

Sow Manager

Code No. 99-97-2836 GB

Edition: 07/2018 v 3.2

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System description Page 1

1 System description



Figure 1-1: Selected management area – Sow Manager

The BigFarmNet Sow Manager is a database you can use to manage your entire sow herd. You will create a comprehensive data collection to retrieve data for multiple purposes. The BigFarmNet Sow Manager provides the following functions:

- create and edit master data
- record sows using the sow numbers and transponder numbers specific to each farm (for CallMaticpro and Call-Innpro)
- · define and assign feed curves
- adjust feeding individually for each animal
- assign states: pregnant, inseminated, empty, lactating
- create lists depending on filter settings
- filter groups or individual animals
- filter according to different characteristics, such as
 - state, identity or eating behaviour
- filter according to different purposes, such as
 - monitoring the feed intake
 - assigning selection tasks (separation or colour marking)
- print created lists

The Manager PC with the BigFarmNet software and the control computers of the respective feeding systems continuously exchange data. The Manager PC transmits all stored data regarding feeding and selection to the control computer. The control computers provide feedback to the Manager PC, e.g. by returning information on the actual state (e.g. number of times a sow requested feed). The Manager PC and all control computers therefore have the same information.

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1.1 System limits

30,000	Sows
256	Feeding stations
50	Feed curves
1,000	Ingredients
50	Recipes



2 Feed curve

Defining feed curves is one of the basic settings configured during initial operation, in addition to moving the animals in. To meet the feed demand of the animals, use a feed curve to define which feed components are dispensed at which ratio and during which time periods. Daily rations are adapted automatically as required by the individual growth states or production cycles. During production, the actual feeding state is registered and checked based on the set feed curve.

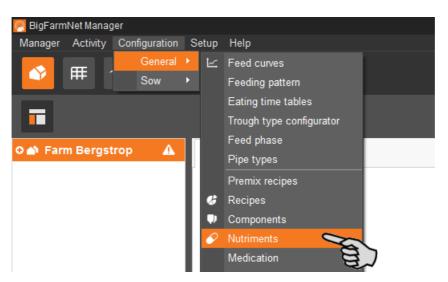


The feed curve must always be defined before the animals are moved in as it is mandatory for moving in. Before you define a feed curve, you need to determine feed components as well as nutrients, pre-mix recipes and recipes as required or depending on the type of feeding.

2.1 Creating nutrients

Nutrients include carbohydrates, fats and proteins, but also vitamins and minerals. The nutrients you create determine the nutritional value of the components. When you create a new component, all nutrients you created before will be listed. You can then enter the corresponding values per component, see chapter 2.2 "Creating components".

1. In the menu "Configuration" > "General", click on "Nutrients".



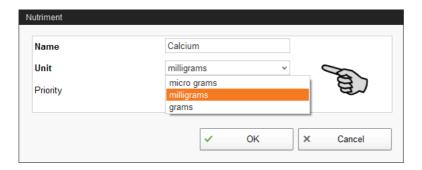
In the dialog window "Nutrients", click on "Add".

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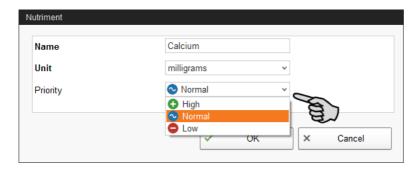
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Enter a name for the nutrient and determine the unit.



4. As an option, you can also determine a priority for each nutrient. The nutrients can then be listed in ascending or descending order according to priority later on.

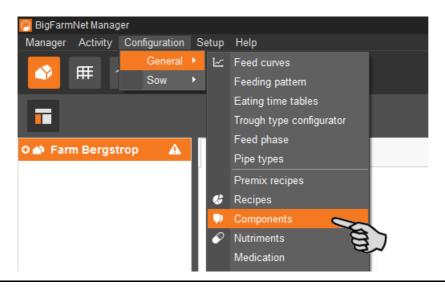


5. Accept these inputs by clicking on "OK".

2.2 Creating components

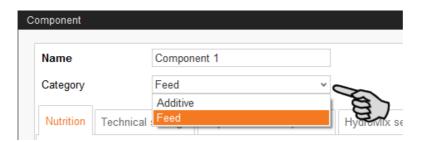
Use the "Component" dialog to create different components and to add any corresponding information. Components are classified into the categories "Feed" and "Additive". Components in the category "Feed" can be the individual ingredient of a feed mix or a complete compound feed.

1. In the menu "Configuration" > "General", click on "Components".

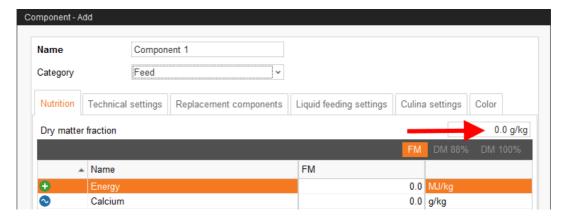




- 2. In the dialog window "Components", click on "Add".
- 3. Enter a name for the component and select a category.

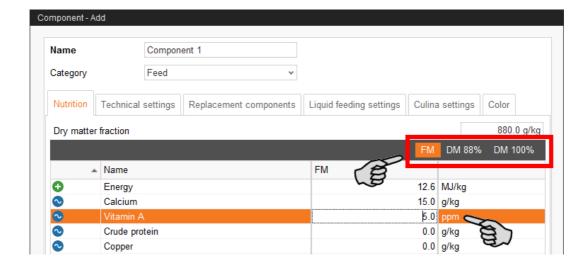


4. Under the first tab "Nutrition", enter the dry matter fraction of the component.



- 5. Only after entering the dry matter fraction can you choose one of the following quantities:
 - FM = per fresh matter
 - DM 88 % = in relation to 88 % dry matter
 - DM 100 % = in relation to 100 % dry matter

If required, enter the energy content and the individual nutrient fractions in the table below (see 2.1 "Creating nutrients").

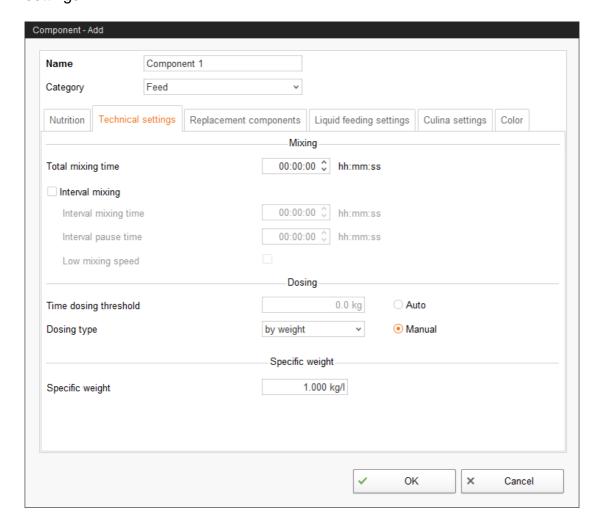


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6. Define parameters for feed preparation in the mixing tank under the tab "Technical settings".



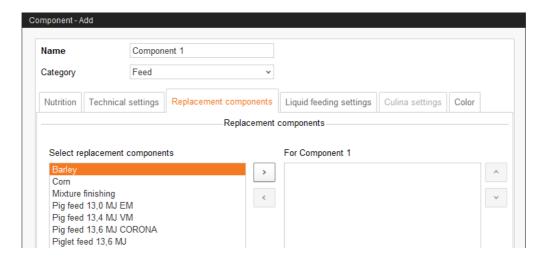
- Under **Total mixing time**, determine a time period for mixing the component.
 If several components are mixed together, the mixing time will correspond to that of the component with the longest mixing time.
- If a component needs to macerate first, click on **Interval mixing** and enter the required value.
- Define settings for dosing of the component:
 - > **Auto:** Define a weight as threshold value. If the weight of the dispensed component is below the threshold, dosing is automatically time-controlled. If the weight is above the threshold, dosing is automatically weight-controlled.

OR

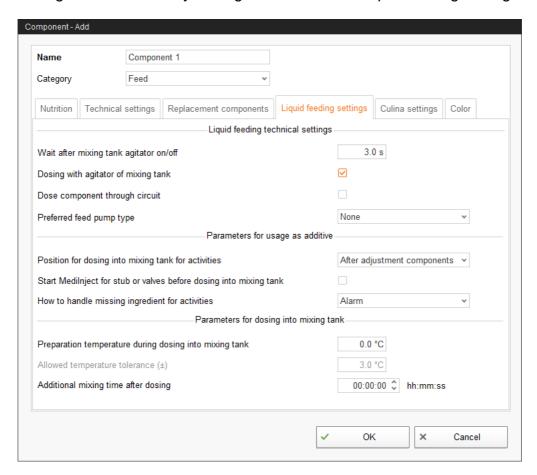
- > **Manual:** Define whether components should be generally dispensed "by weight" or "by time".
- If the component is dissolved in water, change the presetting under Specific weight, if necessary.



7. Select one or more replacement components from the tab "Replacement components" in case the component you entered is used up before a new order arrives. If you select more than one replacement, you may sort them in descending order according to priority.



8. Configure the necessary settings under the tab "Liquid feeding settings".

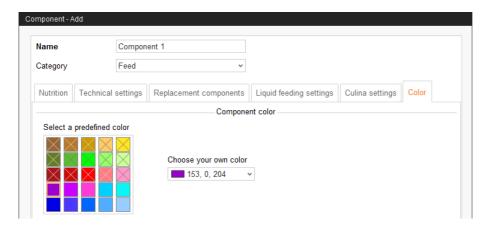


 Dose component through circuit refers to water or whey to be dispensed via the circuit with a specific pump (Preferred feed pump type). Page 8 Feed curve

 The settings in the bottom part, Parameters for dosing into mixing tank, must be configured for the CulinaMixpro application:

The temperature values that must be defined are target values. The parameter **Additional mixing time after dosing** ensures that the component can dissolve at the stated temperature.

9. Select a color for the component under the tab "Color". This makes recognizing components in the feed curve easier and lets you distinguish specific components from others during evaluation.

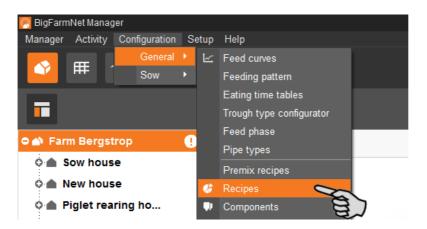


10. Click on "OK" after you have configured all settings.

2.3 Creating a recipe

Use the "Reciple dialog" to compile a recipe for a feed mix based on the components you created (see 2.2 "Creating components"). A recipe is used like a component when you create a feed curve.

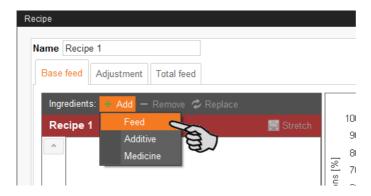
1. In the menu "Configuration" > "General", click on "Recipes".



- 2. In the dialog window "Recipes", click on "Add".
- Enter a name for the recipe.

