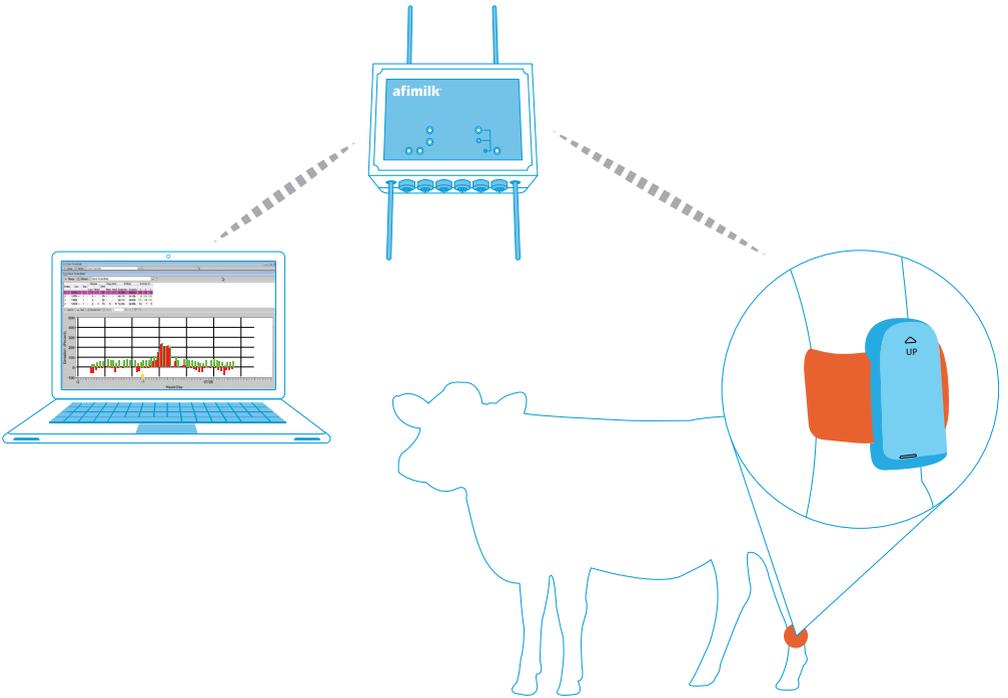


# AfiAct II

## Automatic Heat Detection System

### Operation Guide



**afimilk**<sup>®</sup>  
Vital know-how in every drop

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*Note: All specifications in this manual are subject to change without notice.*

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# 1 | Introduction

## 1.1 Safety

Read the AfiAct II Installation Manual before starting operating the system.

## 1.2 System Overview

AfiAct II is an estrus and fertility monitoring system that provides at a glance full picture of cows and heifers in estrus. The monitoring system provides thorough tracking of the fertility-related data for the dairy farm herd. It can be implemented either as a standalone system or as part of a comprehensive Afimilk system.

## 1.3 Prerequisite

- System is installed
- Animals are tagged
- Data relating to animals is available in the system

## 1.4 Applicable Documents

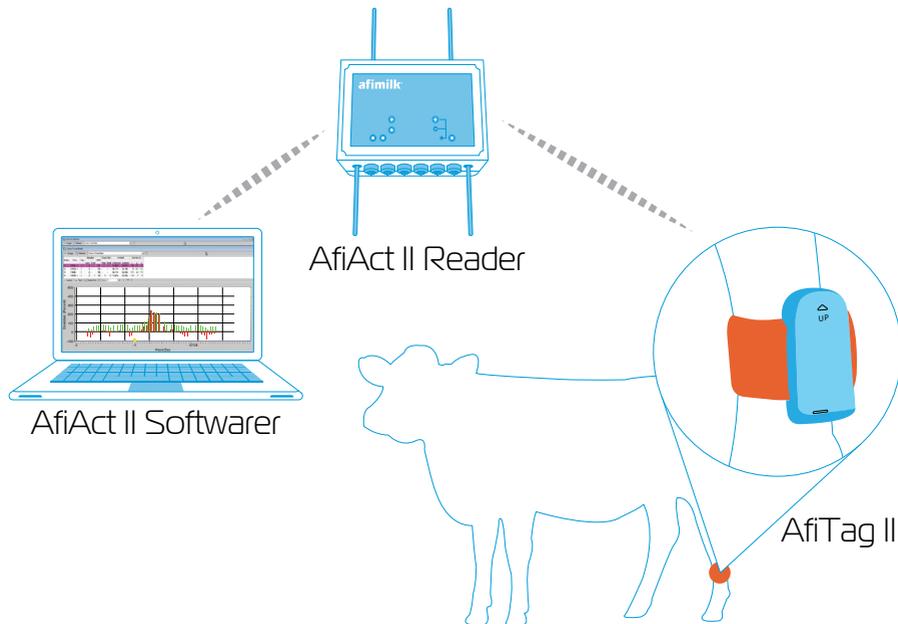
For more information, refer to the following documents:

