BigFarmNet manager

Finishing Manager

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BU Pig

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1 System description

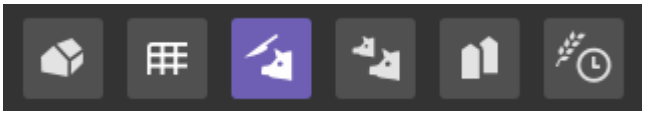


Figure 1-1: Icon for the Finishing Manager

The BigFarmNet Finishing Manager is a database used to manage the entire finishing pig herd and its feeding. You will create a comprehensive data collection to retrieve data for multiple purposes. The BigFarmNet Finishing Manager provides the following functions:

- keep track of the entire stock and its feeding
- keep track of the feed consumption
- check the state of health
- check animal movements (moving in, moving to a different location, moving out)
- check growth states
- define and assign feed curves
- adjust feeding
- filter animals groups based on specific characteristics
- create and edit master data
- print or export stock data

1.1 System limits

100,000	Animals
50	Feed curves
1,000	Ingredients
50	Recipes

2 Feed curve

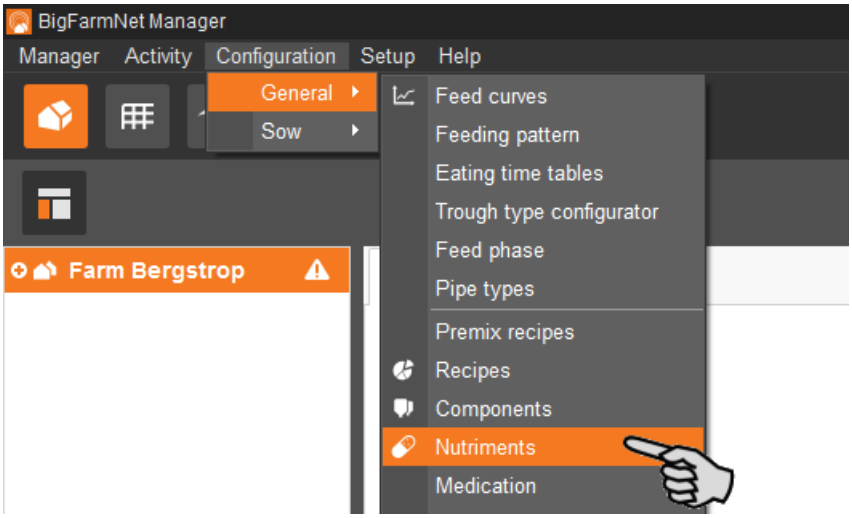
Defining feed curves is one of the basic settings configured during initial operation, in addition to moving the animals in. To meet the feed demand of the animals, use a feed curve to define which feed components are dispensed at which ratio and during which time periods. Daily rations are adapted automatically 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.

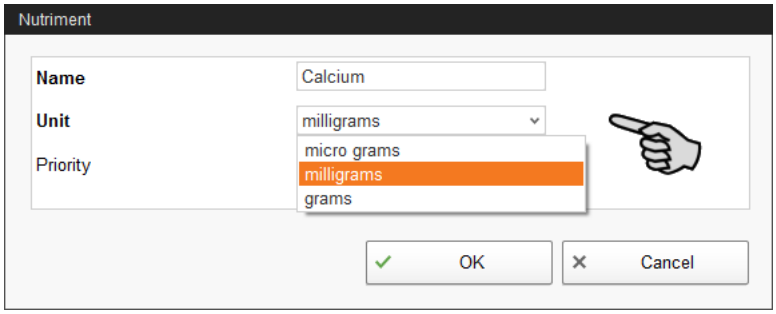
2.1 Creating nutrients

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”.

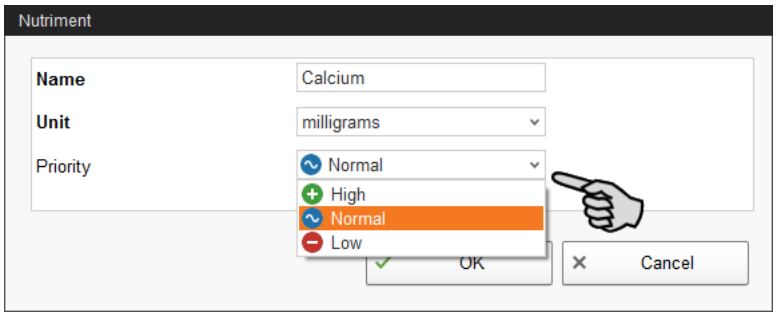
1. In the menu "Configuration" > "General", click on "Nutrients".



2. In the dialog window "Nutrients", click on "Add".
3. 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.

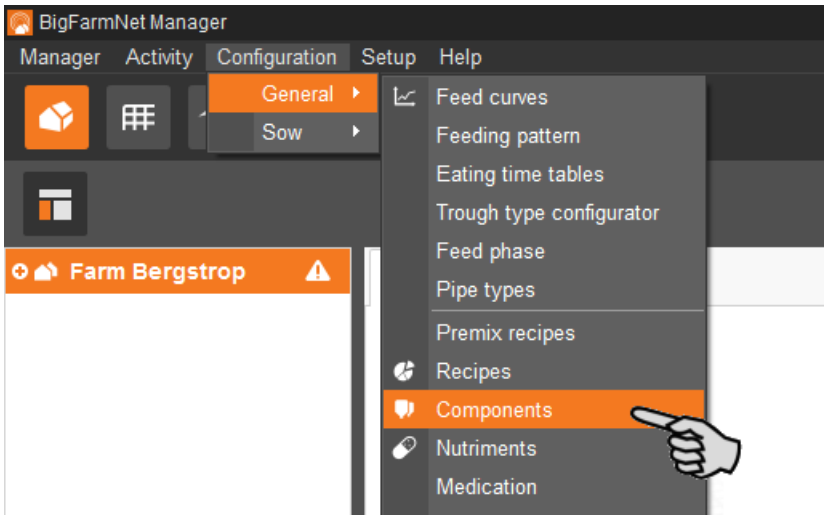


5. Accept these inputs by clicking on "OK".

2.2 Creating components

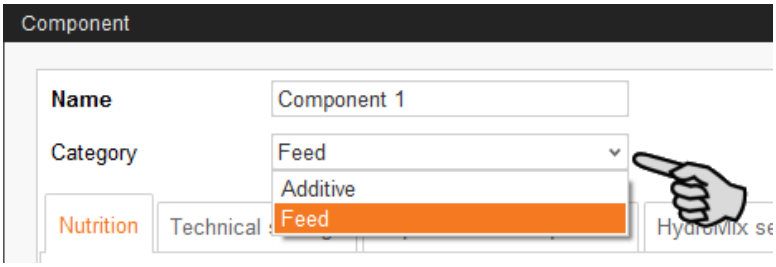
Use the "Component" dialog to create different components and to add any corresponding information. Components are classified into the categories "Feed" and "Additive". Components in the category "Feed" can be the individual ingredient of a feed mix or a complete compound feed.