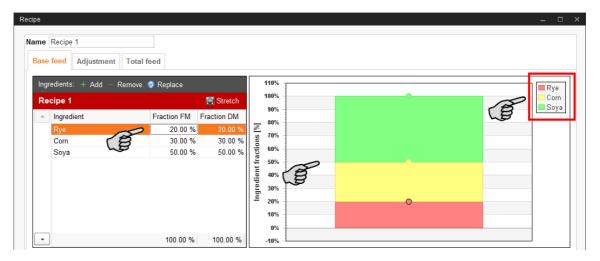


4. Under the first tab "Base feed", add the required ingredients "Feed", "Additive" or "Medicine".



5. Select whether you want to enter fresh matter (FM) or dry matter (DM) and define the respective fractions of the ingredients.

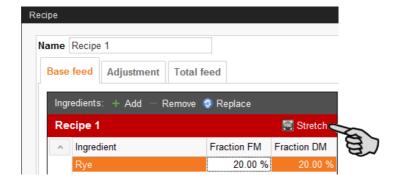
The fractions must sum up to 100 % in total. A diagram shows the distribution.



OR:

The ingredients can be distributed automatically:

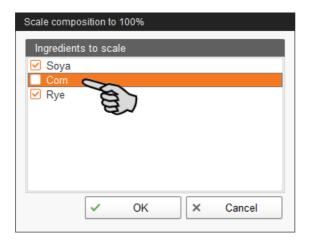
a) Click on "Stretch":



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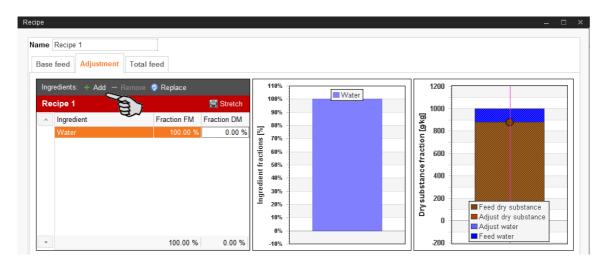
b) Deactivate ingredients whose fixed fraction should **not** be changed during automatic distribution.

Automatic distribution uses 100 % as basis. If one ingredient is deactivated with a fraction of e.g. 30 %, the other ingredients are evenly distributed over the remaining 70 %.



- c) Click on "OK" to distribute the ingredients automatically.
- 6. Under the tab "Adjustment", you may add ingredients of which proportions are used in addition to water.

The ingredient fractions and the dry matter fraction are shown in a diagram.



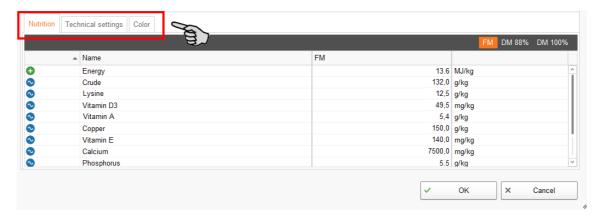
- 7. You may change the dry matter fraction directly in the diagram:
 - a) Click on the dot in the diagram and hold the mouse button.
 - b) Move the dot up or down to increase or reduce the dry matter fraction.
- 8. Click on the tab "Total feed" for a graphic overview of your feed mix.

 Settings cannot be changed here.



9. In the lower part of the "Recipe" window, additional tabs allow for the following settings:

- Nutrition: Select between DM, FM 88 % and DM 100 %. The energy content and the nutrient fractions are then shown including the corresponding values.
- Technical settings: Option to change the specific weight.
- Color: Select a color for the recipe you created. This makes recognizing components in the feed curve easier and lets you distinguish specific components from others during evaluation.



10. Click on "OK" after you have configured all settings.

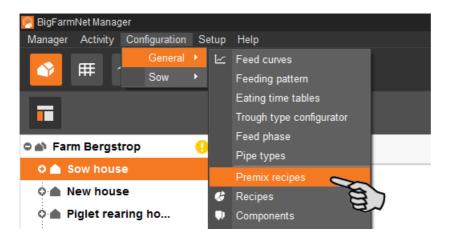
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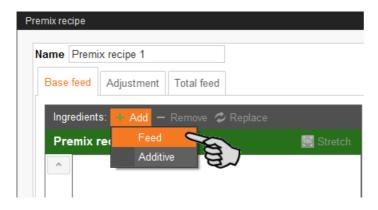
2.4 Creating a premix recipe

In a premix recipe, a mixture to be created in the premixer is defined. A premix recipe consists of created components from the "Feed" and/or the "Additive" (vitamins, minerals) category. In case of very small amounts, the main mixer cannot weigh the components, so a premixer for very small amounts is used. A premix recipe is used like a component for feeding.

1. In the menu "Configuration" > "General", click on "Premix recipes".



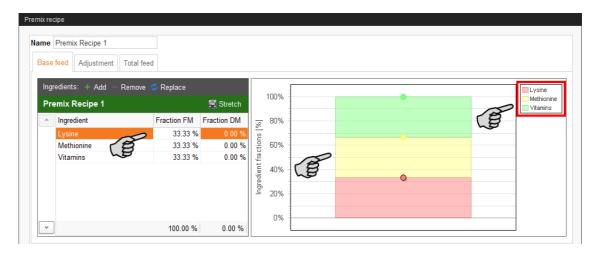
- 2. In the dialog window "Premix recipe", click on "Add".
- 3. Enter a name for the premix recipe.
- 4. Under the first tab "Base feed", add the required ingredients "Feed" or "Additive".



5. Select whether you want to enter fresh matter (FM) or dry matter (DM) and define the respective fractions of the ingredients.

The fractions must sum up to 100 % in total. A diagram shows the distribution.

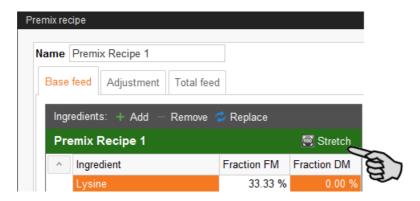




OR:

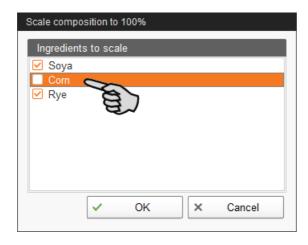
The ingredients can be distributed automatically:

a) Click on "Stretch":



b) Deactivate ingredients whose fixed fraction should **not** be changed during automatic distribution.

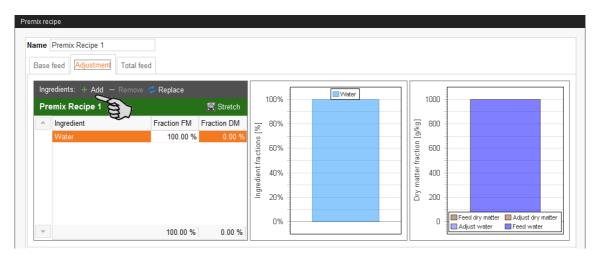
Automatic distribution uses 100 % as basis. If one ingredient is deactivated with a fraction of e.g. 30 %, the other ingredients are evenly distributed over the remaining 70 %.



c) Click on "OK" to distribute the ingredients automatically.

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- 6. You may change the dry matter fraction directly in the diagram:
 - a) Click on the dot in the diagram and hold the mouse button.
 - b) Move the dot up or down to increase or reduce the dry matter fraction.

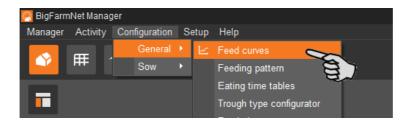


- 7. Click on the tab "Total feed" for a graphic overview of your mixture.
 - Settings cannot be changed here.
- 8. Configure additional settings in the lower part of the window under the corresponding tabs.
 - As a premix recipe is used like a component, the settings options are identical, see chapter 2.2 "Creating components".
- 9. Click on "OK" after you have configured all settings.



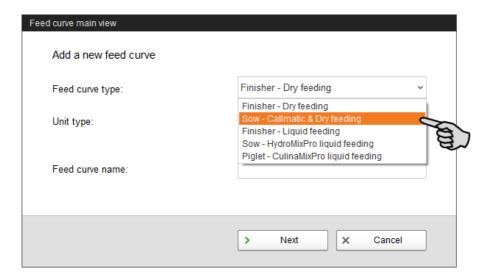
2.5 Defining a feed curve for dry feed

1. In the menu "Configuration" > "General", click on "Feed curves".

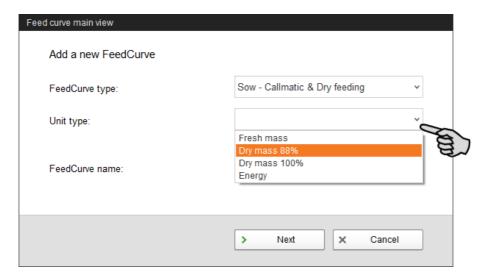


In the next dialog window, click on "Add".
 You can edit, copy or remove created feed curves later on, if necessary.

3. In the next window, select the correct feed curve type.



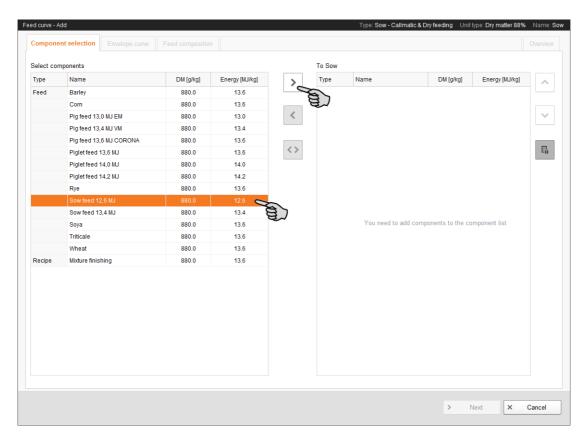
4. Select the unit type and enter a name for the feed curve.



5. Click on "Next".

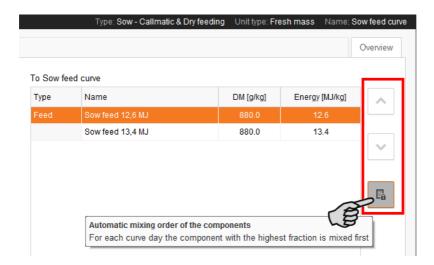
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6. From the component list on the left, select the components for your feed curve by either double clicking on the component in the list or by clicking on the arrow button. The component list includes all feed components, additives, recipes and premix recipes you have created.



7. If necessary, define an order for the components.

By default, the function "Automatic mixing order of the components" is active (button highlighted in gray). This means that the component with the largest fraction always enters the mixing tank first. Click on the button to deactivate the function and to define a different order using the arrows.



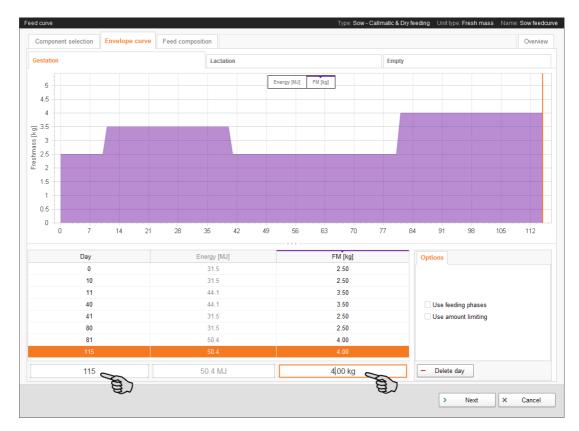


- 8. Click on "Next".
- Under the tab "Envelope curve", define feed curves for the different states of a sow according to a pre-set order. Possible sow states are:
 - Gestation
 - Lactation
 - Empty



- a) Click on the "Gestation" tab.
- b) Enter the curve day and the corresponding feed amount into the input fields below the table.
- c) Press the Enter key to confirm the input.
- d) Enter further curve days.