- AfiAct II Installation Manual

## 1.5 System Components

The system consists of the following three components:

- **AfiTag II** – attached to the animal leg, transmits the animal ID, and the animal behavior information.
- **AfiAct II Reader** – receive information from the animal tags and transfers it to the computer running the AfiAct II software.
- **AfiAct II Software** – collects the animals data, analyze and manages the data.



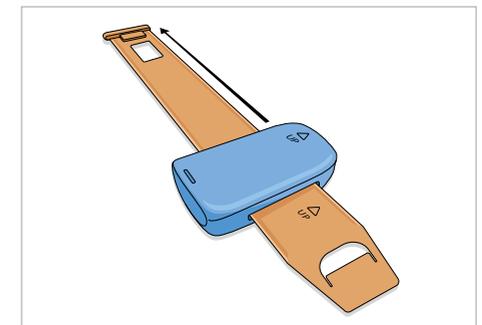
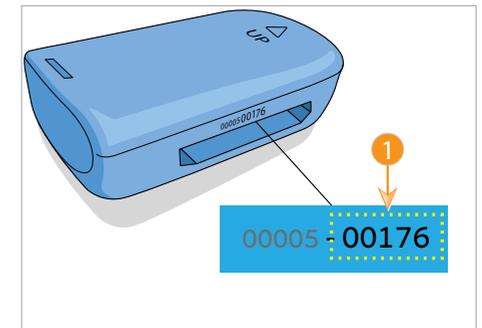
# 2 | Adding New Animal

This chapter reviews tasks associated with adding and maintaining animal data information.

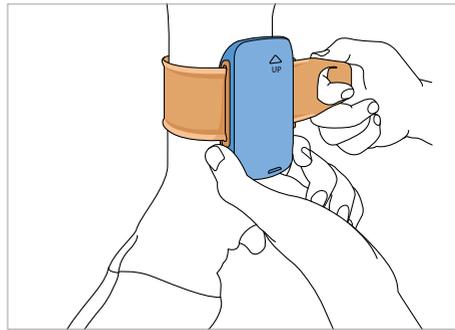
## 2.1 Attaching a Tag

To attach a tag to the animal leg:

1. Read the tag serial number. The tag serial number is the right group of numbers printed on the tag. This number is required during [Matching Tag to Animal](#) (see page 10).
2. Verify proper orientation of the **Up** arrow located on the tag and the strap.
3. Insert the strap into the tag eye and pull the tag all the way towards the end of the strap.

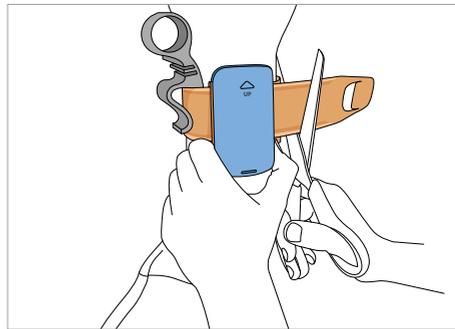


- Verify correct orientation of the **Up** arrow and wrap the strap (with the tag) around the animal leg above the hoof.



*Note: Place the tag about 20 cm (8") above the ground.*

- Insert the strap end into the tag eye. Do not tighten the strap.
- Place the spacer to ensure correct tightness and fasten the strap.
- Pull out the spacer.
- Cut the strap excess edge.

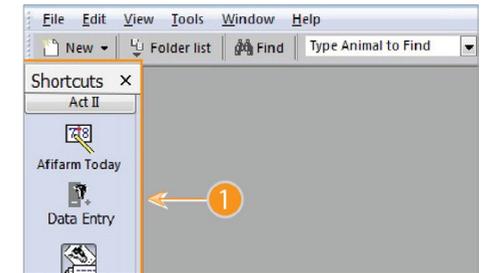


**CAUTION: TO AVOID INJURIES OR LEG DISEASE, THE ATTACHED TAG SHOULD BE LOOSE ENOUGH TO ROTATE FREELY AROUND THE ANIMAL LEG. THIS IS ESPECIALLY IMPORTANT WITH HEIFERS, AS THEIR LEGS ARE STILL GROWING.**

