:21

Click On arrow symbol to view Health Report – See next Page



Note:

1. An alarm indicating a change in Eating behaviour often occurs before the Rumination alarm
2. Normally if Eating time increases so will the Rumination time. A reduction in Rumination time can indicate an issue with feed quality

From the Main dashboard > Animals to Check, Click on Show attentions to see the complete list

Animals to check 2

7
Attentions

- 0 In transition period
- 7 Other animals

[Show attentions >](#)

Legend

- | Animal's average
- 🐄 Recently been in heat
- 📧 Smarttag not working properly
- ⚠️ Group alerts
- 🚨 Urgent attention

Animals to check

Show: All Transition period (0) Youngstock (1) Dairy cows (6)

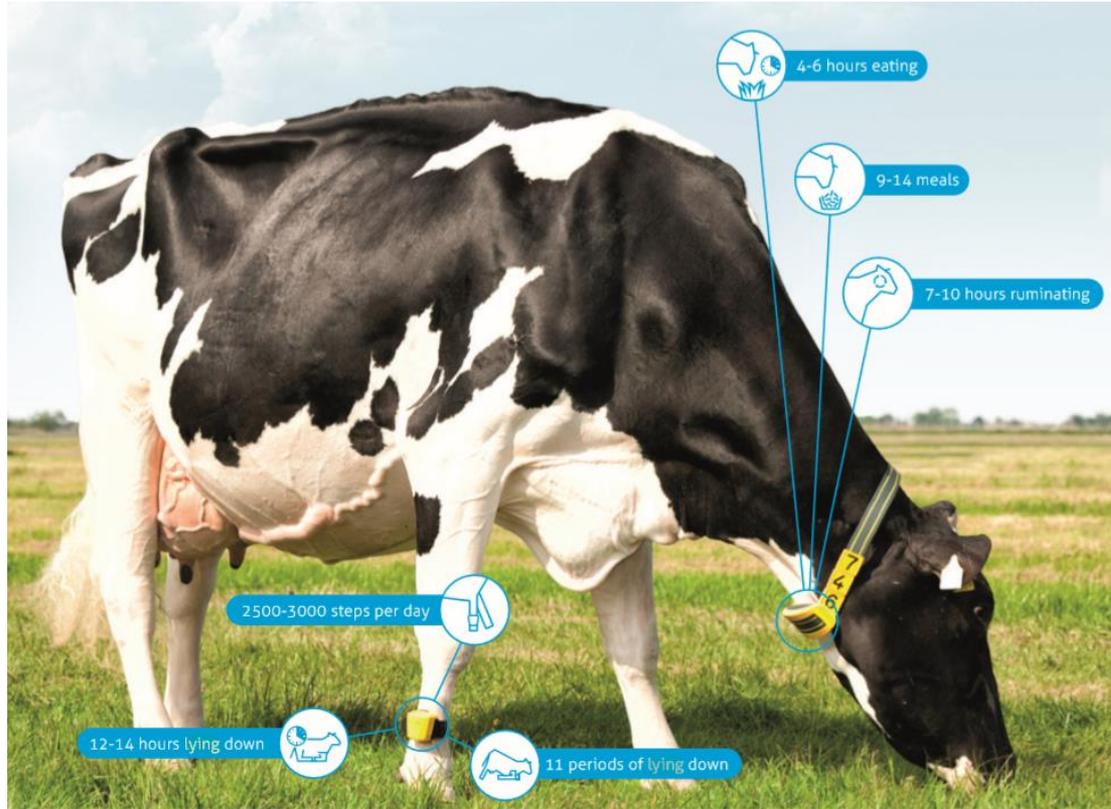
Actions | ▾

<input type="checkbox"/> Animal	Group / pen	Lact. days	Inactive		Remarks
<input type="checkbox"/> 5189	1.	0		🐄 📧 ⚠️ 🚨	Add event ▾
<input type="checkbox"/> 623	1.	53		🐄 📧 ⚠️ 🚨	Add event ▾
<input type="checkbox"/> 4253	1.	106		🐄 📧 ⚠️ 🚨	Add event ▾
<input type="checkbox"/> 3502	1.	212		🐄 📧 ⚠️ 🚨	Add event ▾
<input type="checkbox"/> 3512	1.	354		🐄 📧 ⚠️ 🚨	Add event ▾
<input type="checkbox"/> 3550	1.	367		🐄 📧 ⚠️ 🚨	Add event ▾
<input type="checkbox"/> 4248	1.	745		🐄 📧 ⚠️ 🚨	Add event ▾