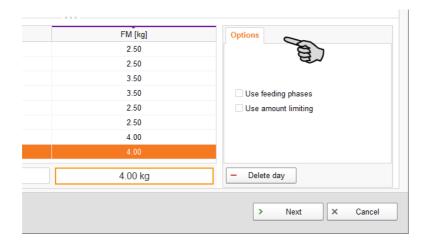
The curve in the diagram will take shape the more curve days you enter.



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10. In the pane "Options" in the bottom right corner, you may activate the following functions by checking the corresponding box:

- Use feeding phases: Feeding phases can be assigned to the individual curve days. Feeding phases allow for an automatic switch to a higher or lower number of feeding times.
 - Before you can use this function, you need to assign feeding phases to the feeding times in the Task Manager on Task Manager of the general master data, see chapter 5 "Master data".
- Use limiting amount: Use this function to limit the maximum feed amount to prevent the animals from eating too much in case of sensor feeding.



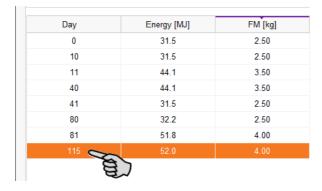
- 11. Click on "Next" after you have completed all inputs for the state "Gestation".
- 12. Define the envelope curves for the remaining states "Lactation" and "Empty" as described above for the "Gestation" state.
- 13. Define the fractions of the feed components for the respective curve period under the "Feed composition" tab and for the different states.



- a) Click on the "Gestation" tab.
- b) Click on the desired curve day in the list.

You can also edit multiple curve days at the same time: Press and hold the Ctrl key and click on all days to which you want to assign the same fraction.



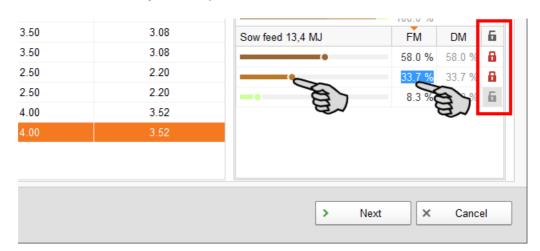


c) In the pane "Fixed ingredient fraction", enter the value into the field next to the colored line for the component.

OR:

Click on the dot of the component's colored line and hold the mouse button. Move the mouse to the left or to the right to increase or reduce the fraction.

The fractions always add up to 100 %.

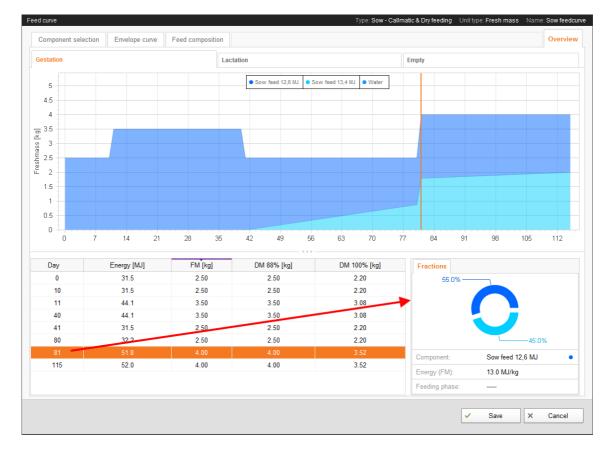


If you use more than two components, a padlock icon is displayed next to each value. Use this padlock icon to lock a defined value. Such locked values will not change when defining further component fractions.

- 14. Click on "Next" after you have completed all inputs for the state "Gestation".
- 15. Define the feed composition for the remaining states "Lactation" and "Empty" as described above for the state "Gestation".

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This tab shows a summary of the feed curve you created. Use the overview to verify your settings. It is, however, not possible to make any changes here.

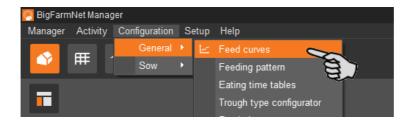
Click on the individual curve days to see the corresponding information in the "Fractions" window, and the nutritional values under the "Nutrition" tab.

17. Click on "Save" to save all settings.



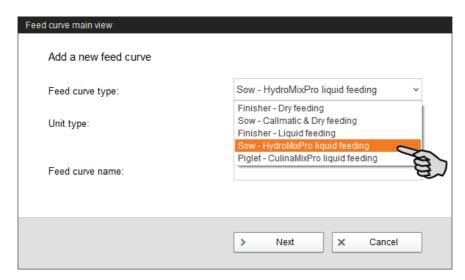
2.6 Defining a feed curve for liquid feed

1. In the menu "Configuration" > "General", click on "Feed curves".

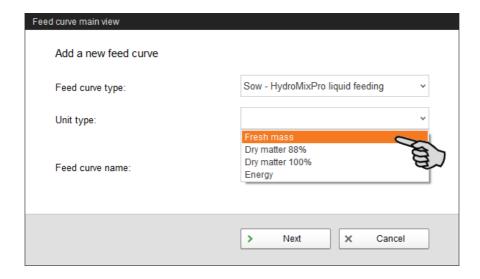


In the next dialog window, click on "Add".
 You can edit, copy or remove created feed curves later on, if necessary.

3. In the next window, select the correct feed curve type.



4. Select the unit type and enter a name for the feed curve.

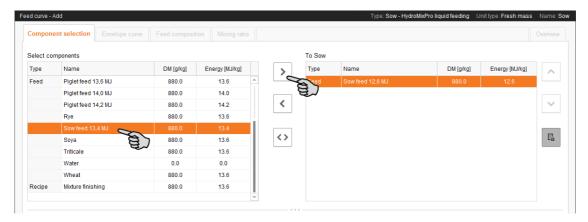


5. Click on "Next".

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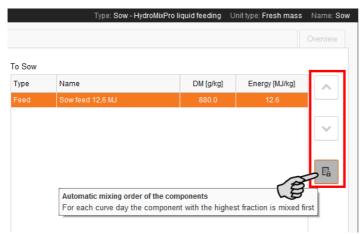
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6. From the component list in the upper left-hand part of the window, select the dry components for your feed curve either by double-clicking on the component in the list or by clicking on the arrow pointing to the right.

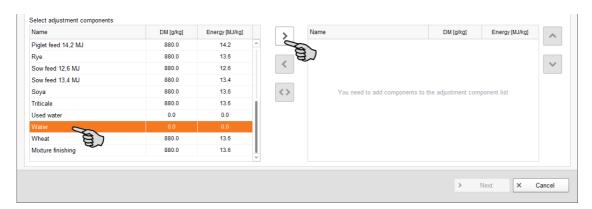


7. If necessary, define an order for the components.

By default, the function "Automatic mixing order of the components" is active (button highlighted in gray). This means that the component with the largest fraction always enters the mixing tank first. Click on the button to deactivate the function and to define a different order using the arrows.



8. From the component list in the lower left-hand part of the window, select the adjustment components either by double-clicking on the component in the list or by clicking on the arrow pointing to the right.





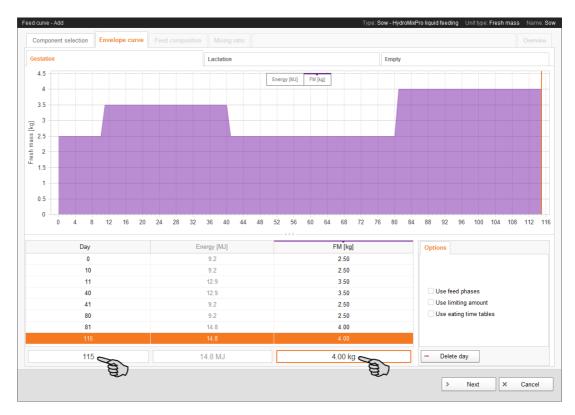
9. You may also define an order using the arrows pointing upwards and downwards, if necessary.

- 10. Click on "Next".
- 11. Under the tab "Envelope curve", define feed curves for the different states of a sow according to a pre-set order. Possible sow states are:
 - Gestation
 - Lactation
 - Empty



- a) Click on the "Gestation" tab.
- b) Enter the curve day and the corresponding feed amount into the input fields below the table.
- c) Press the Enter key to confirm the input.
- d) Enter further curve days.

The curve in the diagram will take shape the more curve days you enter.



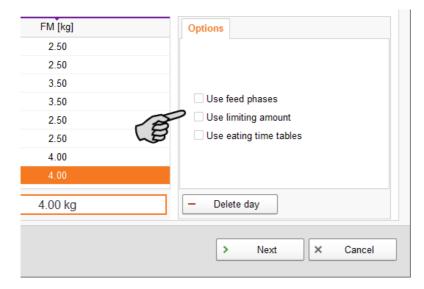
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Page 24 Feed curve

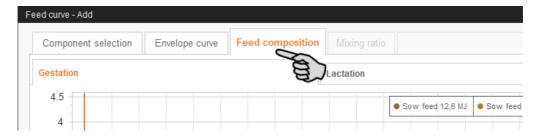
12. In the pane "Options" in the bottom right corner, you may activate the following functions by checking the corresponding box:

- Use feeding phases: Feeding phases can be assigned to the individual curve days. Feeding phases allow for an automatic switch to a higher or lower number of feeding times.
 - Before you can use this function, you need to assign feeding phases to the feeding times in the Task Manager on . Feeding phases are part of the general master data, see chapter 5 "Master data".
- Use limiting amount: Use this function to limit the maximum feed amount to prevent the animals from eating too much in case of sensor feeding.
- Use eating time tables: Eating time tables are used for sensor feeding (ad libitum). The sensor measures whether the animals have emptied the trough or not. The sensor also measures how fast the trough was emptied and sends this information to BigFarmNet Manager. Using the eating time table, you can then adjust the feed according to the corresponding eating times.



- 13. Click on "Next" after you have completed all inputs for the state "Gestation".
- 14. Define the envelope curves for the remaining states "Lactation" and "Empty" as described above for the "Gestation" state.
- 15. Define the fractions of the feed components for the respective curve period under the "Feed composition" tab and for the different states.





- a) Click on the "Gestation" tab.
- b) Click on the desired curve day in the list.

You can also edit multiple curve days at the same time: Press and hold the Ctrl key and click on all days to which you want to assign the same fraction.

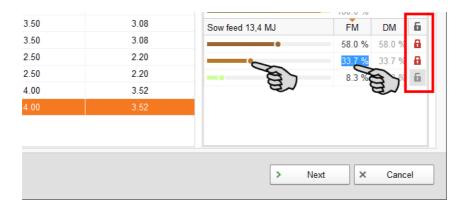
Day	Energy [MJ]	FM [kg]
0	31.5	2.50
10	31.5	2.50
11	44.1	3.50
40	44.1	3.50
41	31.5	2.50
80	32.2	2.50
81	51.8	4.00
115	52.0	4.00

c) In the pane "Fixed ingredient fraction", enter the value into the field next to the colored line for the component.

OR:

Click on the dot of the component's colored line and hold the mouse button. Move the mouse to the left or to the right to increase or reduce the fraction.

The fractions always add up to 100 %.