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

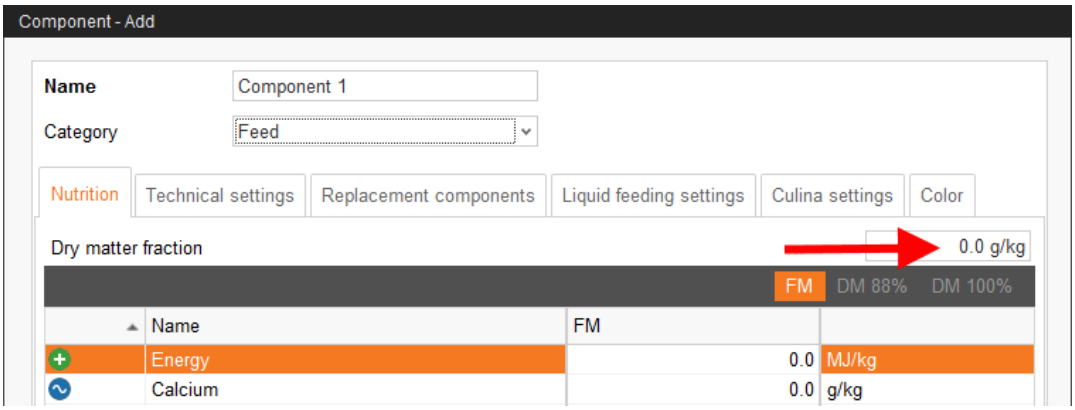


2. In the dialog window "Components", click on "Add".

3. Enter a name for the component and select a category.

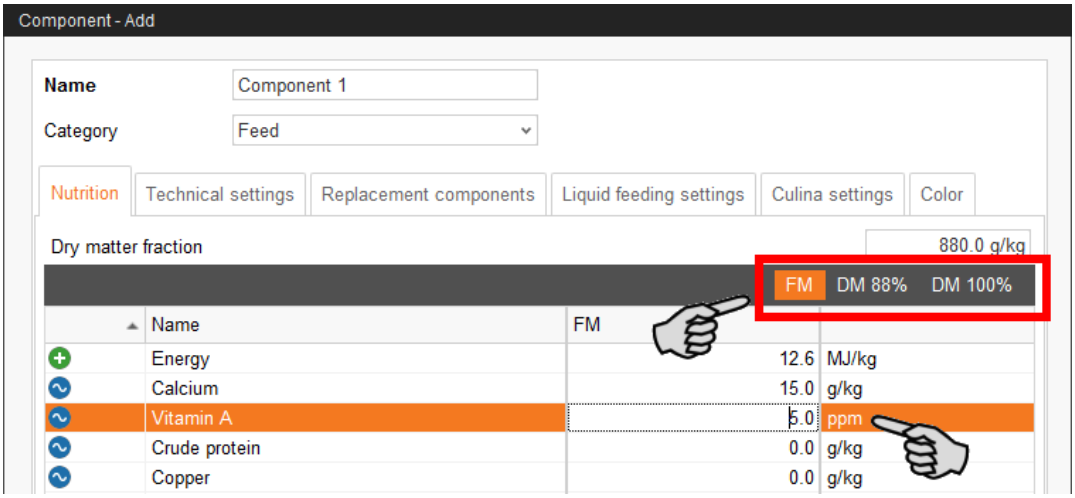


4. Under the first tab "Nutrition", enter the dry matter fraction of the component.

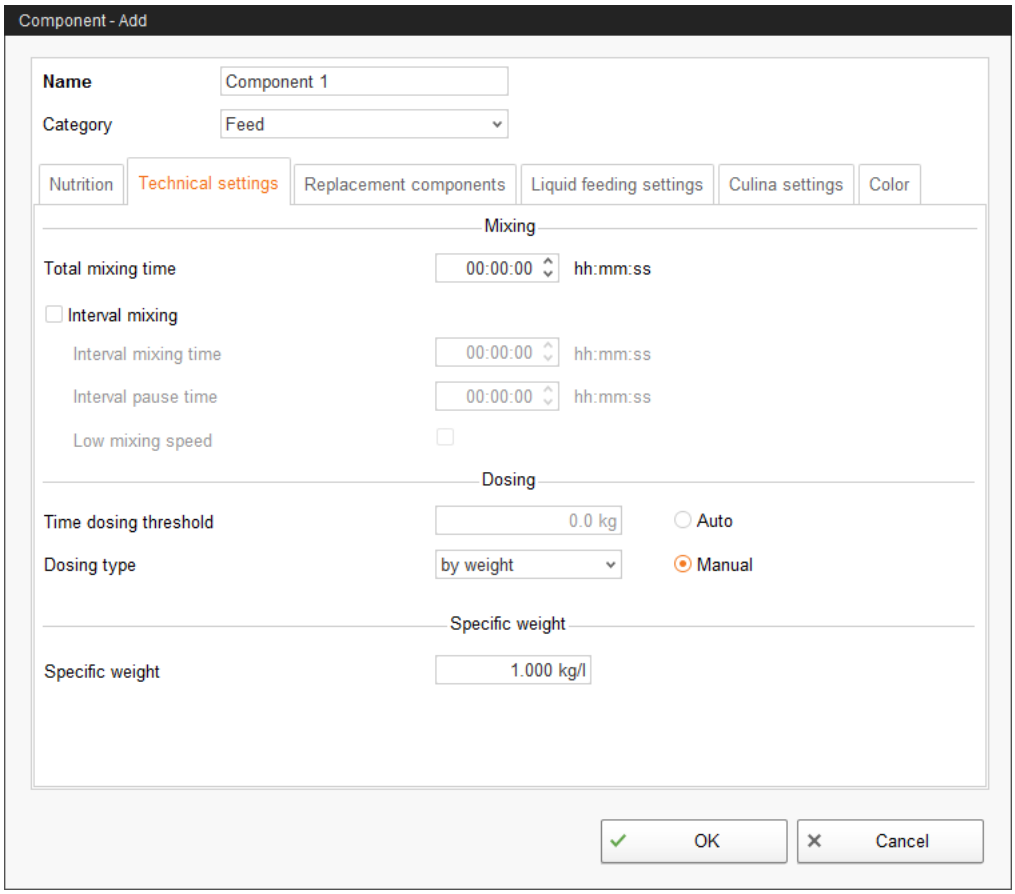


5. Only after entering the dry matter fraction can you choose one of the following quantities:
   - FM = per fresh matter
   - DM 88 % = in relation to 88 % dry matter
   - DM 100 % = in relation to 100 % dry matter

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



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:

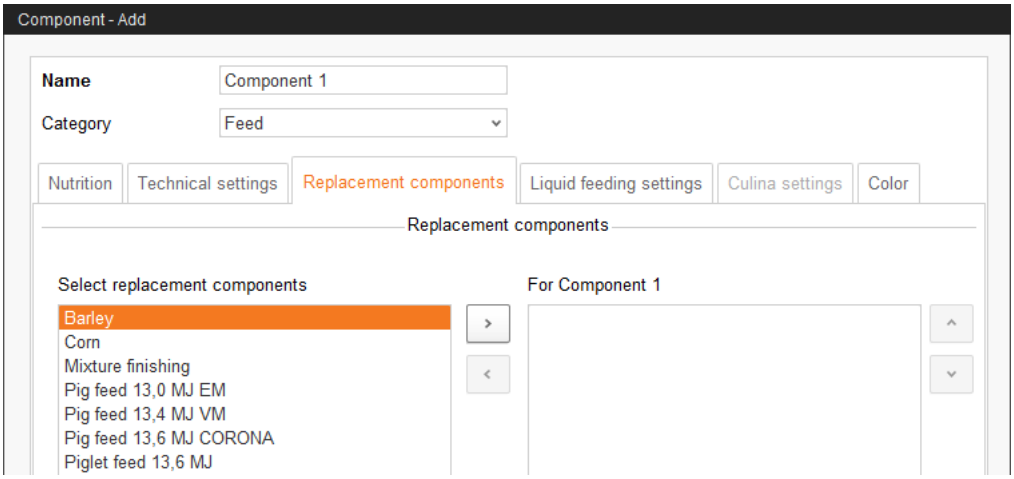
  > **Auto:** Define a weight as threshold value. If the weight of the dispensed component is below the threshold, dosing is automatically time-controlled. If the weight is above the threshold, dosing is automatically weight-controlled.

  OR

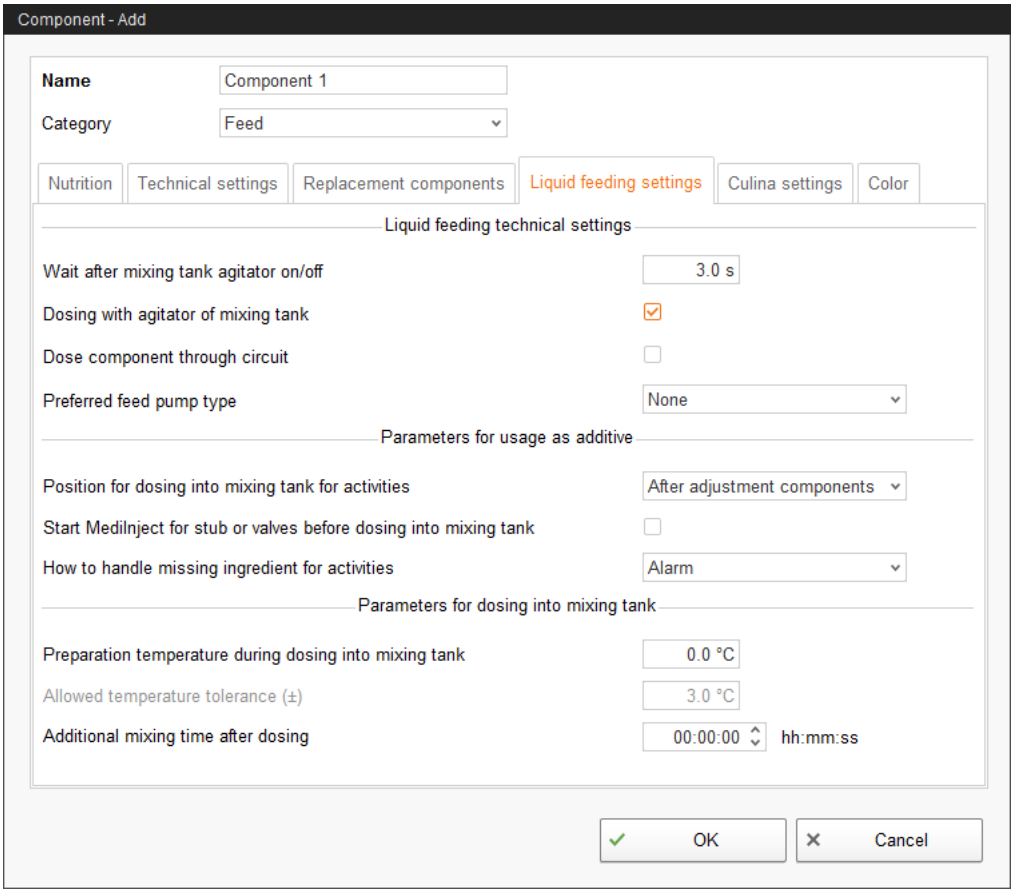
  > **Manual:** Define whether components should be generally dispensed "by weight" or "by time".

– 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".

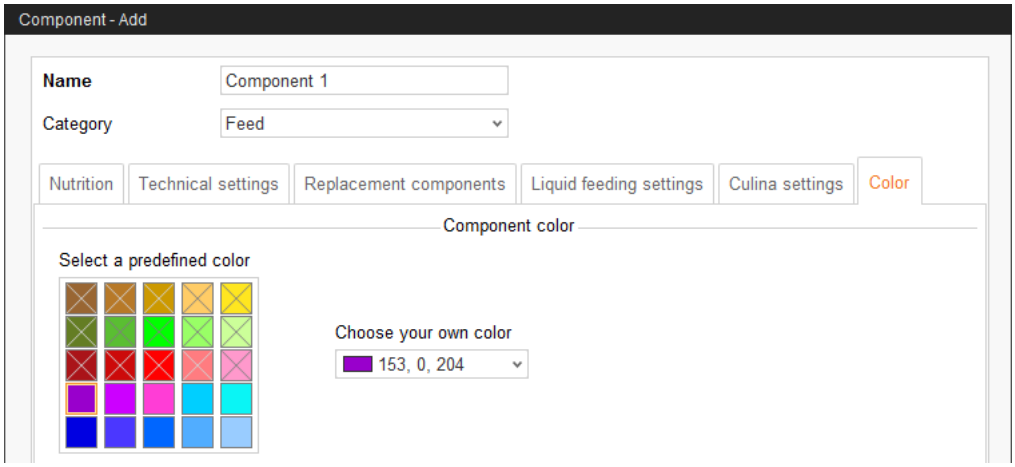


– **Dose component through circuit** refers to water or whey to be dispensed via the circuit with a specific pump (**Preferred feed pump type**).

– The settings in the bottom part, **Parameters for dosing into mixing tank**, must be configured for the CulinaMix*pro* 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.