## 2.2

## 2.3 Starting the Application

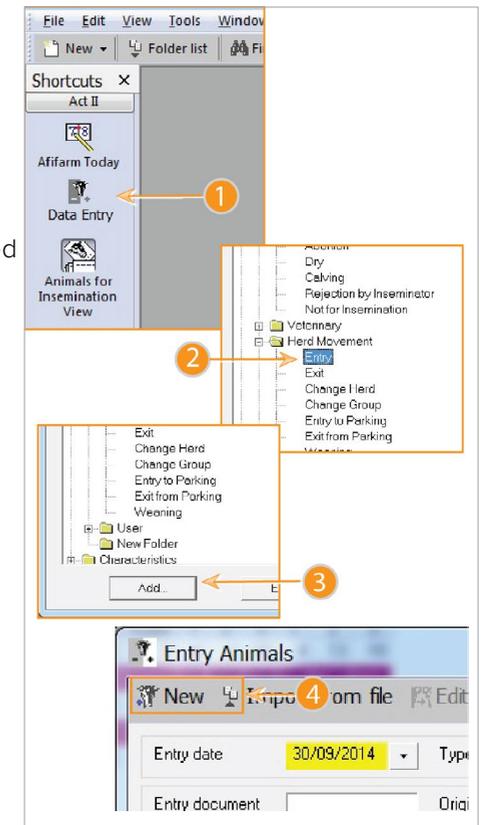
Double click the **ActII** icon located on the desktop.  
The Act II application opens with the Shortcuts tool bar pane (1) on the left side of the screen.



## 2.4 Adding Animal Data Card

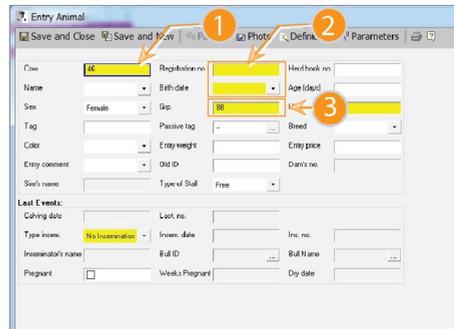
### 2.4.1 Starting Data Entry

- Click the **DATA ENTRY** button located on the left tool bar. The **Select Subject** window opens.
- Select **HERD MOVEMENT > ENTRY** from the option pane.
- Click the **ADD** button. The **Entry Animal** window opens.
- Click the **NEW** button.



### 2.4.2 Editing Animal Card

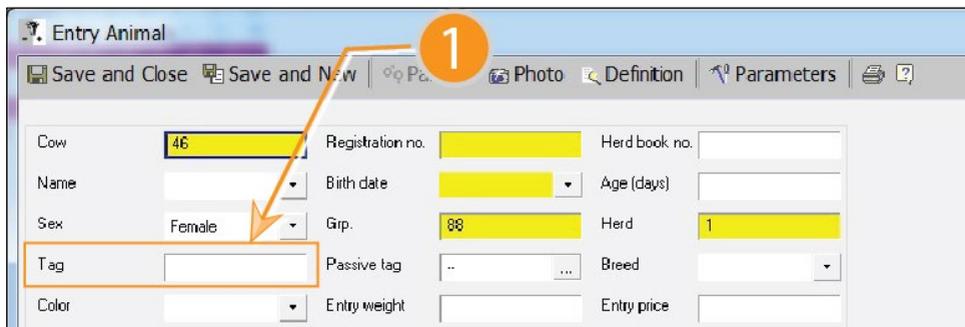
1. Type the animal ID in the **Cow** (1) text box.
2. Type the cow government issued number in the **Registration** (2) text box and the cow date of birth.
3. Define the cow **Herd** (3).



### 2.5 Matching Tag to Animal

To match between the tag attached to the animal leg and the animal card:

1. Type the tag serial number in the **Tag** text box (1). The typed number must match the serial number of the tag attached to the associated animal, see "Attaching a Tag" on page 7.
2. Click the **SAVE** button.
3. Click the **SAVE AND CLOSE** button or the **SAVE AND NEW** button.



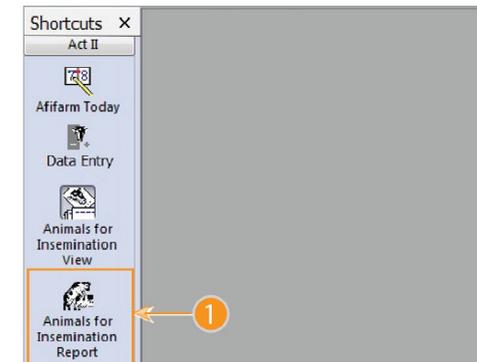
# 3 | Preparing for insemination

This chapter reviews the tasks associated with preparing a list of animals for the next expected insemination process.