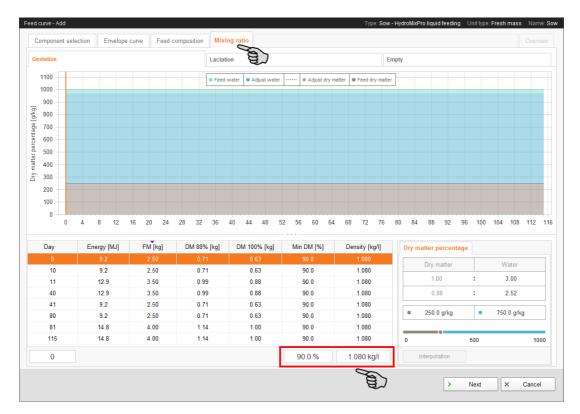
If you use more than two components, a padlock icon is displayed next to each value. Use this padlock icon to lock a defined value. Such locked values will not change when defining further component fractions.

16. Click on "Next" after you have completed all inputs for the state "Gestation".

Page 26 Feed curve

17. Define the feed composition for the remaining states "Lactation" and "Empty" as described above for the state "Gestation".

- 18. Click on "Next" after you have completed all inputs.
- 19. Under the tab "Mixing ratio", define the dry matter (feed) and water percentages for the corresponding curve period.
 - a) Click on the desired curve day in the table.
 You can also edit multiple curve days at the same time: Press and hold down the Ctrl key. Click on all curve days that should have the same percentage.
 - b) Enter the minimum dry matter percentage (Min DM) into the input field below the respective column.
 - c) Enter the density into the input field below the respective column, if necessary.

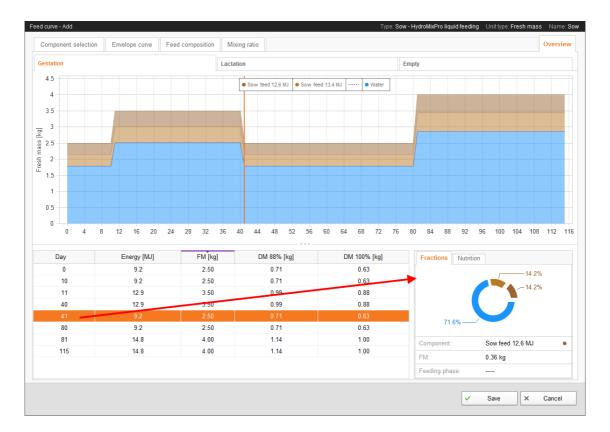


d) In the pane "Dry matter percentage", enter either the value for dry matter or for water.

The other value and the ratio are calculated automatically.

20. Click on "Next" to move to the "Overview" tab.





This tab shows a summary of the feed curve you created. Use the overview to verify your settings. It is, however, not possible to make any changes here.

Click on the individual curve days to see the corresponding information in the "Fractions" window, and the nutritional values under the "Nutrition" tab.

21. Click on "Save" to save all settings.

Page 28 Moving animals

3 Moving animals

Locations with and without animals are marked as follows in the farm structure:



- Dark gray sow icon:
 - There are currently animals in the area / section / pen.
- Light gray sow icon:
 - Animals were in the section / area / pen and have been moved. The area / section / pen is currently empty.
- No sow icon:
 - The area / section / pen is empty. No animals have been in the area / section / pen before.

3.1 Moving animals in

It is possible to register entire groups simultaneously during moving in. In this case, you only need to input data that is the same for all animals once. Individual data, such as the sow number and the transponder number, must be assigned per animal.

1. In the menu "Activity" > "Sow", click on "Move in".



2. Fill in the bold mandatory information.

All other information is optional.

- The field Move-in date is automatically filled with today's date.
- Animal count can be one animal or a group of animals with the same characteristics.
- The Feed curve must have been created before moving animals in, see chapter 2 "Feed curve".

As soon as you have entered all bold mandatory information, the **location** can be edited.

BiqFarmNet manager

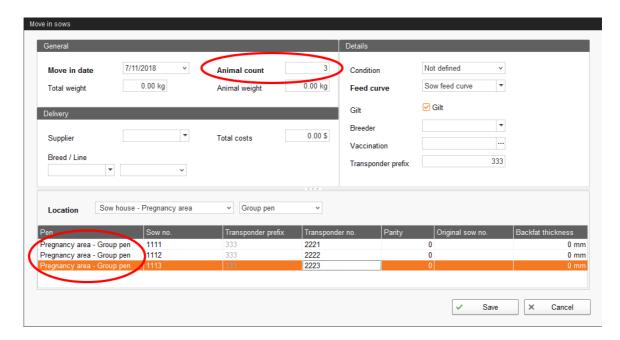
Moving animals Page 29

- 3. Enter the transponder prefix, if necessary.
 - This input is transferred automatically when creating animals in the system. The transponder prefix can only be entered in the upper part under "Details".

4. Select the correct move-in location under **Location**. Select the house and section first and then the corresponding pen(s), depending on whether you want to move the animals into a group pen or into individual pens.

Moving animals into a group pen

If you select "Group pen", you will only see one row at first. Each row corresponds to one animal. Proceed as follows:



- a) Enter the sow number of the first animal and confirm by pressing the Enter key.
 The cursor automatically jumps into the next input field.
 - You may also use the arrow keys on your keyboard to jump from one input field to the next, for example if you want to leave a field empty and jump to the next one.
- b) Continue with your inputs as described above.
 - As soon as you press the Enter key in the last input field, another row appears for the next animal. The system continues generating as many rows as you have defined animals under "Animal count".
- c) To delete a row from the list, select this row and press the Delete key.
- d) Click on "Save" after you have completed all inputs.

The system saves the moving-in process and finishes the task.

BiqFarmNet manager

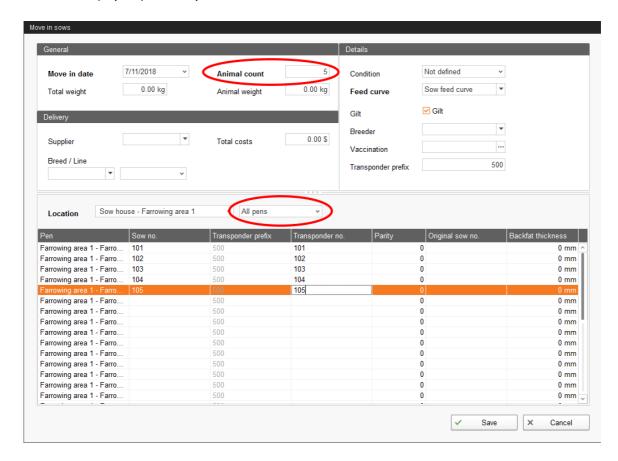
Page 30 Moving animals

Moving in one animal per pen

For sections with one animal per pen, select

- "All pens" if you want to move in multiple animals, and
- one specific pen if you want to move in only one animal.

Each row (= pen) corresponds to one animal. Proceed as follows:



Enter the sow number of the first animal and confirm by pressing the Enter key.
 The cursor automatically jumps into the next input field.

You may also use the arrow keys on your keyboard to jump from one input field to the next, for example if you want to leave a field empty and jump to the next one.

- b) Continue with your inputs as described above.
 - If the number of pens is higher than the number of animals you want to move in, leave the remaining pens empty.
- To delete a row from the list, select this row and press the Delete key.
- d) Click on "Save" after you have moved in all animals.

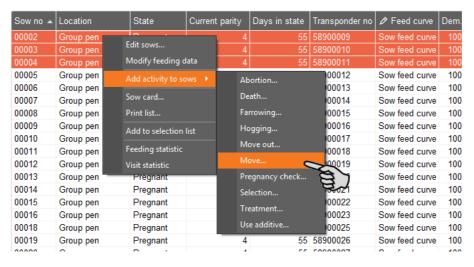
The system saves the moving-in process and finishes the task.



Moving animals Page 31

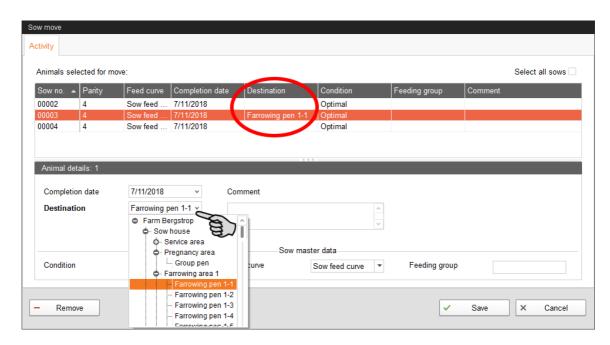
3.2 Moving animals using the context menu

- 1. Click on the "Sow Manager" tab.
- 2. Select one or more sows.
 - More information on multi-selection: see chapter 4.9.
- Right-click into the marked area to open the context menu.
- 4. Click on "Add activity to sows" > "Move...".



In the next dialog window, mark the correct animals and select the destination. All other information is optional.

By default, all animals are selected in this dialog window. Click on one animal to de-select all other animals as well. More information on multi-selection: see chapter 4.9.



6. Click on "Save" to accept the changes.

Sow Manager

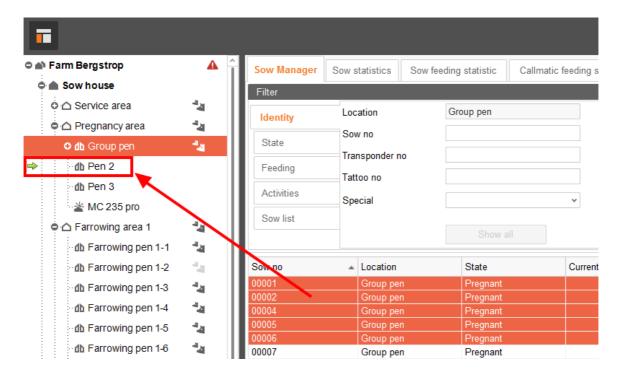
BiqFarmNet manager

Page 32 Moving animals

3.3 Moving animals using drag and drop

- Select one or more sows.
- 2. Left-click into the marked area and hold the mouse button.
- 3. Drag the cursor to the required location in the farm structure.

The green arrow at the left-hand border of the window shows which location you are currently selecting as destination.



4. Release the mouse button. The animals are now automatically moved to their destination.



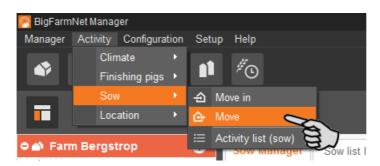
Remember to adjust the feed curve when moving animals, if required. Animals might receive feed from a different feeding system in the new location.



Moving animals Page 33

3.4 Moving animals according to the sow number

In the menu "Activity" > "Sow", click on "Move".

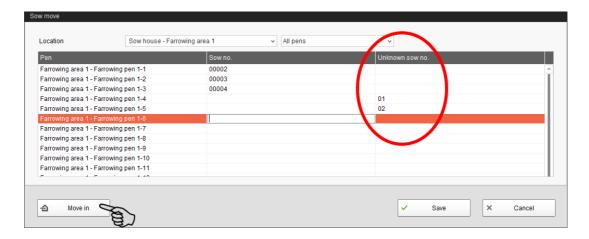


2. Under "Location", select the place to which you want to move to the animals.



- 3. Enter the sow number of the animal into the row of the correct destination.
 - If you know all sow numbers, click on "Save".
 - The moving process is finished.
 - If one or more sow numbers are unknown, the system transfers the number into the row "Unknown sow no." and the "Move in" button is activated. You can immediately move these animals in now:
 - a) Click on "Move in" in the lower command bar.