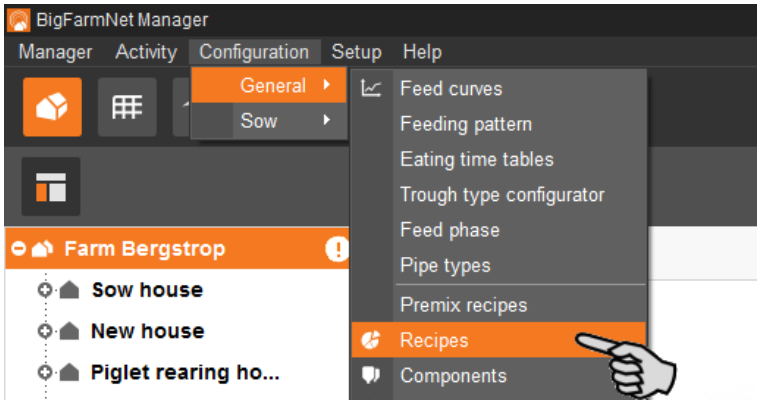


10. Click on "OK" after you have configured all settings.

2.3 Creating a recipe

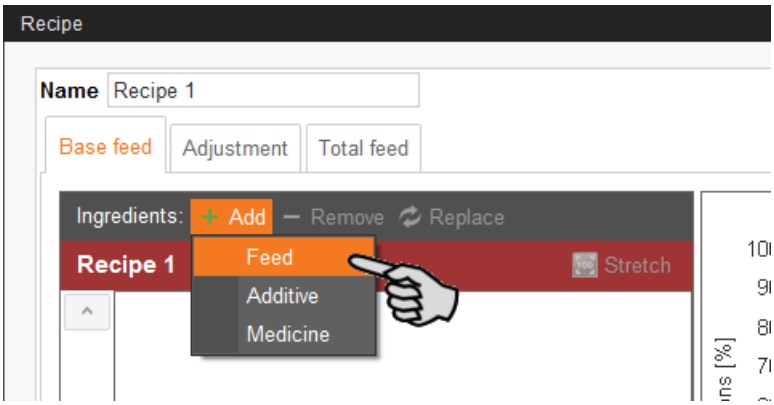
Use the "Reciple dialog" to compile a recipe for a feed mix based on the components you created (see 2.2 ”Creating components”). A recipe is used like a component when you create a feed curve.

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



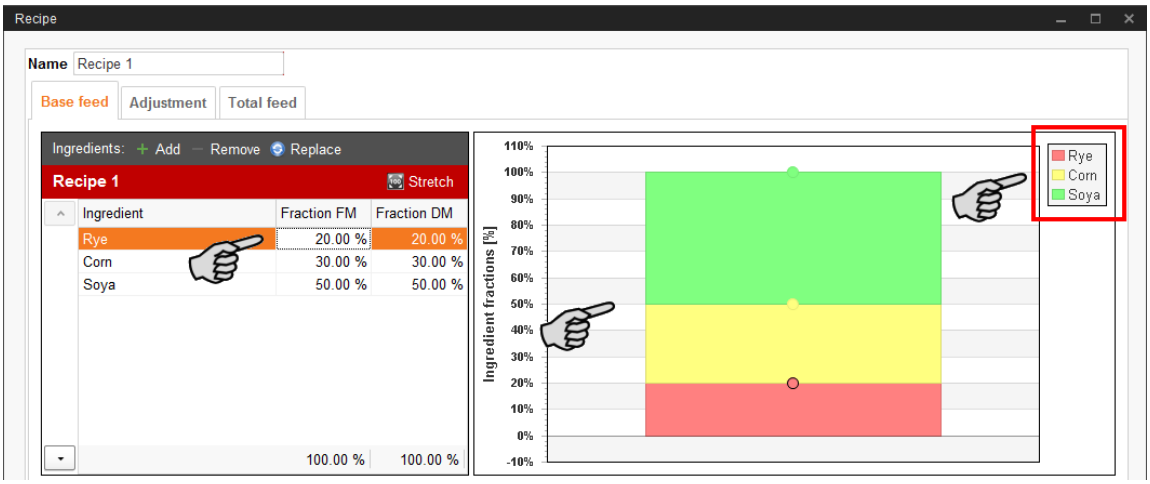
2. In the dialog window "Recipes", click on "Add".
3. Enter a name for the recipe.

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.

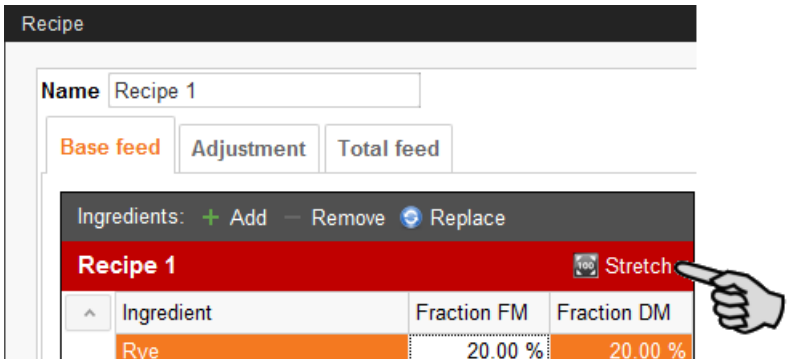
   The fractions must sum up to 100 % in total. A diagram shows the distribution.



   OR:

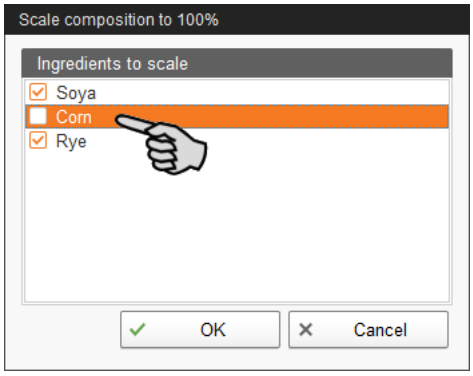
   The ingredients can be distributed automatically:

   a) Click on "Stretch":



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

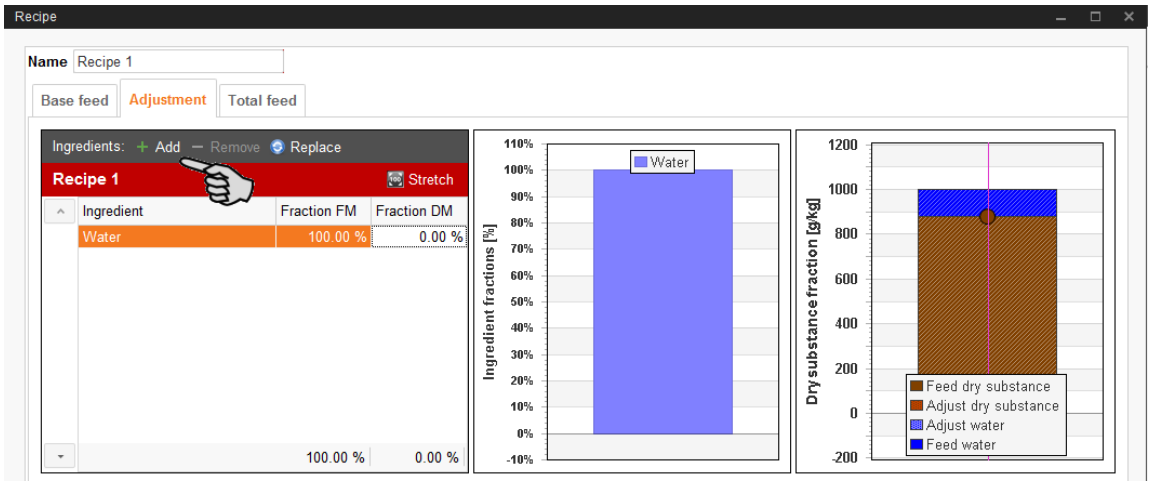
Automatic distribution uses 100 % as basis. If one ingredient is deactivated with a fraction of e.g. 30 %, the other ingredients are evenly distributed over the remaining 70 %.



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.

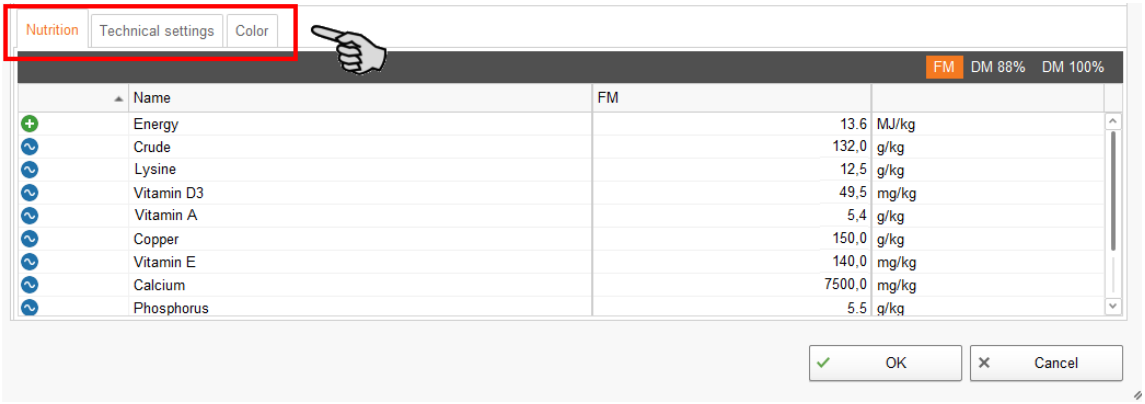
b) Move the dot up or down to increase or reduce the dry matter fraction.

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.

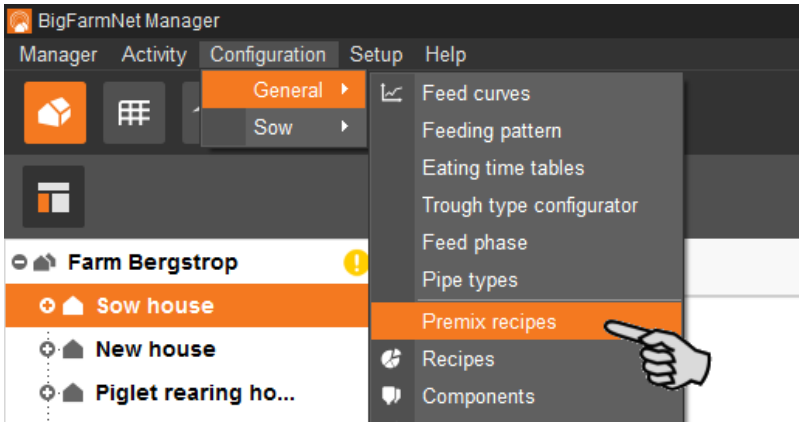


10. Click on "OK" after you have configured all settings.

2.4 Creating a premix recipe

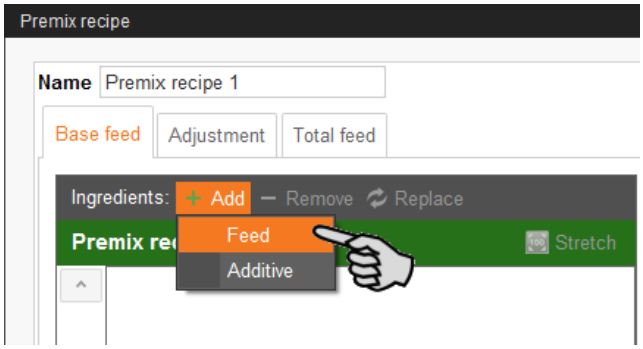
In a premix recipe, a mixture to be created in the premixer is defined. A premix recipe consists of created components from the "Feed" and/or the "Additive" (vitamins, minerals) category. In case of very small amounts, the main mixer cannot weigh the components, so a premixer for very small amounts is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