Click On arrow symbol to view Health Report – See next Page



To change the sensitivity of the attention list, click on the settings icon and move the slider bar accordingly



Note : An early indication of health issues can avoid a drop in milk production and save treatment & culling costs

This shows list of cow with changes in Behaviour Depending on Responder type

Neck Responder shows Eating Behaviour

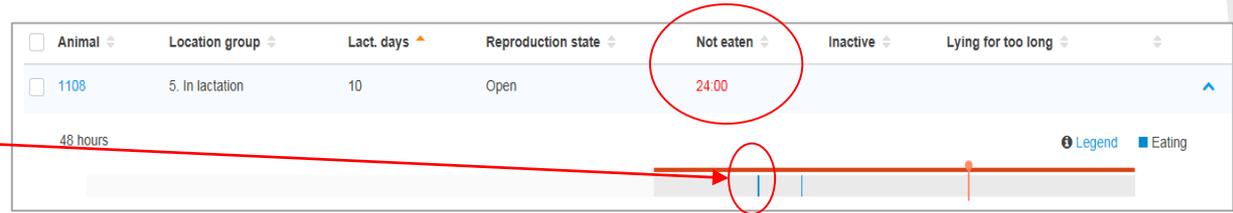
Leg Responders shows Step count - Walking & Lying Behaviour

Animal Behaviour changes detected by CowScout may indicate Health or Management issues : -

- ❖ Lameness
- ❖ Mastitis
- ❖ Acidosis
- ❖ Ketosis
- ❖ Feed issues e.g. quality ,amount or diet make-up of the feed
- ❖ Over crowding

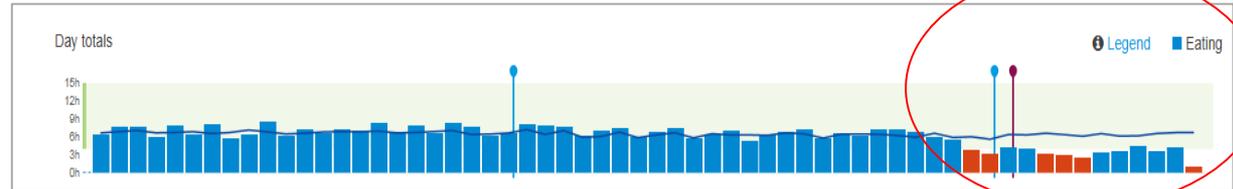
Last 48 hour Eating behaviour

width of blue line indicates duration of eating period.



In this case there has been no eating in the last 24 hours and only a small period of eating before this

Last 2 Months Eating & Rumination behaviour



Red column - Cows eating time for that day indicates an Alarm

Blue Column - Cows eating time for that Day - normal

Blue line – this is the Cow Average

For this cow , Eating behaviour has been affected before and after Calving

Last 48 hour Activity behaviour

Width of dark orange bar indicates length of lying period.

length of grey bar indicates standing period.



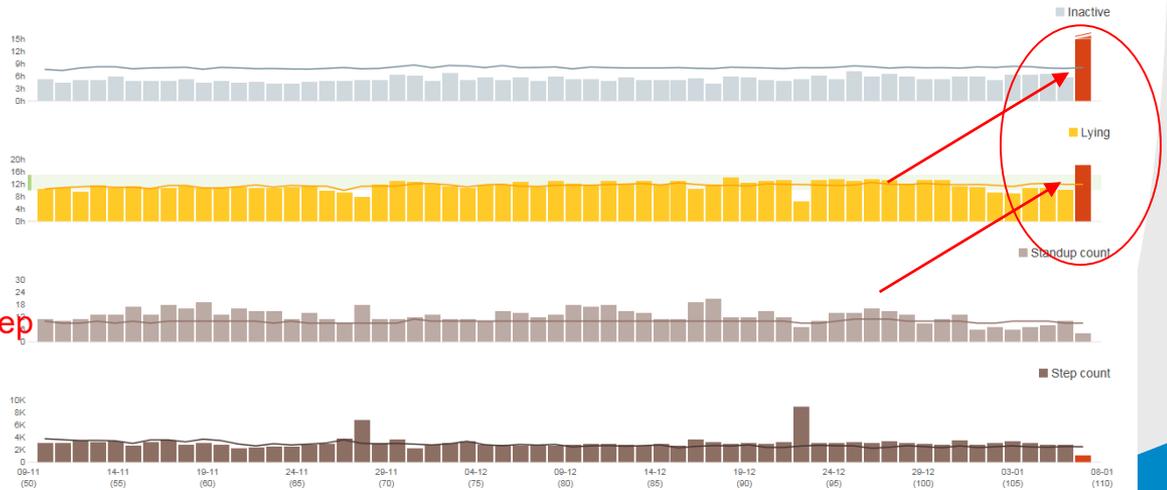
In this case the animal has been inactive for the last 18 hours