This opens the move-in dialog. The system shows the already selected destination.

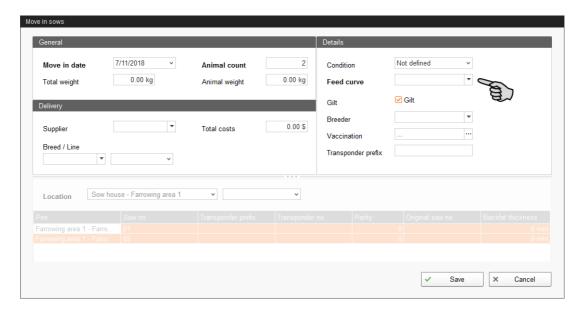


Sow Manager

Page 34 Moving animals

 Define the feed curve and provide more information, such as the transponder number, if necessary.

As soon as you have filled the mandatory field **Feed curve**, the information under **Location** can be edited.

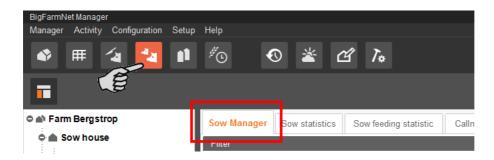


- c) Click on "Save" to complete the moving-in process.
 - The system returns to the moving dialog.
- d) Click on "Save" to finish the moving process.

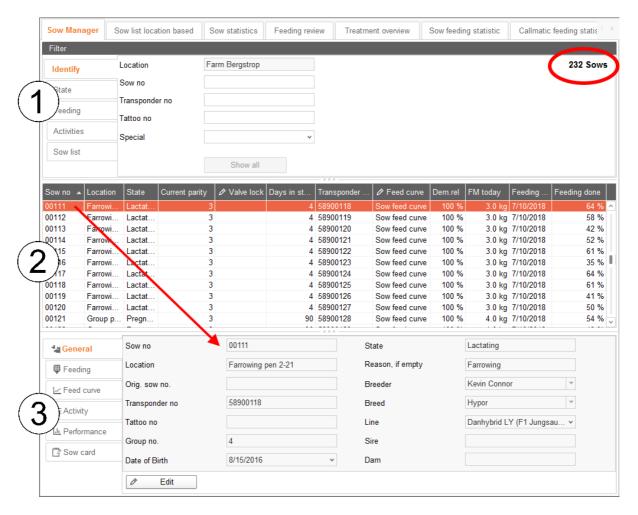


4 Managing the sows

Open the Sow Manager by selecting the management area.



The tab of the same name, "Sow Manager", has the following structure:

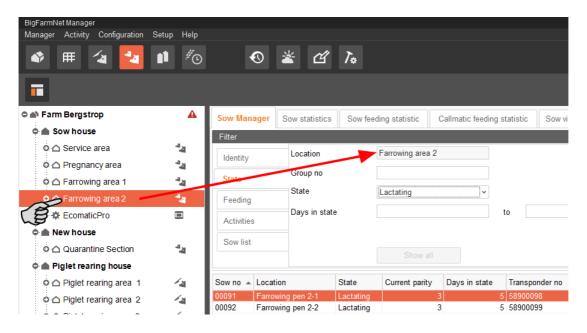


- 1 = filters for finding sows; the search result is displayed in the upper right corner
- 2 = total sow stock or filtered sows
- **3** = information and editing options for the sow selected in the table

4.1 Filter functions

4.1.1 Filter "Location"

Click on the desired location (house, section or pen) in the farm structure to show the sows at this location in the table. The "Location" filter can be combined with all other filters.



4.1.2 Filter "Identity"

Use the "Identity" filter area to search, for example, for sows with specific sow numbers, sows without transponder number or double transponder numbers.

You can search multiple sows with the **Sow no.** filter. Separate the respective sow numbers by a comma, e.g. 001, 005, 009.

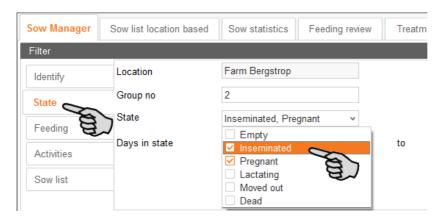




4.1.3 Filter "State"

Use the "State" filter area to search sows in a specific state. You can narrow the search further by using the **Group no.** and the **Days in state**.

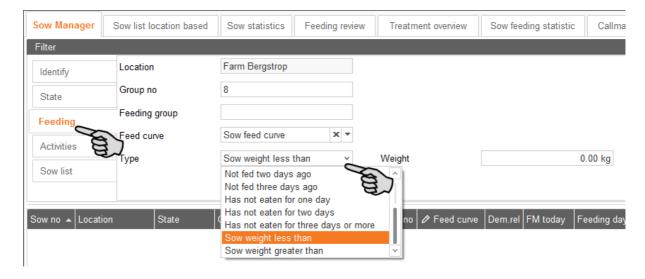
You can select multiple sows with the State filter.



4.1.4 Filter "Feeding"

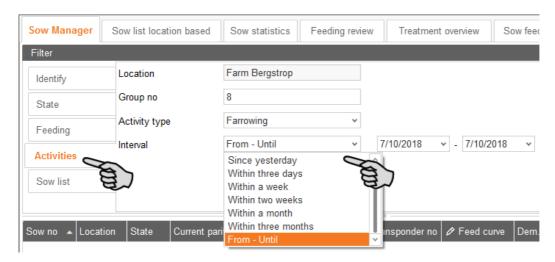
Use the "Feeding" filter area to search for sows based on their eating behaviour. Narrow the result by combining filters.

If you want to search for the sow's weight under **Type**, enter an approximate value for the weight.



4.1.5 Filter "Activities"

Use the "Activity" filter area to search sows for which an activity such as heat detection, insemination or farrowing has been saved. Narrow the search by selecting a time period under **Interval**. Define the period individually by selecting "From - Until".



4.1.6 Creating a sow list

Use the filter area "Sow list" to create an individual list based on different search results if one filter is not sufficient to find all required sows.



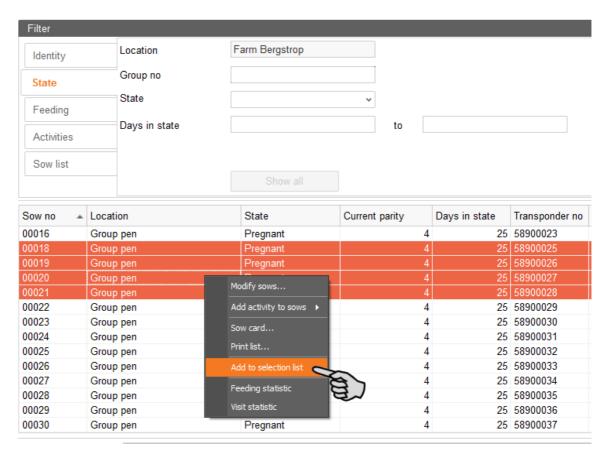
The sow list expires when the BigFarmNet Manager is closed.

- Mark the sows you want to add to the sow list after filtering.
 More information on multi-selection: see chapter 4.9 "Editing multiple sows".
- 2. Press the space bar on your keyboard. The sows are then automatically added to the sow list.

OR:

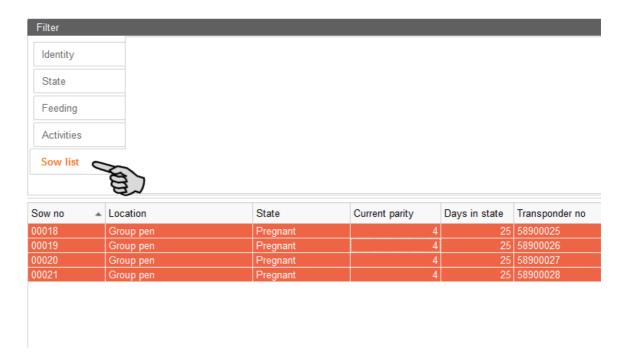
Right-click into the marked area and select "Add to selection list" from the context menu.





3. If you click on the filter area "Sow list", you will find that the sows selected before have now been added to the sow list.

In this list, you can continue to mark and edit sows.

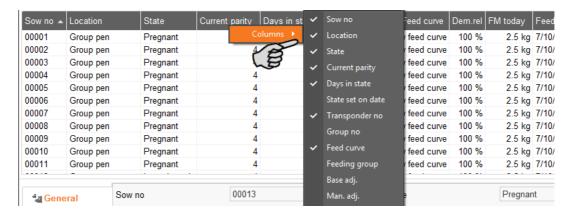


4.2 Parameters in the table

4.2.1 Adjusting views

You may adjust the table view as follows:

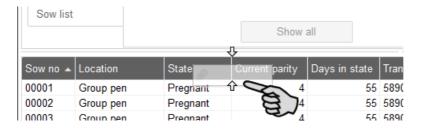
- Hiding and showing columns:
 - a) Right-click into the head line to open the context menu with all parameters.
 - **b)** Select or de-select parameters to hide and show the respective columns.



Rearranging columns:

- a) Click into the head line of the respective column and hold the mouse button.
- **b)** Drag the column to the desired position.

The arrows showing up at the head line when you move the columns help you with assigning the new position.



c) Release the mouse button.

The column is now at its new position.

Sorting data:

Click on the respective parameter in the head line to sort the animals in ascending or descending order according to the given values.



4.2.2 Parameter definition

- State: Current state of the sow.
- Current parity: The sow's current farrowing interval.
- Days in state: Number of days in the current state.
- State set on date: Date on which the state was last changed.
- Transponder no.
- Feed curve: Currently used feed curve.
- **Feeding group:** The sow is managed based on the defined feeding group.
- Base adj.: This value indicates the constant feed adjustment.
- **Man. adj.:** This value indicates the manual feed adjustment valid for the current day, see chapter 4.4 "Editing the feeding settings".
- Auto. adj.: This value indicates the feed adjustment calculated with the eating time correction. This only applies to sensor feeding.
- **Dem. rel:** This value provides an overview of the entire feed adjustment. It is calculated by multiplying "base adj.", "auto. adj." and "man. adj.".
- **FM today:** This value shows the total daily amount of fresh matter; including added water for liquid feeding systems.
- **DM:** This value indicates the daily amount of pure dry matter per animal.
- DM 88%: This value indicates the daily amount of feed per animal containing 88 % of dry matter.
 - For dry feeding systems, this means that the value DM 88% and FM are identical.
 - For liquid feeding systems, the DM 88% value shows the amount of dry feed without considering the pure share of dry matter. The DM value indicates the entire dry feed / water mixture.
- Energy: Daily amount of energy that results from the feed amount in kg.
- **Feeding day:** As the day change does not have to take place at 00:00, the feeding day may differ from the current date.
- **Feeding done:** This value indicates the percentage of the daily feed amount that has already been dispensed.
- Start factor: This value indicates the start factor for manual feed adjustment.
- **Fade duration:** This value indicates the time period during which manual feed adjustment should be applied.