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



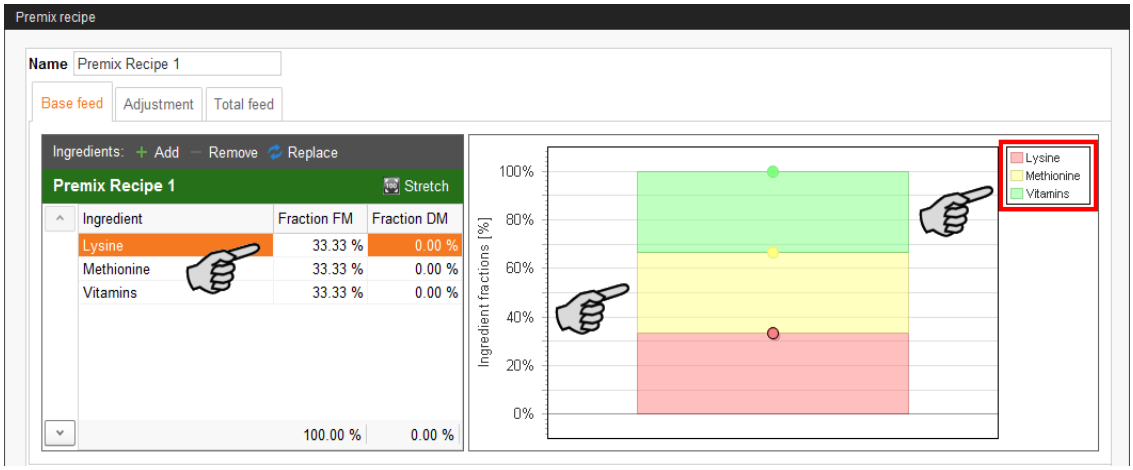
2. In the dialog window "Premix recipe", click on "Add".
3. Enter a name for the premix recipe.

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.

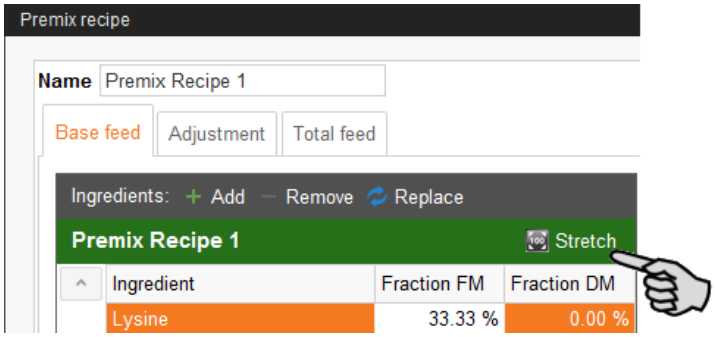
   The fractions must sum up to 100 % in total. A diagram shows the distribution.



   OR:

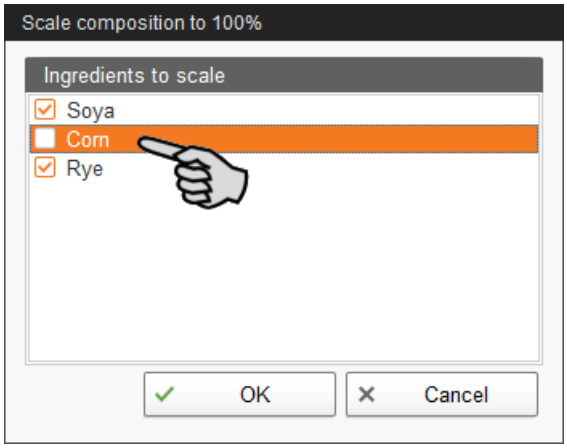
   The ingredients can be distributed automatically:

   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 %.

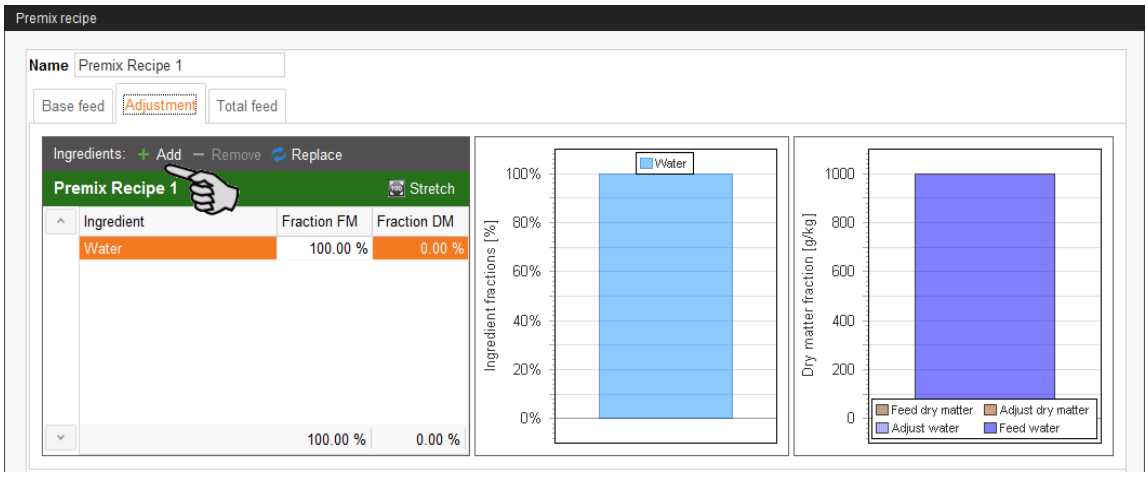


c) Click on "OK" to distribute the ingredients automatically.

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.

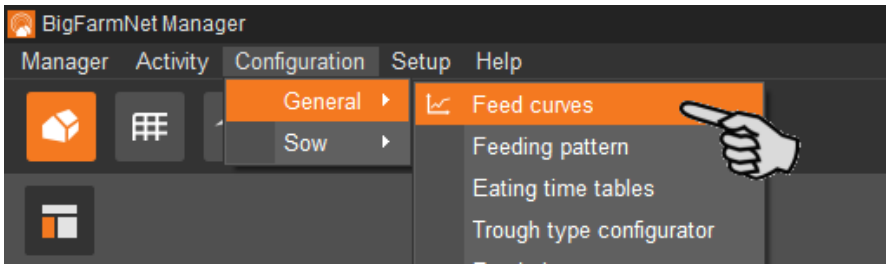
8. Configure additional settings in the lower part of the window under the corresponding tabs.

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

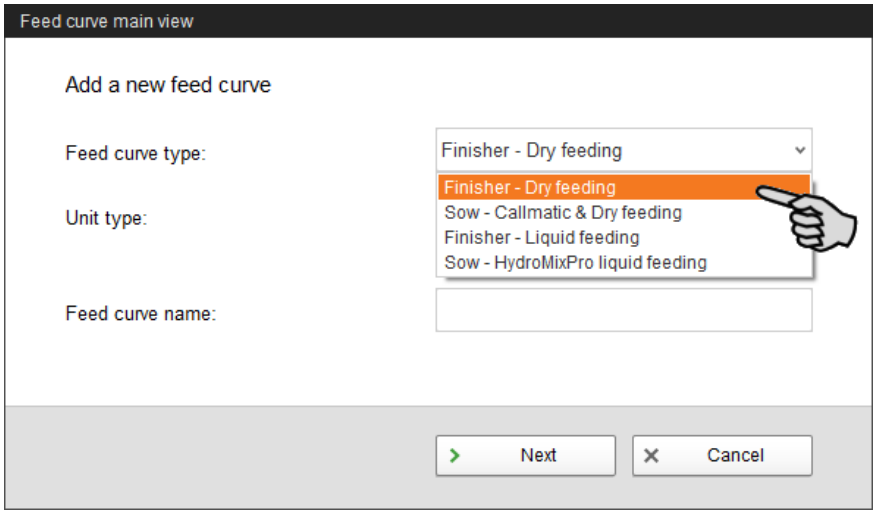
1. In the menu "Configuration" > "General", click on "Feed curves".



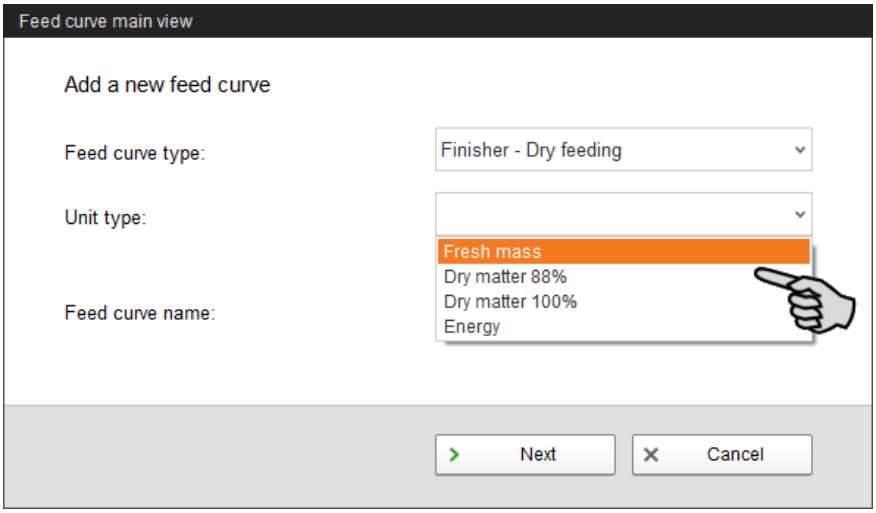
2. In the next dialog window, click on "Add".

   You can edit, copy or remove created feed curves later on, if necessary.