## 3.1 Viewing List of Animals in Heat

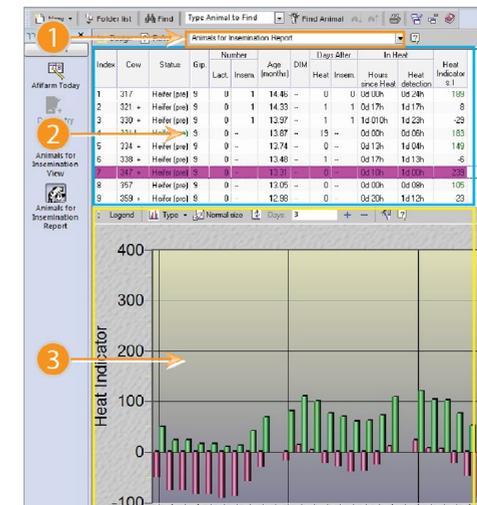
Click the **ANIMALS FOR INSEMINATION REPORT** button located on the left toolbar.

The **Animals for Insemination Report** screen appears displaying a list of animals in heat or close to heat. These animals are available for insemination as selected.



The screen includes:

- **Report selection option box (1)** – enables selecting additional reports.
- **Prospected Animals Table (2)** – see page 12.
- **Selected Animal Graph (3)** – see page 13.



### 3.1.1 Prospected Animals Table

The table lists all the animals that **are in heat or close to heat** and includes the following columns:

- **Cow** – indicates the animal IDs.  
Ignore the plus sign appears near some of the animals.
- **Status** – the animal status as defined on the animal data sheet (see "Adding Animal Data Card" on page 9).
- **Grp.** – the group to which the animal belongs (see "Adding Animal Data Card" on page 9).
- **Number (Lact. /Insem.)** – number of lactations/inseminations of the animal.
- **Age** – animal age in months.
- **DIM** – days in milk.
- **Days After / Heat** – days passed since last heat.
- **Days After Insem.** – days passed since the cow last insemination.
- **In Heat /Hours since heat** – hours passed since heat has finished.
- **In Heat /Heat detection)** – time passed since cow detected in heat.
- **Heat Indicator** – indicates the level of heat.

Index	Cow	Status	Grp.	Number		Age (months)	DIM	Days After		In Heat		Heat Indicator s.1
				Lact.	Insem.			Heat	Insem.	Hours since Heat	Heat detection	
1	317	Heifer (pre)	9	0	1	14.46	--	0	0	0d 00h	0d 24h	189
2	321 +	Heifer (pre)	9	0	1	14.33	--	1	1	0d 17h	1d 18h	8
3	330 +	Heifer (pre)	9	0	1	13.97	--	1	1	1d 010h	1d 23h	-29
4	331 !	Heifer (pre)	9	0	--	13.87	--	19	--	0d 00h	0d 06h	183
5	334 +	Heifer (pre)	9	0	--	13.74	--	0	--	0d 13h	1d 04h	149
6	338 +	Heifer (pre)	9	0	--	13.48	--	1	--	0d 17h	1d 13h	-6
7	347 +	Heifer (pre)	9	0	--	13.31	--	0	--	0d 10h	1d 00h	239
8	357	Heifer (pre)	9	0	--	13.05	--	0	--	0d 00h	0d 08h	105

### 3.1.2 Selected Animal Graph

The graph presents the selected animal heat parameters from the past few days and includes two main graphs:

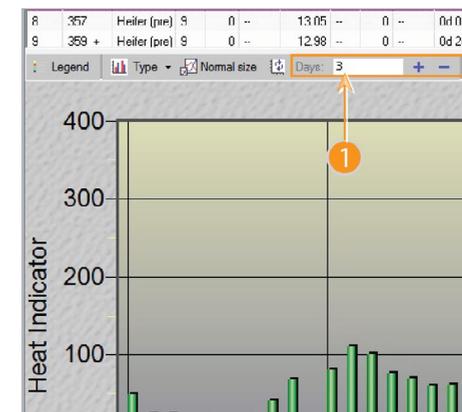
- **Activity** – green graph indicates the animal number of steps per period of time.
- **Heat Indicator** – red graph indicates a calculated value representing the level of heat.



### 3.1.3 Graph Options

The upper tool bar includes the graph time scale (1) control (in days). Type the relevant time scale. The graph changes according to the time scale selection:

- **1 to 3 days** – the graph shows a bar per each hour.
- **4 to 10 days** – the graph shows a bar per each session.
- **1 to 50 days** – the graph shows a bar per each day.