Sow Manager

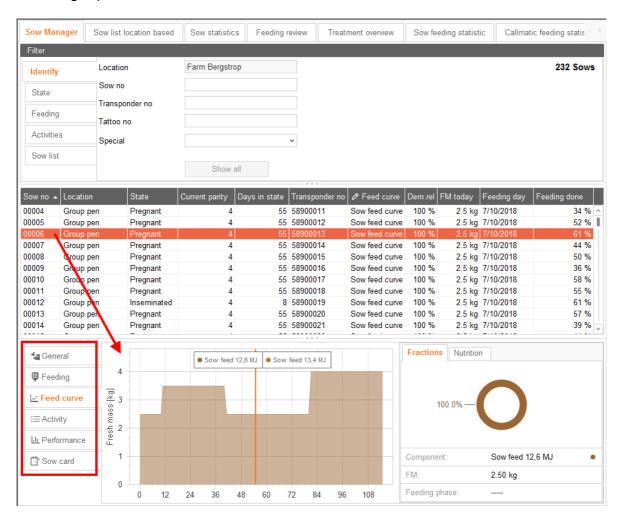


- Start date: Start of manual feed adjustment.
- Remaining time: Remaining time of manual feed adjustment.
- Constant factor: A checked box indicates that feed is adjusted with constant factor.

Valve lock:

- To lock the valve immediately and completely, enter X.
- To lock following feeding times, enter the corresponding quantity as negative value. For example: -3 means that the valve will be locked for the next three feeding times.
- To lock following feeding days, enter the corresponding quantity as positive value. For example: +2 means that the valve will be locked for the next 2 feeding days.

If you select a sow, the lower part of the application window contains information on the following topics:



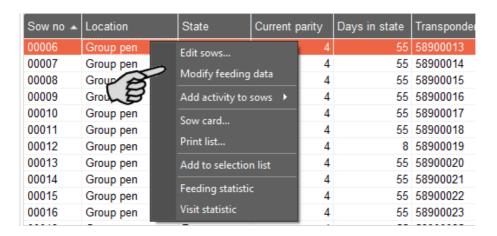
- General, see chapter 4.3
- Feeding, see chapter 4.4



- Feed curve, only as a view without options for editing
- Activity, see chapter 4.5
- Performance, see chapter 4.6
- Sow card, see chapter 4.7

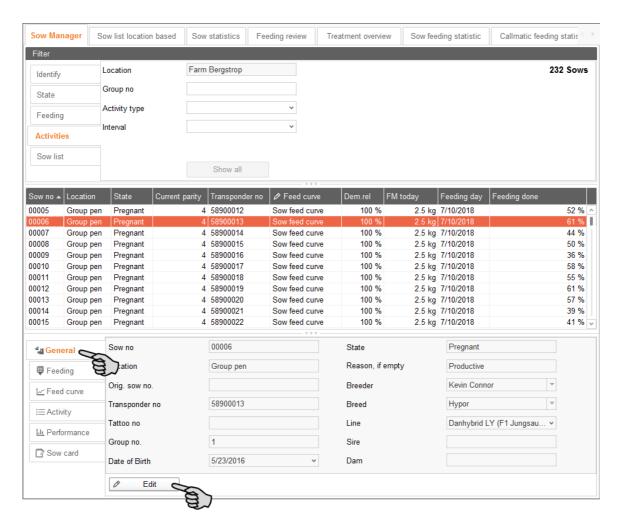
4.3 Editing general sow data

- 1. Click on the "Sow Manager" tab and filter the correct sow, if necessary.
- 2. Click on the sow in the table to mark it.
- Right-click into the marked area to open the context menu and click on "Edit sows...".



OR:

Under "General", click on "Edit".

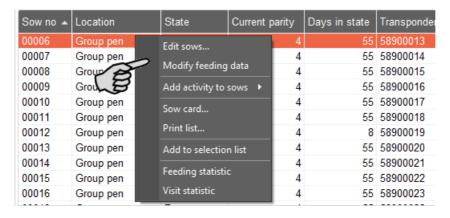


- 4. Change the data as required in the next dialog window.
- 5. Click on "OK" to accept the changes.



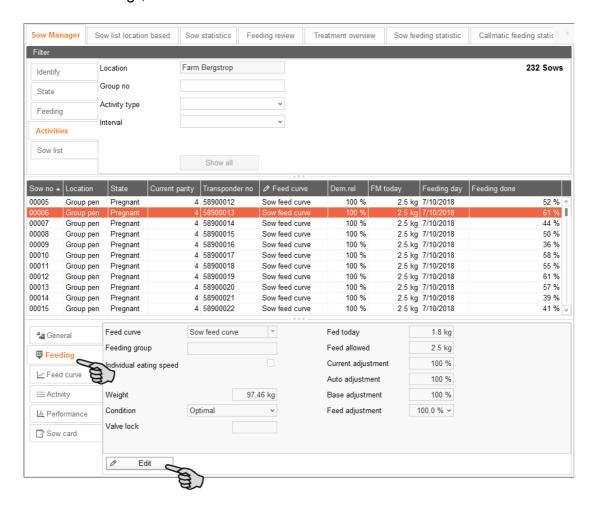
4.4 Editing the feeding settings

- 1. Click on the "Sow Manager" tab and filter the correct sow, if necessary.
- 2. Click on the sow in the table to mark it.
- Right-click into the marked area to open the context menu and click on "Modify feeding data".

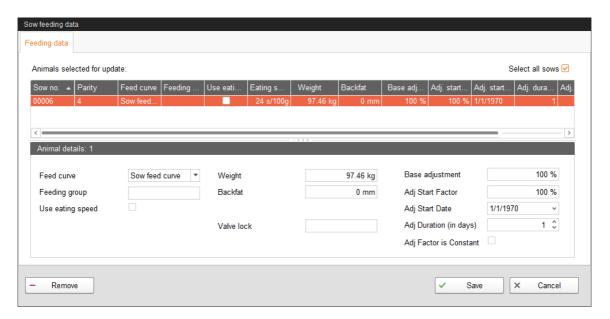


OR:

Under "Feeding", click on "Edit".



Change the data as required in the next dialog window.



Manual adjustment

Use the manual adjustment function for corrections to the feed amount, for example by increasing it for a specific time period.

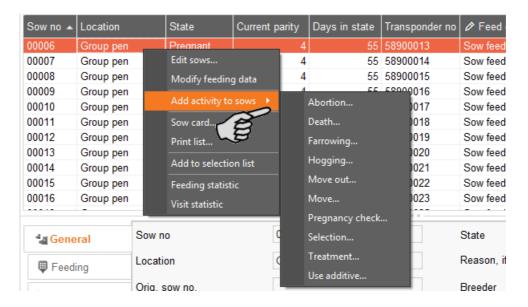
- Base adjustment:
- Adjustment start factor: Defines by how much (percentage) the daily feed ration should be increased. If you enter 120 %, the animals receive 20 % more feed than pre-set by the feed curve, starting from the date entered as starting date.
- Adjustment duration (in days): The number of days for which the animals are
 to receive an increased amount of feed. If the parameter "Constant factor" is
 not active, the increased feed amount percentage is reduced day by day until
 the animals receive the standard quantity defined in the feed curve.
- Adjustment start date: Start of the increased feed amount
- Adjustment factor is constant / Constant factor: The specification made under "Start factor" is observed constantly for the number of days given under "Adjustment duration". This means that the animals will receive an increased amount of feed for a specific time period.
- 5. Click on "Save" to accept the changes.



4.5 Editing activities

- 1. Click on the "Sow Manager" tab and filter the correct sow, if necessary.
- 2. Click on the sow in the table to mark it.
- 3. Right-click into the marked area to open the context menu and click on the correct activity under "Add activity to sows".

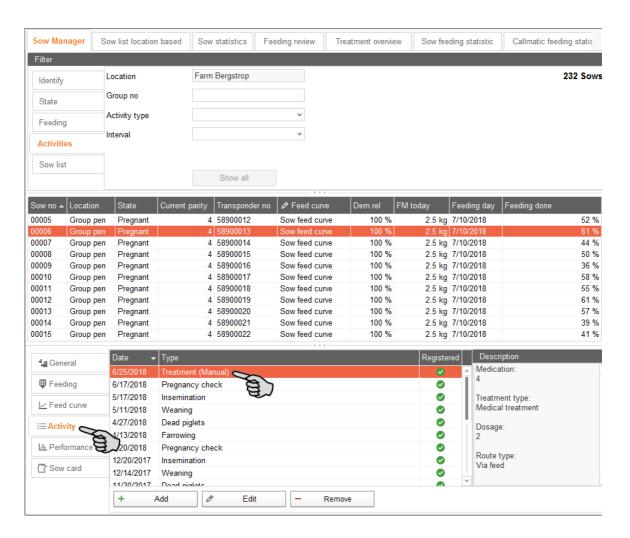
Only activities that are possible considering the sow's current state are displayed. For example, a lactating sow cannot be inseminated.



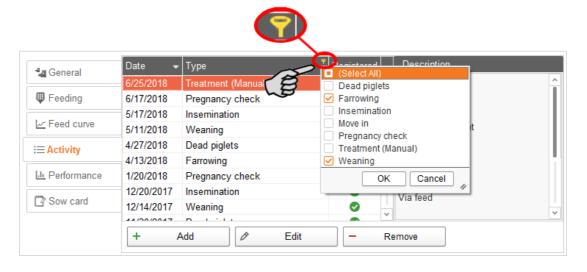
OR:

Click on "Activity".

A chronological list of all available activities of the selected sow is displayed. A pane on the right shows more information if you select an activity.



You may also set a filter so only specific activities show up in the list.



- You may edit or delete existing activities.
- You may add new activities.



4.5.1 Treating animals

You may choose between two different types of treatment for your animals:

- Manual treatment = vaccinate or administer medication using syringes; the treatment can be documented subsequently.
- Medical treatment = the system administers additives through the feed; define previously planned treatments.



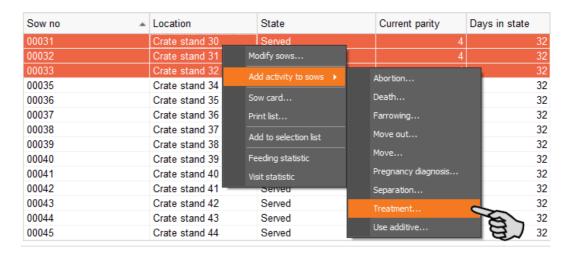
A medical treatment cannot be deleted later under "Activity".

Manual treatment

- 1. Click on the "Sow Manager" tab.
- Select one or more sows.

More information on multi-selection: see chapter 4.9.

- 3. Right-click into the marked area to open the context menu.
- 4. Click on "Add activity to sows" > "Treatment...".

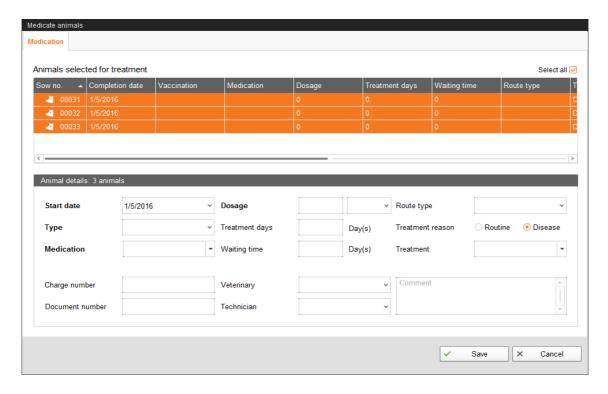


5. Select "Manual treatment" in the next dialog window and click on "Next".



- In the next dialog window, define either identical treatment details for all sows or individual details for each sow.
 - Start date = date of administration; backdating is possible
 - Type = vaccination or medical treatment
 - Vaccination or Medicine = information on the drug or vaccine, depending on the type
 - Dosage = amount of the applied drug or vaccine

Bold parameters are mandatory. All other information is optional.