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

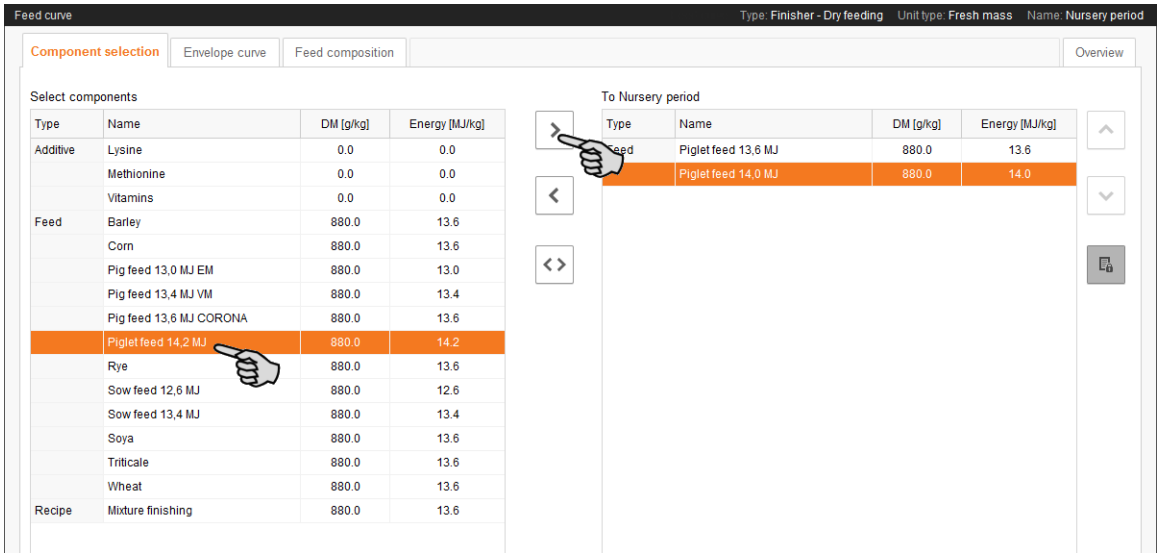


4. Select the unit type and enter a name for the feed curve.



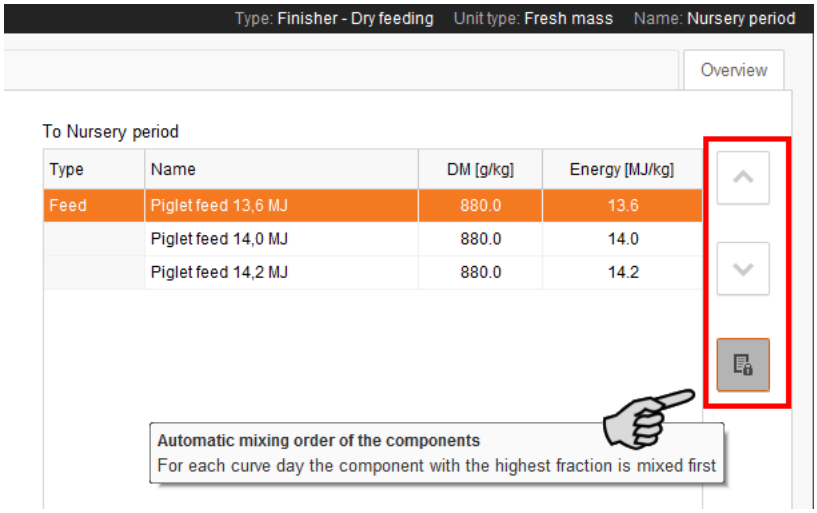
5. Click on "Next".
6. From the component list on the left, select the components for your feed curve by either double clicking on the component in the list or by clicking on the arrow button.

   The component list includes all feed components, additives, recipes and premix recipes you have created.



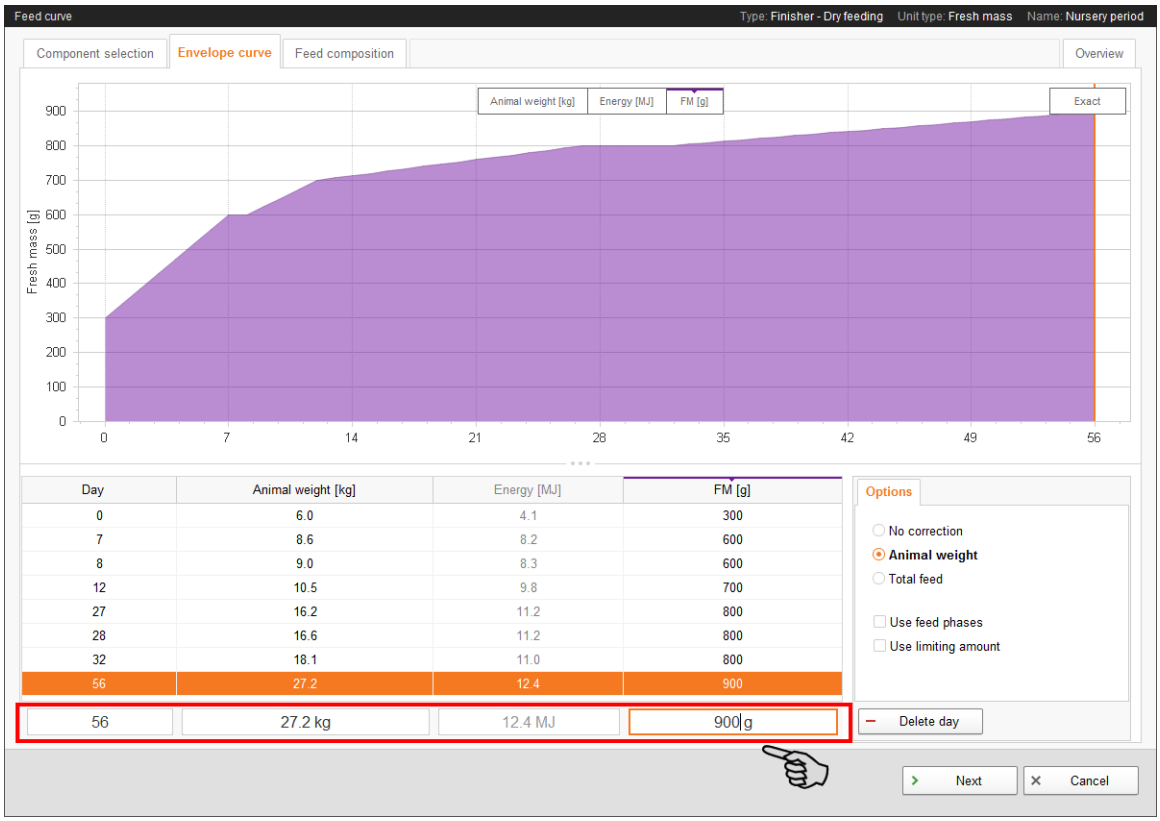
7. If necessary, define an order for the components.

   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.

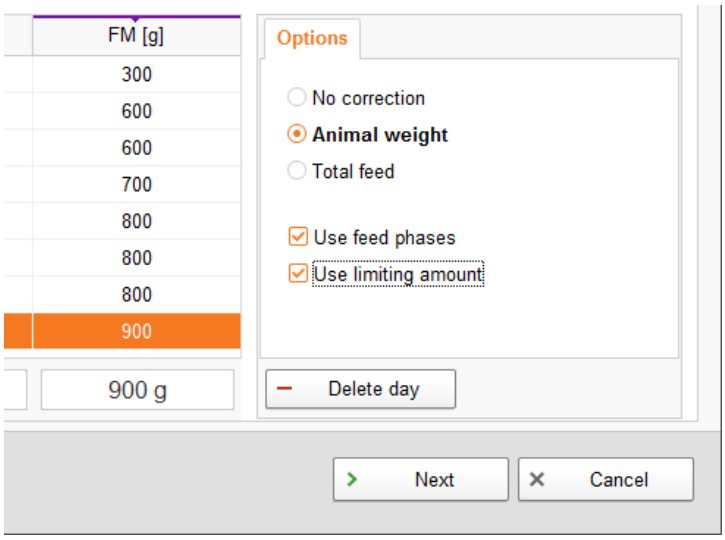


8. Click on "Next".
9. Define the feed curve under the tab "Envelope curve".
   a) Enter the curve day and the corresponding units such as animal weight and feed amount in the input fields below the table.
   b) Press Enter after you have determined a time period for the curve.
   c) Continue by entering further curve days.

      The curve in the diagram will take shape with each curve day you add.



10. In the pane "Options" in the bottom right corner, select one of the following feeding modes:



- **No correction** means that the animals are fed exclusively according to the defined curve days, without considering their weight development.
- **Animal weight** means that the animals are fed based on their weight development. The animals can either be weighed manually or using the TriSort sorting scale. Weights determined by TriSort are recorded automatically and can be viewed under the parameter **Pig weight** in the livestock record. If you weigh the animals manually, enter the determined weights in the livestock record under **Curve day weight**, see chapter 4.2 ”Livestock record”.
- **Total feed** means that a specific total feed amount is set for a time period of the curve. This feed must be dispensed before the curve switches to the next curve day.

You may also activate the following functions:

- **Use feed phases:** Feed phases can be assigned to the individual curve days. Feed 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 feed phases to the feeding times in the Task Manager .
- **Use limiting amount:** Activate this function and limit the maximum feed amount per curve day to prevent the animals from eating too much when feeding by sensor. Enter the values into the column that opens when activating this function.

11. Click on "Next" after you have completed all inputs.

12. Define the percentage share of the different components for one curve period under "Feed composition". The fractions always add up to 100 %.

a) Click on the desired curve day in the list.

   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.

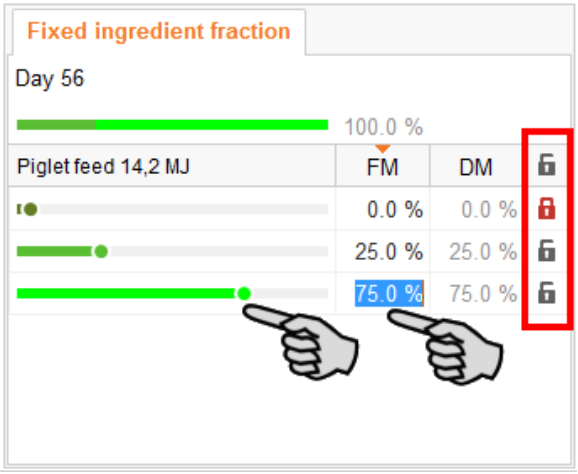
b) Enter the percentage directly into the input field under "Fixed ingredient fraction".