## 3.2 Reporting Insemination Event

After animals are inseminated, perform the following steps to add an insemination event in the animals file:

1. Select all the inseminated animals on the list.



*Tip: Use the CTRL or SHIFT key to select multiple animals.*

2. Right-click the selected animals and select **DATA ENTRY** from the context menu. The **Select Subject** window opens.
3. Select **INSEMINATION** from the **Select Subject** option list. The **Insemination** data entry window opens.

The selected animals are marked as inseminated on the current date.

4. Click the **SAVE** button. The insemination event is added to the file of the selected animals.



*Tip: additional event can be reported to the file of an animal using the same method.*

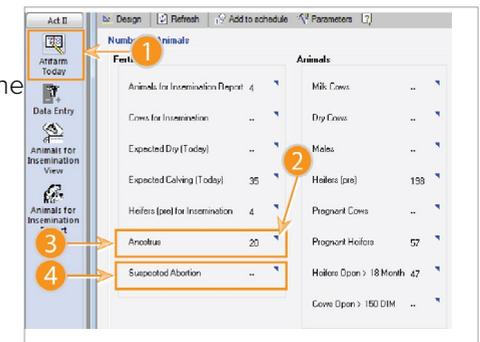
# 4 | Control Routines

This chapter reviews tasks associated with routine review of the animals in the breed, to help take decisions regarding the animal's status.

## 4.1 Reviewing the Breed

To review the status of all the animals in the breed:

1. Click the **AFIFARM TODAY** icon (1) located on the left tool bar. The **AfiFarm Today** is your dashboard to view important information of the breed.
2. Click the blue triangular button (2) near the **Anestrus** (3) report. List of cows that fails to display heat symptoms is displayed.
3. Repeat steps 1-2 above to view the **Suspected Abortion** report (4). The report displays a list of cows that were PD+ and shows heat behavior.



*Tip: It is recommended to review the **Anestrus** report and the **Suspected Abortion** report on a daily basis.*

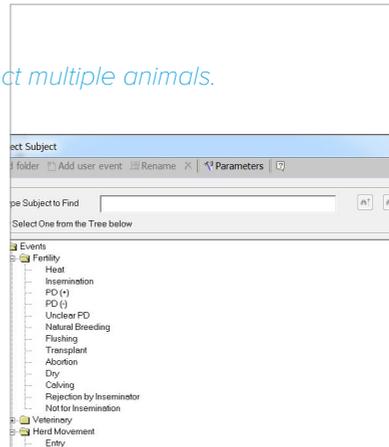
## 4.2 Reporting Pregnancy Diagnostic Results

1. Select the relevant animals on the list.



*Tip: Use the CTRL or SHIFT key to select multiple animals.*

Right-click the selected animals and select **DATA ENTRY** from the context menu. The **Select Subject** window opens.



2. Select either of the following options from the option list:

3. **PD (+)** - when pregnancy diagnostic is positive.

4. **PD (-)** - when pregnancy diagnostic is negative.

The PD result is marked in the selected animals file.

5. Click the **SAVE** button. PD event is added to the file of the selected animals on the current date.

## 4.3 Marking Animals in Heat

To mark a heat event in the animal's file:

1. Select all the animals in heat on the list.



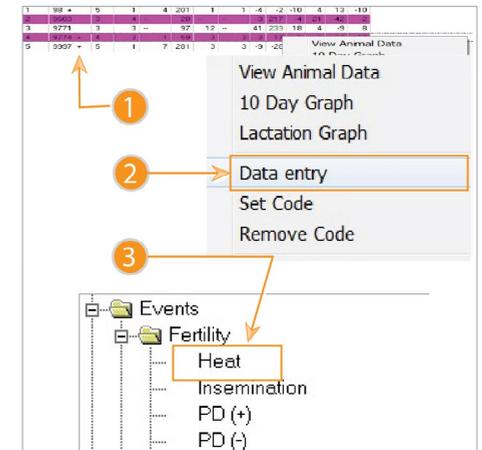
*Tip: Use the CTRL or SHIFT key to select multiple animals.*

2. Right-click the selected animals and select **DATA ENTRY** from the context menu.

3. Select **Heat** from the **SELECT SUBJECT** option list. The **Heat** data entry window opens.

The selected animals are marked as in heat on the current date. This screen is used for modifying and adding additional information regarding the heat event of the selected animals.

4. Click the **SAVE** button (a). Heat event is added to the file of the selected animals.





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