7. Click on "Save" after you have configured treatment details for all sows.

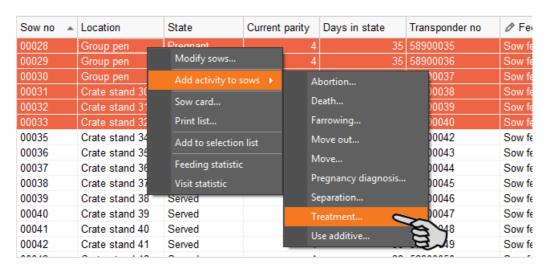


Medical treatment

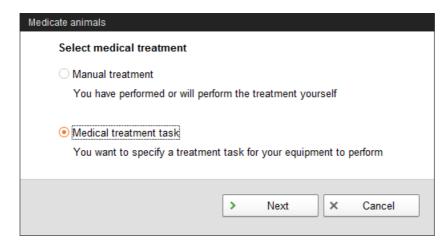
- Click on the "Sow Manager" tab.
- Select one or more sows.

More information on multi-selection: see chapter 4.9.

- 3. Right-click into the marked area to open the context menu.
- 4. Click on "Add activity to sows" > "Treatment...".



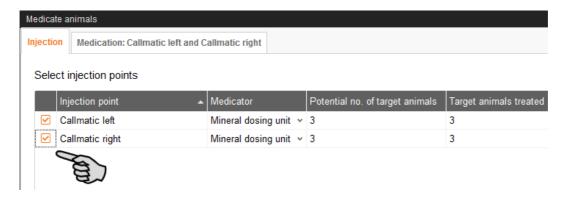
5. Select "Medical treatment task" in the next dialog window and click on "Next".



Activate the injection points.

The displayed injection points differ based on the feeding system. The respective mineral dosing units, valves and circuits can also be selected under "Medicator".

Example in the screenshot: Callmatic right and Callmatic left. Both injection points are activated because the sows selected for treatment might use both stations.





Medical treatment is only possible for sows from **one** location. If you have selected sows from different locations, use the injection point to define which sows should be treated. As soon as you have selected one injection point, the injection points of the other locations are no longer available for selection.

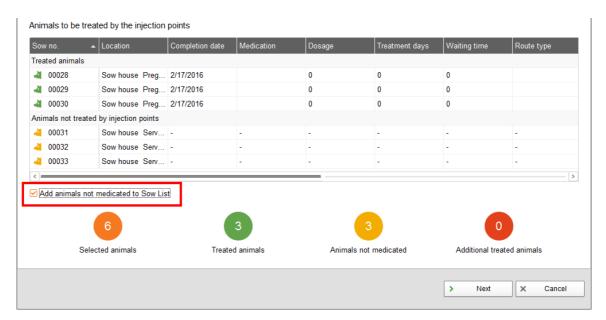
Depending on the injection point, the sows are divided into four color categories indicating their treatment state:

- 4 All sows selected for treatment.
- Sows that are treated via the selected injection point.
- Sows that are not treated via the selected injection point.

You may add these sows to the sow list by checking the box "Add animals not medicated to sow list". Start the activity "Treatment" for these sows again in the sow list as described above (4.1.6 "Creating a sow list").

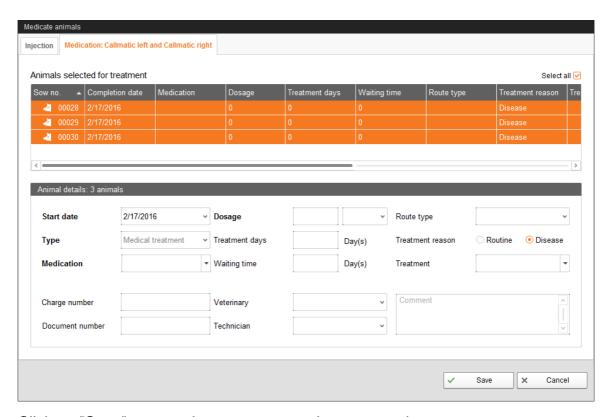
Sows that were not selected for treatment but will receive treatment.
 These sows are in the same location as the sows to be treated, but the injection point cannot single out individual animals.





- Click on "Next".
- 8. Fill in the following mandatory information under the next tab:
 - Start date = date of administration; backdating is possible
 - Type = pre-defined as medical treatment; no changes possible
 - Medicine = information on the drugs
 - Dosage = amount of the applied drug

All other information is optional.



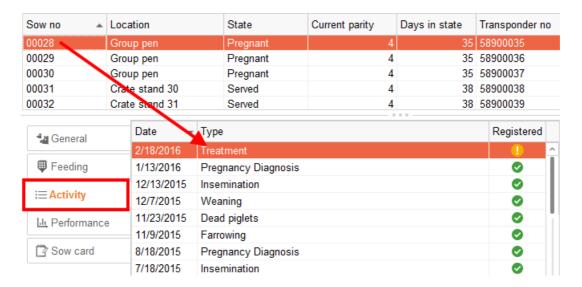
Click on "Save" to save the treatment you have created.

Sow Manager

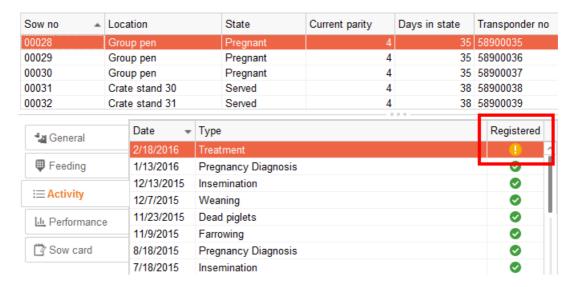


Treatment information

 If you open a treatment for a sow under "Activity" to edit it, the dialog window displays all sows affected by the treatment.



• The treatment type "Medical treatment" is considered completed when the system has dispensed the medicine on the **start date**. The icon under "Registered" then switches from 1 to 2.





4.5.2 Changing the gestation day

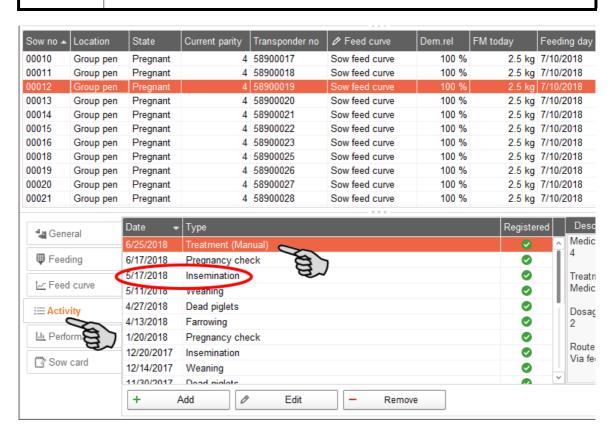
To change a sow's gestation day, delete the last insemination as well as all other subsequent activities, if applicable.

- 1. Filter and select the correct sow in the table.
- 2. Delete all activities under "Activity" one after another, starting with the current and up to the last insemination.

After you have deleted the last insemination, the sow's state changes to "Empty" and you can enter a new insemination.

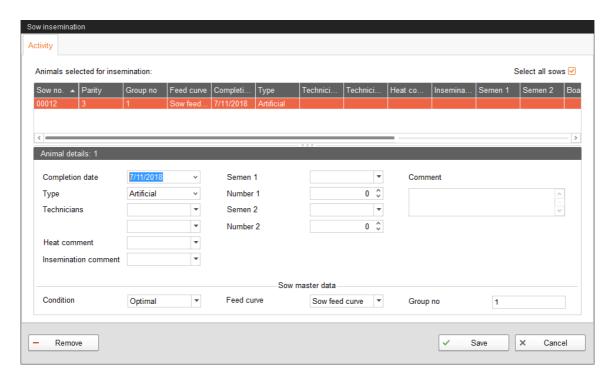


If you need to remove a location change, remember to check the current location of the sow and to correct it by entering an additional move, if necessary.



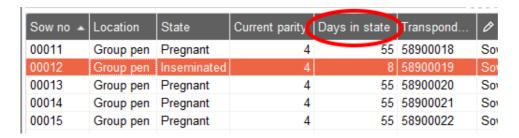
- 3. Create a new insemination by clicking on "Add".
- 4. Define all necessary information in the insemination dialog window.

Define the sow's current gestation day by entering the "Completion date" of the insemination.



5. Click on "Save" to confirm the inputs.

The sow's state changes to "Inseminated" and the correct numbe rof gestation days is displayed under "Days in state".



4.5.3 Deleting sows

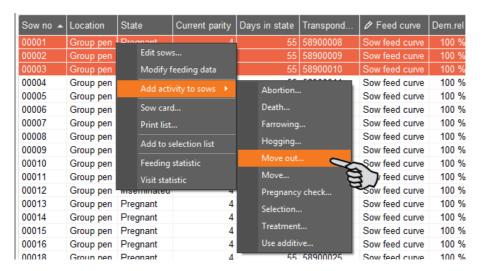
To delete a sow permanently from the system, move out the sow or declare it dead first. Filter all moved-out or dead sows in the next step to delete them permanently.



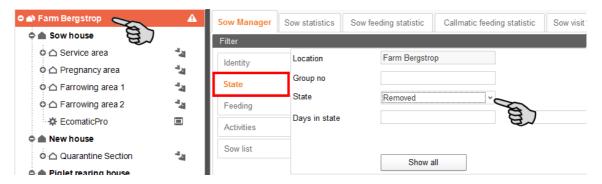
Sows which were deleted permanently cannot be "revived" in the system, chapter 4.5.4 ""Reviving" sows".

- Select one or more sows.
- Right-click to open the context menu. Under "Add activity to sows", click on "Move out..." (or "Death...").

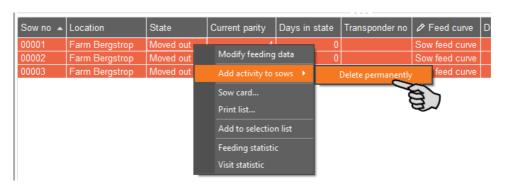




3. Use the filters to search sows with the state "Moved out" (or "Dead") on the farm level.



- 4. Select all moved-out / dead sows you want to delete.
- Right-click to open the context menu. Under "Add activity to sows", click on "Delete permanently".



6. Confirm the following security query with "Yes" to delete the sows permanently from the system.

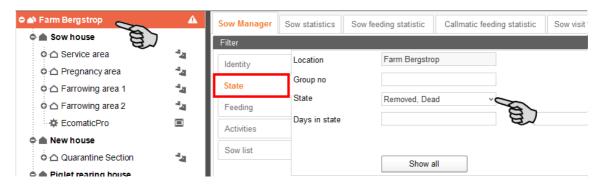
4.5.4 "Reviving" sows

If you have accidentally marked sows with the state "Dead" or "Moved out", reverse this activity as follows:

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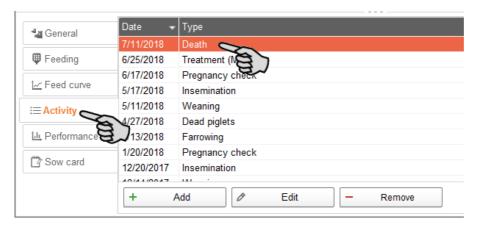
1. Use the filters to search sows with the state "Dead" and/or "Moved out" on the farm level.