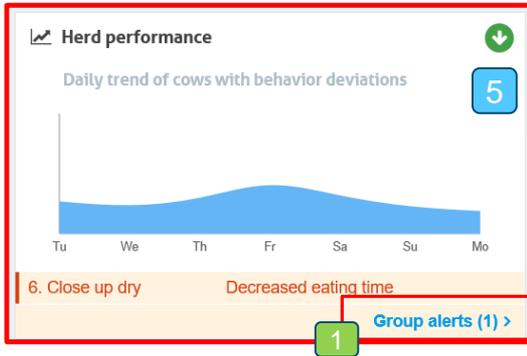
Last 2 Months Activity behaviour

Red column Cows activity indicates an Alarm

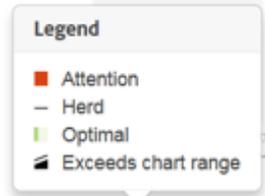
Line indicates the Cow Average

In this case the cows' Inactivity, Lying time & Step Count is outside her normal range

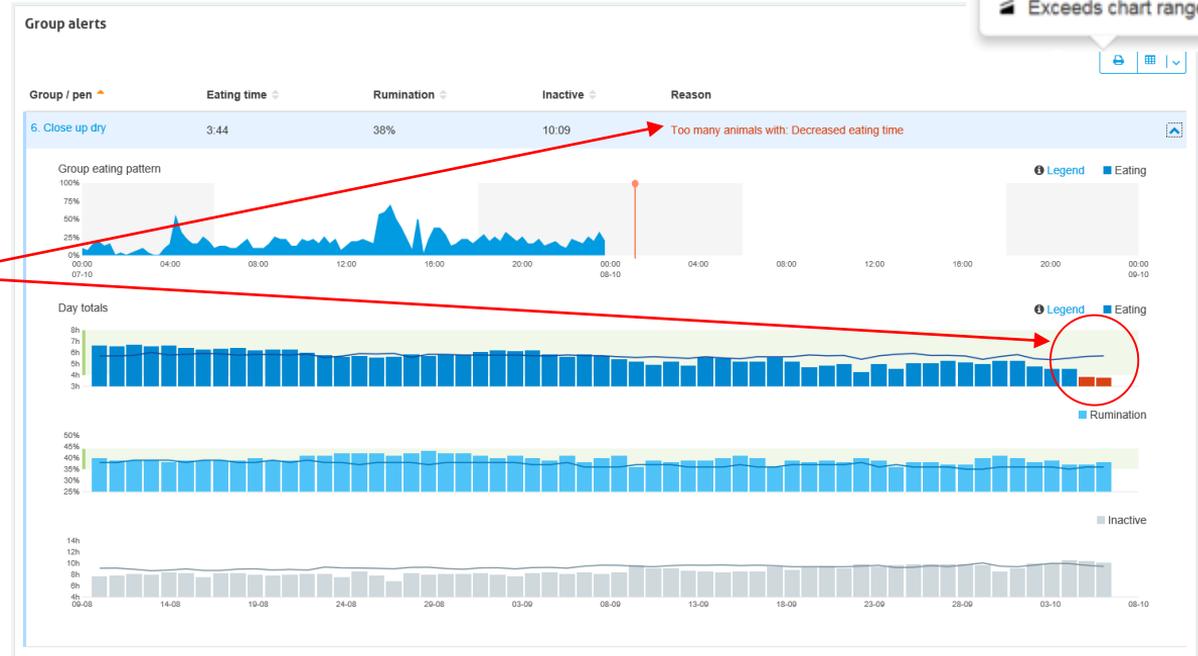


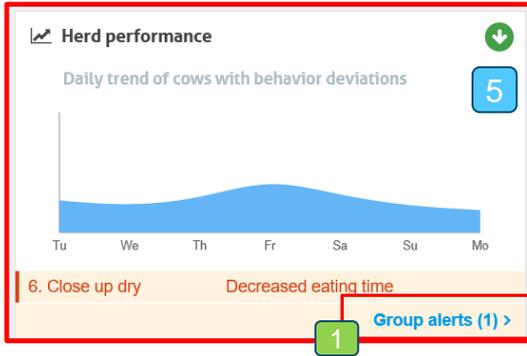


The graph shows how many animals of the complete herd (in %) show unusual behaviour. All animals with unusual behaviour are included, even when they do not have a health attention yet.