   OR:

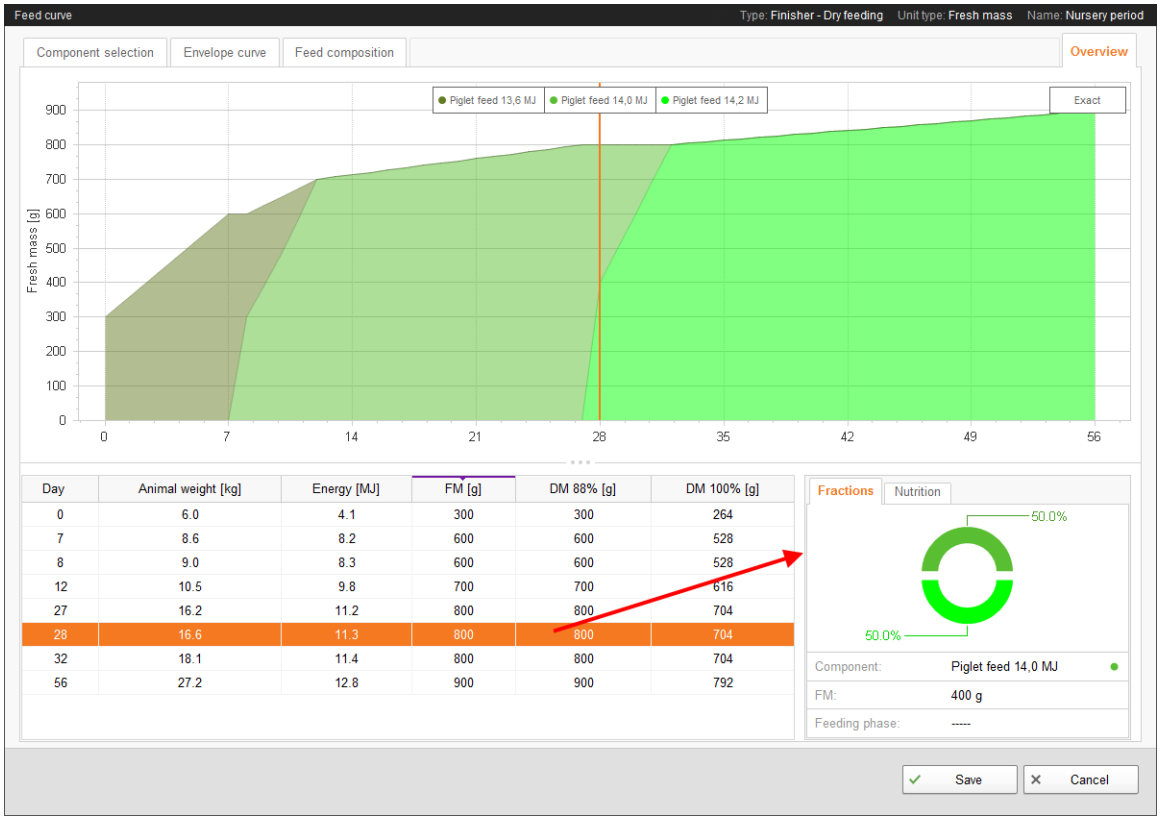
   Use the colored line to change the value. Click on the dot and hold the mouse button. Use the mouse to adjust the length of the colored line and thus the percentage.

c) If there are more than two components, click on the padlock icon to fix fractions. Such locked values will not change when defining further fractions.

DM 88% [g]	DM 100% [g]
300	264
600	528
600	528
700	616
800	704
800	704
800	704
900	792



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



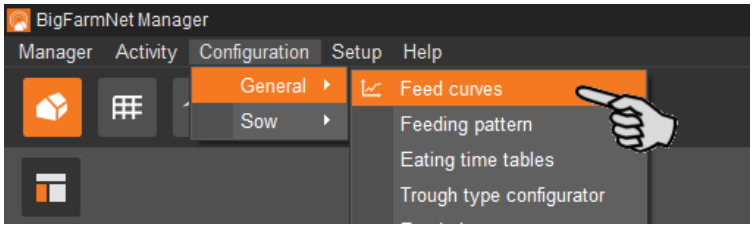
This tab shows a summary of the feed curve you created. Use the overview to verify your settings. It is, however, not possible to make any changes here.

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

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

2.6 Defining a feed curve for liquid feed

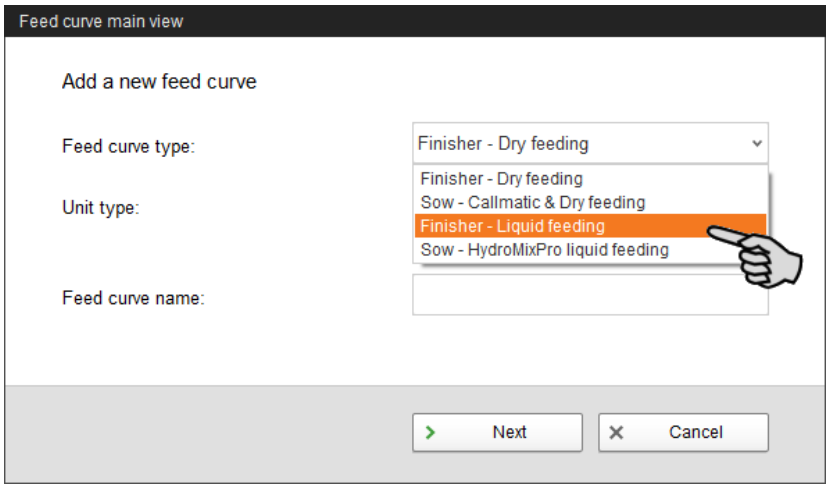
1. In the menu "Configuration" > "General", click on "Feed curves".



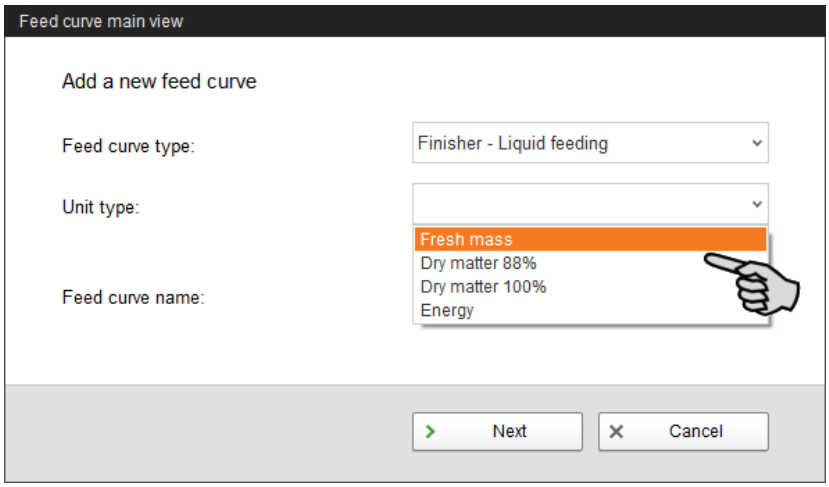
2. In the next dialog window, click on "Add".

   You can edit, copy or remove created feed curves later on, if necessary.

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

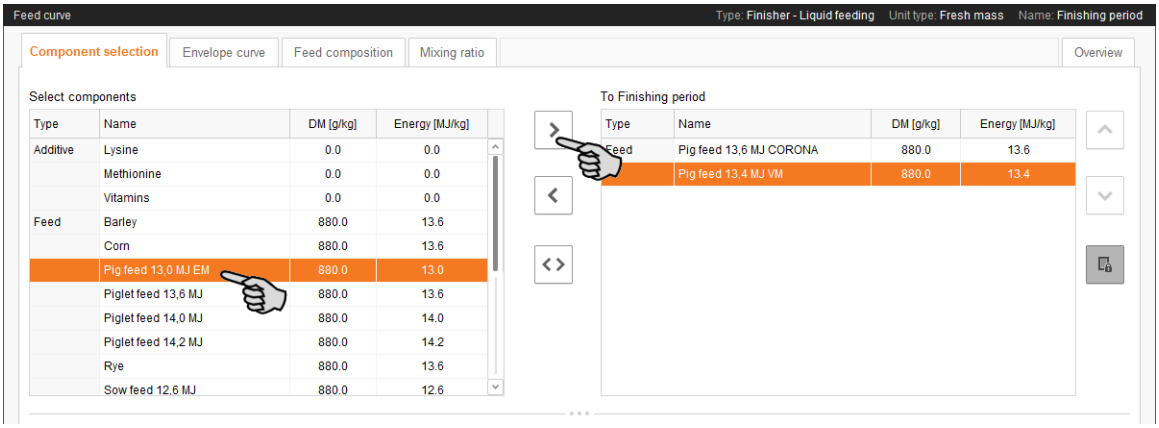


4. Select the unit type and enter a name for the feed curve.



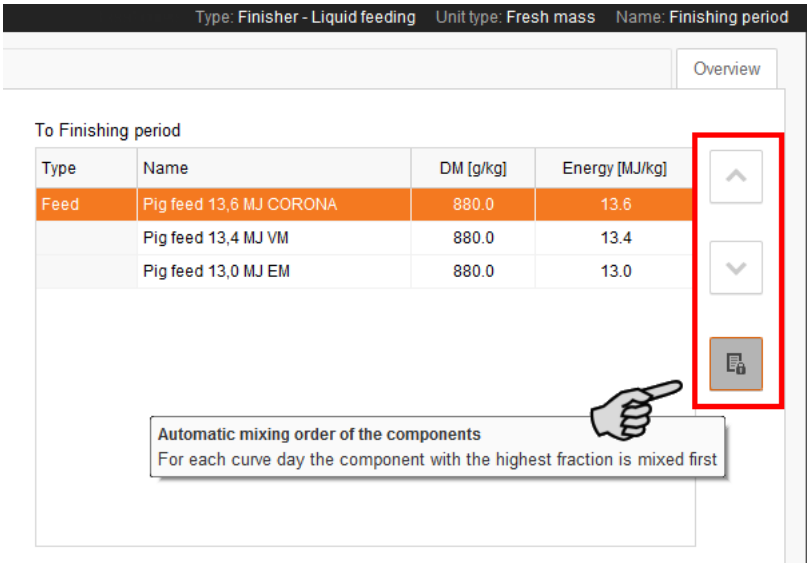
5. Click on "Next".

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.

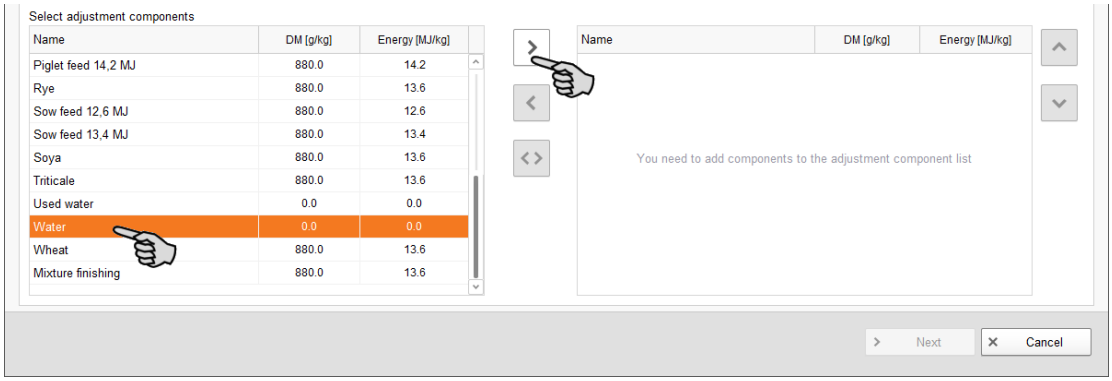


7. If necessary, define an order for the components.

   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.