2. Click on the first sow in the table to mark it.

Multi-editing is not possible here. The activity must be deleted individually for each sow.

3. Select the current, unwanted activity "Death" or "Move out" under "Activity".



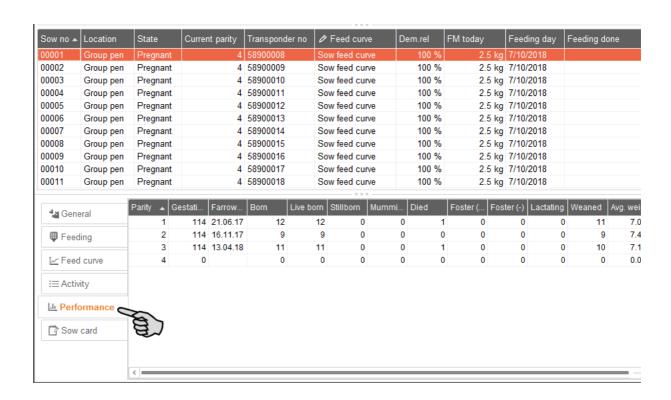
- 4. Click on "Remove".
- 5. Confirm the following security query with "Yes" to delete the activity.

The sow is now returned to its previous location in the system and removed automatically from the search results.

4.6 Viewing the performance data

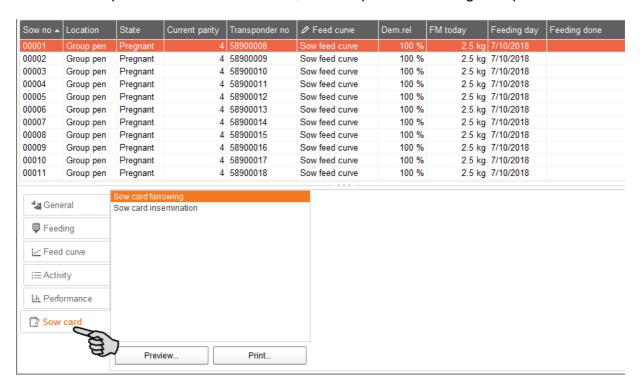
The "Perfomance" category shows the selected sow's biological performance regarding piglet production. This includes information such as the number of live and still births, the number of weaned piglets and information on the average piglet weight at weaning.





4.7 Printing the sow card

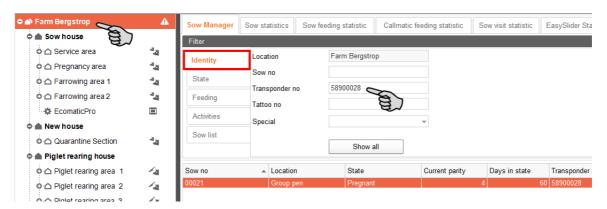
In the "Sow card" category, you may view the sow cards for farrowing and insemination by clicking on "Preview...", and/or print the card. You may also view and/or print the sow cards of multiple sows at the same time, see chapter 4.9 "Editing multiple sows".



4.8 Changing a transponder

If a sow is given a previously used transponder number, check first in the Sow Manager whether this transponder number still exists in the BigFarmNet system. Proceed as follows:

1. Search the transponder number on the farm level.



- 2. When you have found the transponder number, delete it by clicking on "General" > "Edit" or by using the context menu, see chapter 4.3 "Editing general sow data".
- Search the sow without transponder number:
 Identity > Special > No transponder number
- 4. Move out the sow without transponder as follows:
 - a) Click on the sow to mark it.
 - b) Right-click to open the context menu. Under "Add activity to sows", click on "Move out".
 - c) Fill in the fields in the next dialog window, if necessary, or click directly on "OK".



If a sow loses the transponder number and receives a new one, enter the new transponder number immediately, ideally before the sow requests feed. Otherwise, the system registers a new sow with unknown sow number in the Sow Manager.



If the BigFarmNet Sow Manager is used in combination with another sow planner software, the transponder number must be changed in the sow planner software as well.



4.9 Editing multiple sows

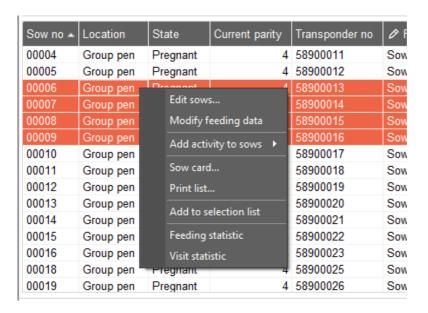
You can configure settings and activities for multiple sows at the same time. Editing multiple sows in the Sow Manager is possible both in the table and in your personal sow list, see chapter 4.1.6 "Creating a sow list".

- 1. Select multiple sows as follows:
 - Selecting neighboring sows:
 - Click on the first sow to mark it, hold down the Shift key and click on the last sow you want to mark.
 - Selecting non-neighboring sows:
 - Click on the first sow to mark it, hold down the Ctrl key and click on one or more other sows you want to mark.
 - Selecting all sows:
 - Click on the first sow to mark it, hold down the Ctrl key and press A.



You may also select just one sow and open the context menu for editing.

2. Right-click into the marked area to open the context menu.



- Edit sows: see chapter 4.3 "Editing general sow data".
- Modify feeding data: see chapter 4.4 "Editing the feeding settings".
- Add activity to sows: depends on the sow's state, see chapter 4.5 "Editing activities".

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- Sow card: see chapter 4.7 "Printing the sow card".
- Print list: Print the sows currently displayed in the table, for example after filtering.
- Add to selection list: Marked sows are copied to the sow list, see chapter
 4.1.6 "Creating a sow list".
- Feeding statistic: Overview statistic (only applicable for CallMaticpro and Call-Innpro).
- Visit statistic: Overview statistic (only applicable for CallMaticpro and Call-Innpro).

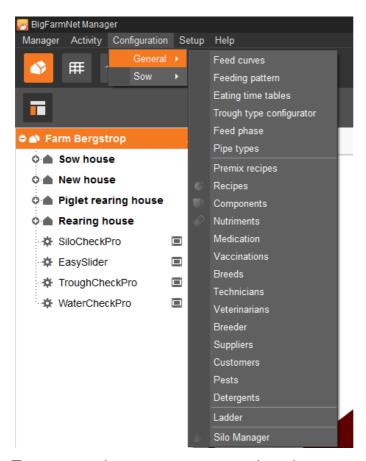


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5 Master data

Master data is defined as information which you only need to enter once and which remains valid for a longer time period. You may process master data multiple times and for different functions, e.g. components can be adjusted in feed curves or supplier information can be adjusted during moving-in.

Click on the menu "Configuration" > "General" to view the master data.



To create recipes, components and nutrients, see the following chapters:

- 2.1 "Creating nutrients"
- 2.2 "Creating components"
- 2.3 "Creating a recipe"

As an example, master data for medication and suppliers will be created in the following. The procedure is identical for all master data.



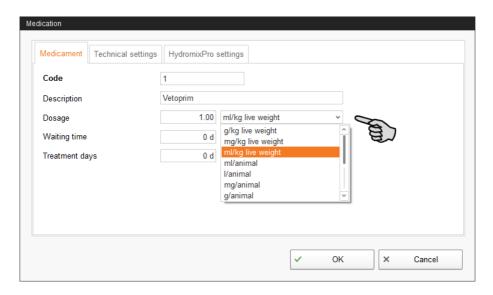
Fields with bold text are mandatory.

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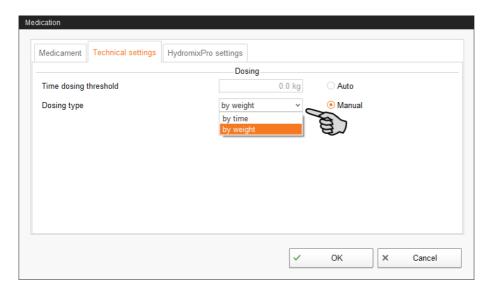
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5.1 Creating a medication

- 1. In the menu "Configuration" > "General", click on "Medication".
- In the dialog window "Medication", click on "Add".
 The dialog window "Medication" lists all created drugs which you can edit, copy or remove later on, if necessary.
- Fill in the information for the medication under the first tab.



4. Determine the dosage under the tab "Technical settings".



- Configure technical settings for the respective feeding system under the tab "Hydromix settings".
- 6. Accept your inputs by clicking on "OK".



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5.2 Creating a supplier

- In the menu "Configuration" > "General", click on "Suppliers".
- 2. In the dialog window "Suppliers", click on "Add".
- 3. Fill in the information for the supplier in the next dialog window.



4. Confirm your inputs by clicking on "OK".

5.3 Sow master data

The sow master data are relevant only for the Sow Manager. These data include information on boars, semen and set parameters regarding e.g. insemination and piglet count.



Fields with bold text are mandatory.

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5.3.1 Setting up sows

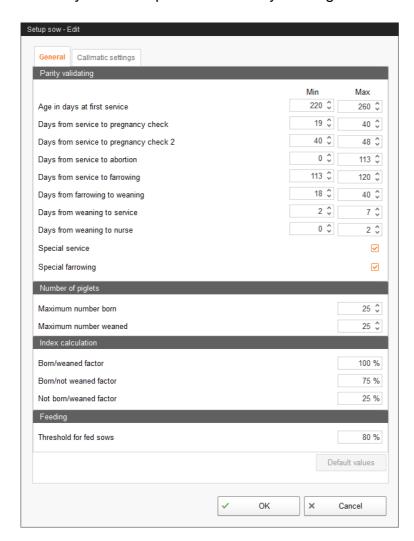
In the dialog "Setup sow", define the activity cycle of the sow and thus determine approximate values for the Sow Manager application. These specifications prevent the input of implausible data during editing. Upon input of the sow data, the program will verify whether the entered values are within the permitted range.

1. In the menu "Configuration" > "Sow", click on "Setup sow".



2. Define the following parameters.

You may also load pre-set values by clicking on the button **Default values**.





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 Age in days at first service = time period for the first insemination. The program does not allow insemination outside of this time period.

- Days from service to pregnancy check = time period for the first pregnancy check
- Days from service to pregnancy check 2 = time period for the second pregnancy check
- Days from service to abortion = time period for abortion after insemination
- Days from service to farrowing = time period for farrowing after insemination
- Days from farrowing to weaning = time period for weaning of the piglets after farrowing
- Days from weaning to service = time period for new insemination after weaning
- Days from weaning to nurse = time period for using a sow as nurse after weaning
- Special service and Special farrowing = If these functions are activated, a sow can be configured with the activity "Farrowing" or "Service" again to restart at status day 0. The activity cycle of a sow is not completed in this case.
- In the section "Number of piglets", define the parameter values for each litter and sow.
- Under "Index calculation", define the performance of the sows by weighting the individual parameters. The sow's performance index is shown on the sow card, see chapter 4.7 "Printing the sow card", page 59.
- Under "Feeding", enter the threshold from which a sow is considered to have been fed. Sows below this value are considered to not have been fed.
- 3. If necessary, define the specific settings for the system under the "Callmatic settings" tab.
- 4. Accept your inputs by clicking on "OK".

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