In this example there is also a GROUP alert which shows that eating time has reduced significantly – this may indicate lack of water/feed, issues with feed quality or diet make up





2

This graph shows % cows in the herd eating simultaneously. If after distributing the feed the % is low then depending on feeding regime it may indicate lack of feed or feeding space

You can also see if there's a gap between milking time and eating. In this example the cows are milked at 6am and fed ~9am. In these 3 hours from end of milking to feeding the cow could have consumed 1kg dry matter resulting in 2-2.5kg extra milk



Calendar events setup

1 Settings

2 Calendar general

3 General

Settings > Calendar general

General Atentions

Dry off	<input type="text" value="240"/>	Days since insemination
Gestation	<input type="text" value="280"/>	Days
Heat cycle	<input type="text" value="21"/>	Days
Transition period		
From	<input type="text" value="30"/>	Days before exp. calving
Until	<input type="text" value="50"/>	Days since calving
End voluntary waiting period		
Youngstock	<input type="text" value="410"/>	Days since birth
Lactating	<input type="text" value="50"/>	Days since calving
Automatic pregnant		
<input type="checkbox"/> Enabled	<input type="text" value="35"/>	Days since insemination

Settings > Calendar general

General Atentions

Attention	Enabled	Days	
No heat	<input checked="" type="checkbox"/>	<input type="text" value="30"/>	Days since calving
No insemination	<input checked="" type="checkbox"/>	<input type="text" value="60"/>	Days since calving
Heat	<input checked="" type="checkbox"/>	<input type="text" value="19"/>	Days since insemination
Pregnancy check	<input checked="" type="checkbox"/>	<input type="text" value="42"/>	Days since insemination
Dry off	<input checked="" type="checkbox"/>	<input type="text" value="2"/>	Days before exp. dry off
Calving	<input checked="" type="checkbox"/>	<input type="text" value="10"/>	Days before exp. calving

5 Submit

Change can be made to calendar details according to your requirements e.g. Dry – off period , in this case 40 Days

The sensitivity of the tags can be altered. For example heifers and cows could be adjusted separately

The screenshot shows the GEA web interface for 'Heat detection attentions'. On the left is a dark sidebar with a menu: Dashboard, Farm, Quick entry, Reports, Settings (highlighted with a red box and green circle 1), Maintenance, and Logout. The main content area has a breadcrumb 'Settings > Heat detection attentions' (green circle 2) and a 'Group / pen' dropdown menu (green circle 3) with a yellow box labeled 'Chose Group'. Below this are two rows for '1. Pen 1' and '2. Pen 2'. Each row has a 'Sensitivity (Neck)' slider (green circle 4) with a 'Default' label and a blue double-line icon. To the right of each slider is a 'Show attentions' field with a value of '36' and a unit 'h' (green circle 5). A blue arrow points from the text 'Change sensitivity as required. Do not change for the first month of use' to the slider. At the bottom right is a 'Submit' button (green circle 6) with a red border.

Heat detection attention settings

See and, if necessary, change the sensitivity of the system to receive more or less attentions

I want to receive more heat attentions

This means the system should be more sensitive. Move the slider to the right to do this. Note that making the system more sensitive also means the amount of false heat attentions could raise

I want to receive less heat attentions

This means the system should be less sensitive. Move the slider to the left to do this. Note that making the system less sensitive also means the amount of missed cows in heat could raise.

Health & Management setup

The sensitivity of the tags can be altered. For example heifers and cows can be adjusted separately

1 Settings

2 Settings > Attentions

Urgent attention Animals to check Group alerts

4 Chose which item to change sensitivity

3 Group / pen Chose Group

0. Farm Sensitivity 6 hours

1. Pen 1 Sensitivity 6 hours

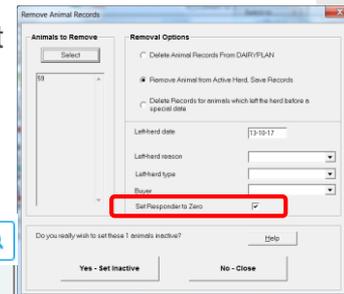
5 Change sensitivity as required. Do not change for the first month of use

6 Submit

Deleting Cows

When a Cow is deleted (or Culled) in Dairyplan you Must also delete them Manually from Cow Scout otherwise incorrect cow number/responder number could be linked between DP & CowScout

Tip If Cow is Culled In DairyPlan remember to remove Responder Number (DPSingle / Details / Identification / responder Number)



Enter cow to delete **1** 12345

Select 'Edit' **2**

Select 'Remove' **3** Remove Submit

Tags 6

- [Tag has wrong position \(3\) >](#)
- [Tag is attached back to front \(6\) >](#)
- [Not enough measurements \(1\) >](#)
- [No data in last 24 hours \(8\) >](#)

Any Cows with Tags that aren't operating correctly are shown here.