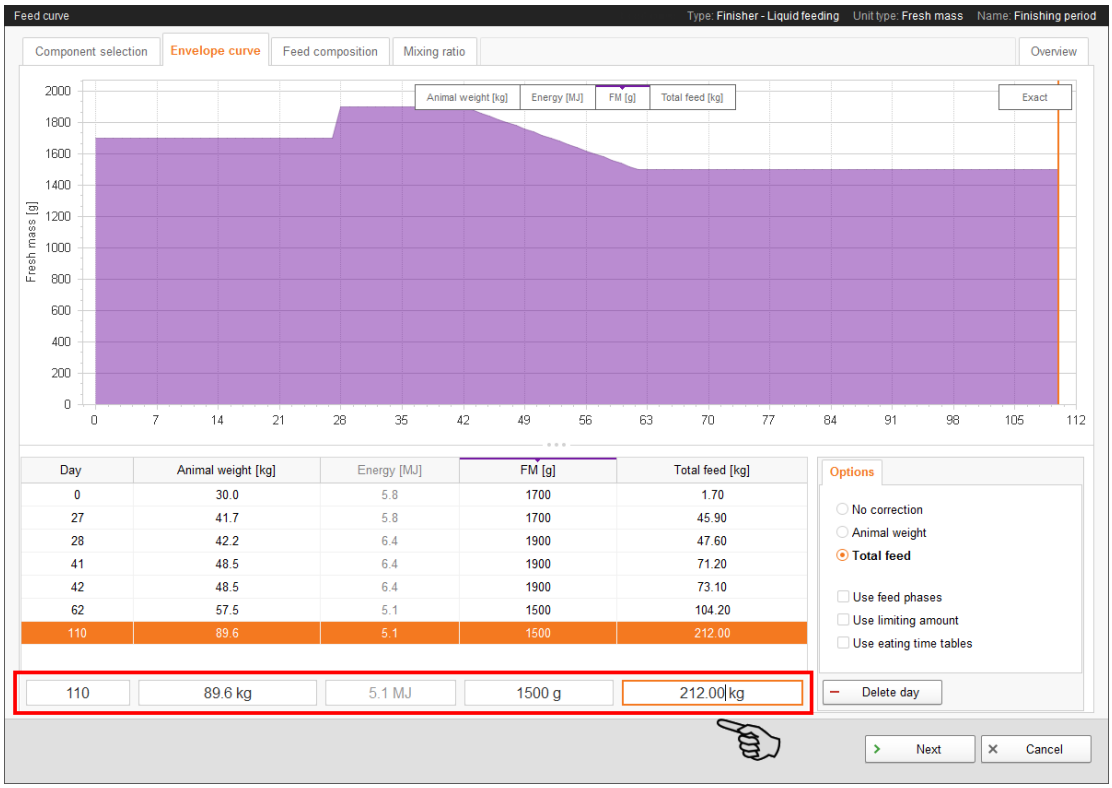


8. From the component list in the lower left-hand part of the window, select the adjustment components either by double-clicking on the component in the list or by clicking on the arrow pointing to the right.

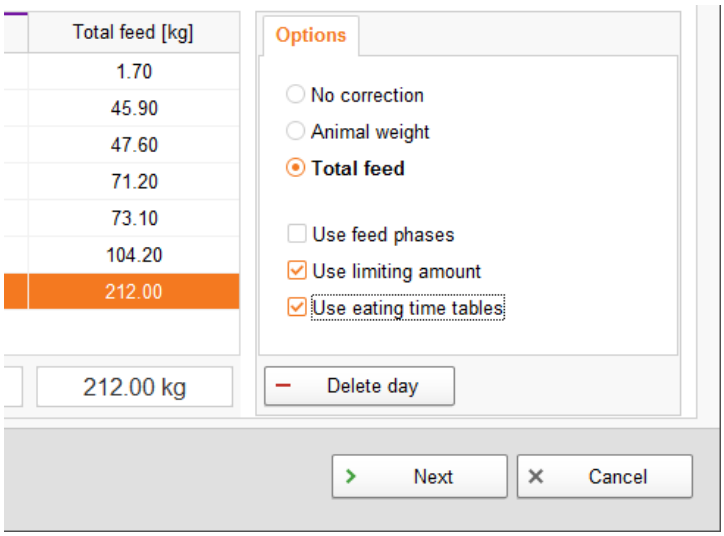


9. You may also define an order using the arrows pointing upwards and downwards, if necessary.
10. Click on "Next".
11. Define the feed curve under the tab "Envelope curve".
    a) Enter the curve day and the corresponding units such as animal weight and feed amount in the input fields below the table.
    b) Press Enter after you have determined a time period for the curve.
    c) Continue by entering further curve days.

    The curve in the diagram will take shape with each curve day you add.



12. In the pane "Options" in the bottom right corner, select one of the following feeding modes:



– **No correction** means that the animals are fed exclusively according to the defined curve days, without considering their weight development.
– **Animal weight** means that the animals are fed based on their weight development. The animals can either be weighed manually or using the TriSort sorting scale. Weights determined by TriSort are recorded automatically and can be viewed under the parameter **Pig weight** in the livestock record. If you weigh the animals manually, enter the determined weights in the livestock record under **Curve day weight**, see chapter 4.2 ”Livestock record”.
– **Total feed** means that a specific total feed amount is set for a time period of the curve. This feed must be dispensed before the curve switches to the next curve day.

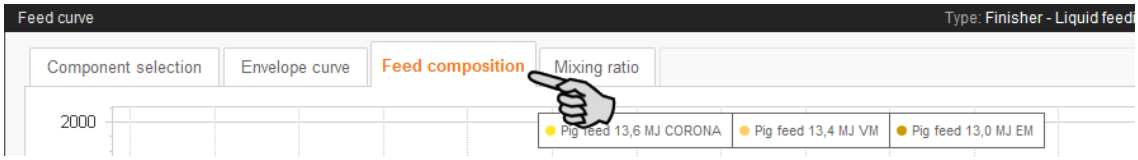
You may also activate the following functions:

– **Use feed phases:** Feed phases can be assigned to the individual curve days. Feed 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 feed phases to the feeding times in the Task Manager .
– **Use limiting amount:** Activate this function and limit the maximum feed amount per curve day to prevent the animals from eating too much when feeding by sensor. Enter the values into the column that opens when activating this function.

– **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.
14. Define the percentage share of the different components for one curve period under "Feed composition". The fractions always add up to 100 %.



a) Click on the desired curve day in the list.

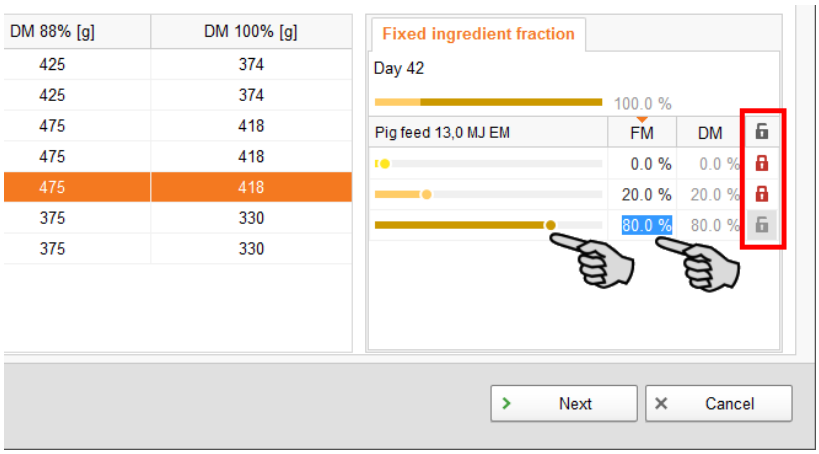
   You can also edit multiple curve days at the same time: Press and hold down the Ctrl key. Click on all curve days that should have the same percentage.

b) Enter the percentage directly into the input field under "Fixed ingredient fraction".

   OR:

   Use the colored line to change the value. Click on the dot and hold the mouse button. Use the mouse to adjust the length of the colored line and thus the percentage.

c) If there are more than two components, click on the padlock icon to fix fractions. Such locked values will not change when defining further fractions.



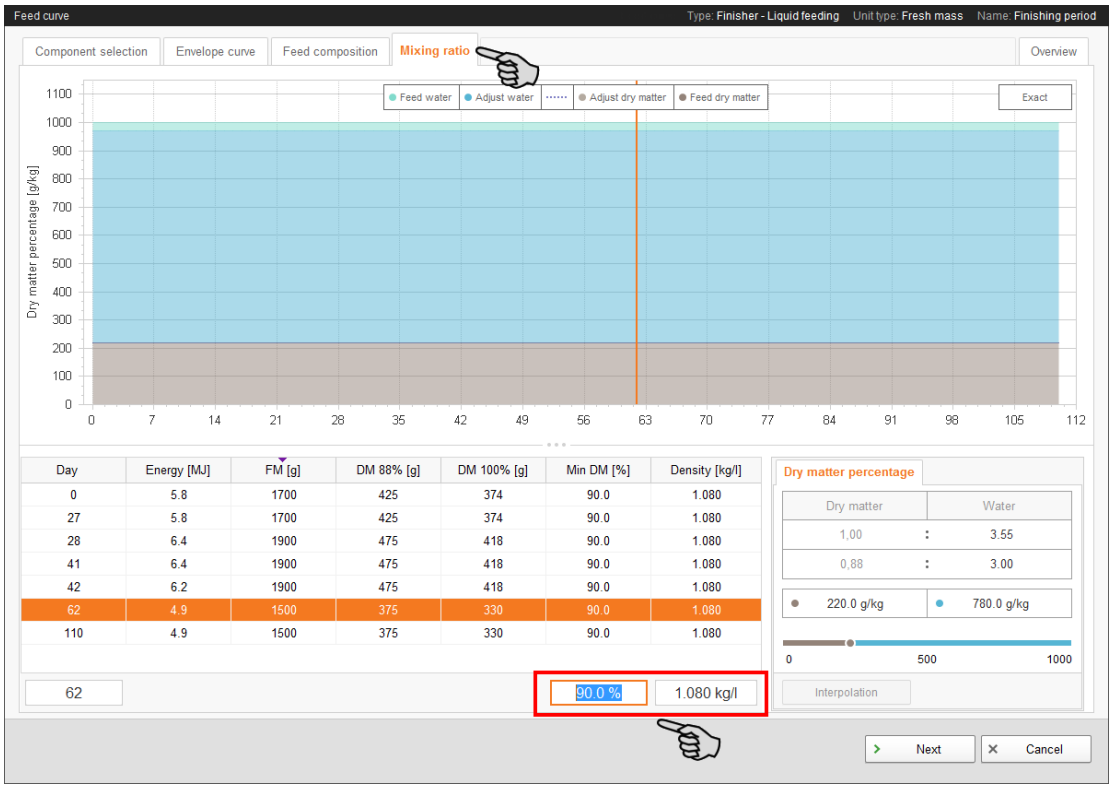
15. Under the tab "Mixing ratio", define the dry matter (feed) and water percentages for the corresponding curve period.