There are 3 options , tags with no data in last 24 hours , incorrectly mounted tags and ones with insufficient data

Smarttag not working properly

No data in last 24 hours (13) **Incorrect position (3)** Not enough measurements

Actions | v

Animal	Group / pen	Responder	Type	Date	Cause
777	1. Maenhir	984000714751396	Neck	08-03-2019 12:53	Tag is attached back to front
3570	1. Maenhir	984000714752147	Neck	29-09-2019 20:07	Tag is attached back to front
4204	1. Maenhir	984000714751425	Neck	04-10-2019 13:29	Tag is attached back to front
4244	1. Maenhir	984000714751999	Neck	25-07-2019 18:38	Tag is attached back to front
4271	1. Maenhir	984000714751405	Neck	28-09-2019 17:04	Tag is attached back to front
4799	1. Maenhir	984000714752090	Neck	29-09-2019 13:13	Tag is attached back to front

Smarttag not working properly

No data in last 24 hours (13) **Incorrect position (3)** Not enough measurements

Actions | v

Animal	Group / pen	Responder	Type	Date	Out of range	Not a smarttag	Edit Smarttag number	Remove Smarttag
2905	1. Maenhir	984000714751392	Neck	02-10-2019 16:50	<input type="checkbox"/>	<input type="checkbox"/>	/	/
3512	1. Maenhir	984000714751349	Neck	06-10-2019 21:27	<input type="checkbox"/>	<input type="checkbox"/>	/	/
4205	1. Maenhir	984000714770843	Neck	02-10-2019 16:50	<input type="checkbox"/>	<input type="checkbox"/>	/	/
4600	1. Maenhir	984000714752010	Neck	02-10-2019 16:50	<input type="checkbox"/>	<input type="checkbox"/>	/	/
5120	1. Maenhir	984000714751636	Neck	06-10-2019 21:27	<input type="checkbox"/>	<input type="checkbox"/>	/	/
5129	1. Maenhir	984000714752235	Neck	06-10-2019 21:27	<input type="checkbox"/>	<input type="checkbox"/>	/	/
5143	1. Maenhir	984000714752236	Neck	04-10-2019 16:51	<input type="checkbox"/>	<input type="checkbox"/>	/	/

Backup Data – manual backup

- A backup of the CowScout data can be made. The method shown is a Manual method
- Optionally an Automatic backup can be setup – please contact your Technical Support

The image shows a screenshot of the GEA web application interface for performing a manual backup. The interface includes a sidebar with navigation options: My tasks, Farm, Quick entry, Reports, Settings, Maintenance (highlighted with a red box and a green '1'), and Logout. The main content area is titled 'Maintenance' and contains several tabs: System (highlighted with a red box and a green '2'), License, Disclaimer, NPNet, Devices, V-packs, Monitor, and Behaviour components. Under the 'System' tab, there are options for Backup/Restore (highlighted with a red box and a green '3'), License, and Register. The 'Backup/Restore' section shows radio buttons for Backup (selected), Restore, Restore backup from USB drive, and Restore online backup. A 'Submit' button (highlighted with a red box and a green '4') is located below these options. A message indicates the last backup was on 29-06-2018 at 00:00 (0 days). Below the main interface, two browser notification messages are shown. The first message asks if the user wants to open or save a file named 'gea-ft_demogea_backup_2016-03-10-33.backup' from 'demogea.vpu-online.com'. The 'Save' button is highlighted with a red box and a green '5'. The second message states 'The gea-ft_demogea_backup_2016-03-10-35.backup download has completed.' and the 'X' button to close the notification is highlighted with a red box and a green '5'. To the right, a Windows File Explorer window is shown for reference, with the 'Downloads' folder highlighted by a red circle and a green '6'. The Explorer shows the 'Downloads' folder is selected, and it contains a file named 'gea-ft_demogea_backup_2016-03-10-33.backup'.

1 Maintenance

2 Backup/Restore

3 Backup

4 Submit

5 After Backup is completed a couple of messages will appear at the bottom of the screen . Click SAVE then click on X to close (depending on Web Browse used message may look different)

6 For reference:- Backups are located in the Download Folders on PC hard disk