    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.

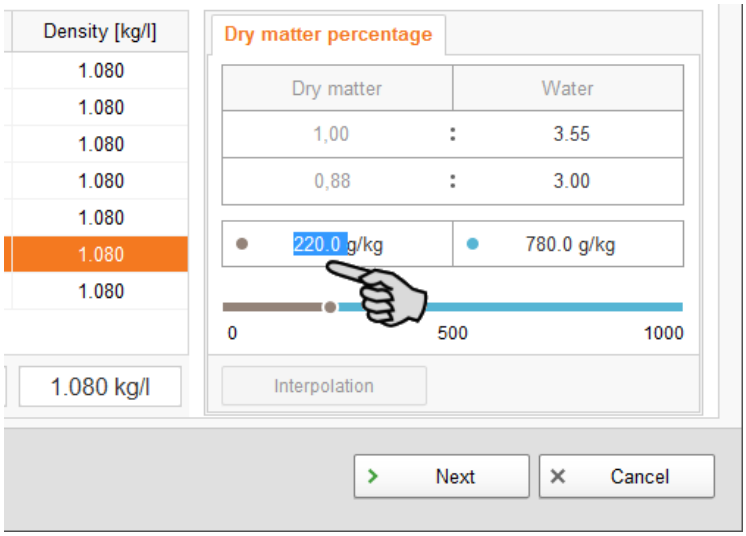
    b) Enter the minimum dry matter percentage (Min DM) into the input field below the respective column.

    c) Enter the density into the input field below the respective column, if necessary.

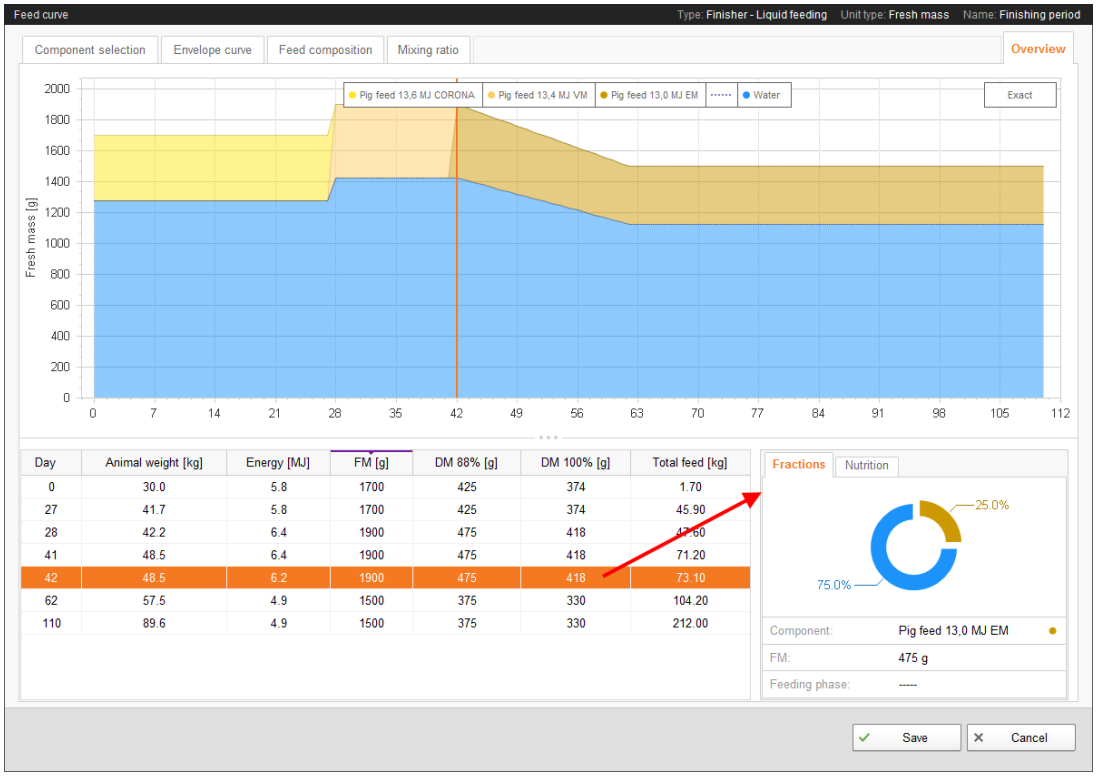


    d) In the pane "Dry matter percentage", enter either the value for dry matter or for water.

    The other value and the ratio are calculated automatically.



16. 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.

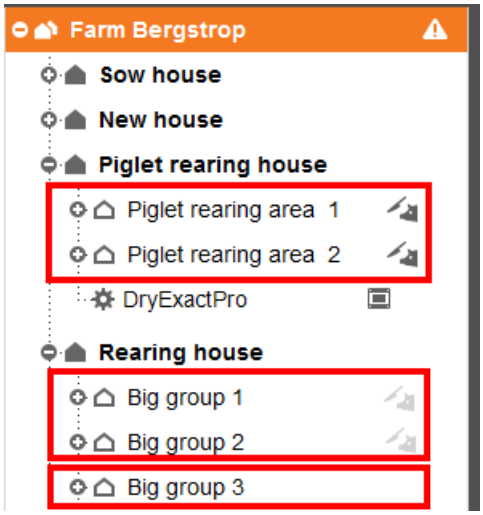
Click on the individual curve days to see the corresponding information in the "Fractions" window, and the nutritional values under the "Nutrition" tab.

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

3 Moving animals

Moving animals means, for the Finishing Manager, moving animals in or out or to another location, as well as and marking dead animals. All animal movements are documented in the tab of the same name, see chapter 4.5 ”Animal movements”.

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



- Dark gray finisher icon:

  There are currently animals in the area / section / pen.

- Light gray finisher icon:

  Animals were in the section / area / pen and have been moved out or moved to another location. The area / section / pen is currently empty.

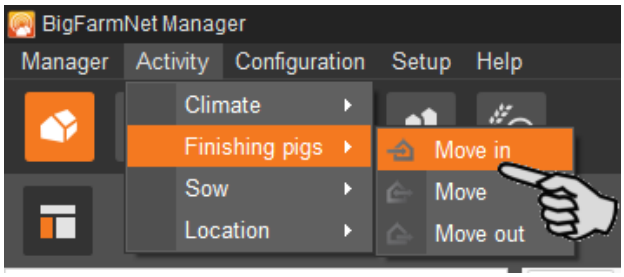
- No finisher icon:

  First option: The area / section / pen is empty. No animals have been in the area / section / pen before.

  Second option: The section /area contains both sows and finishers (not applicable for pens).

3.1 Moving animals in

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



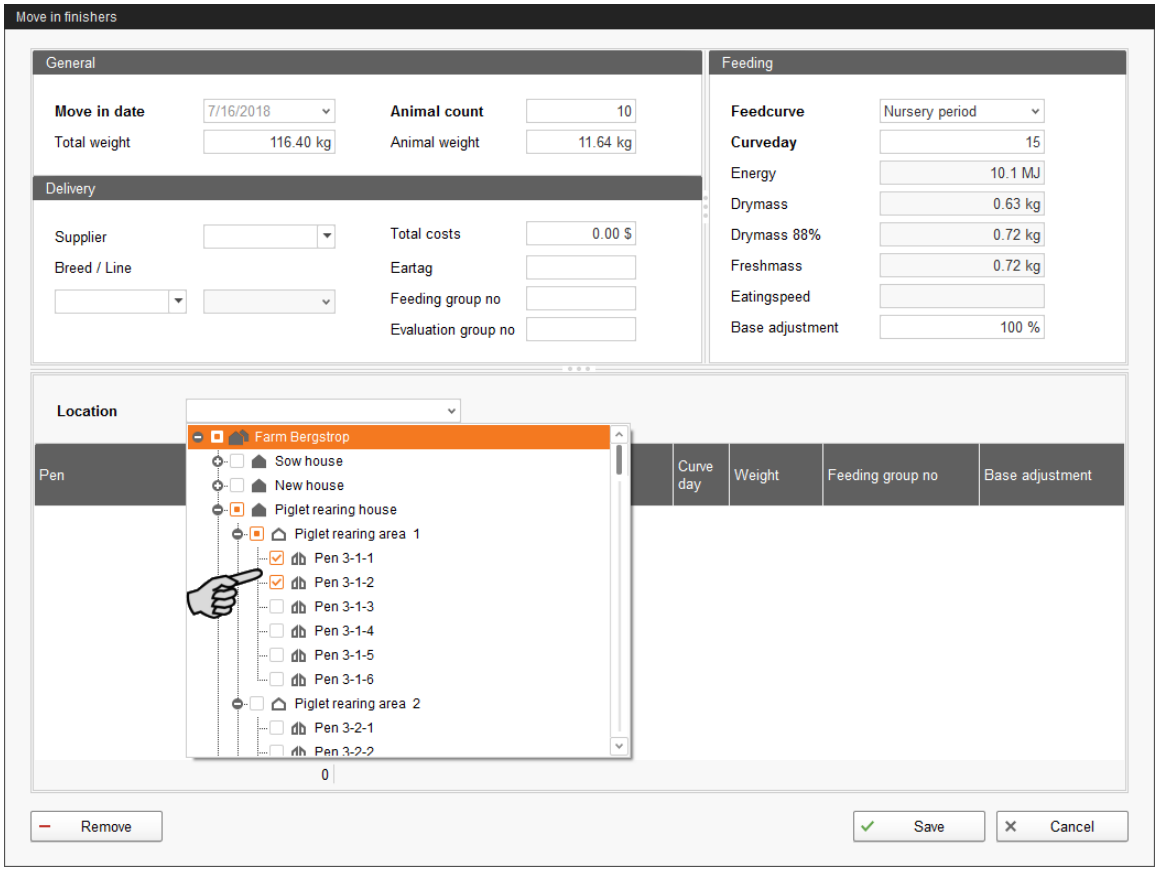
2. Provide (no less than) the following information:
   - The field **Move-in date** is automatically filled with today's date.
   - **Animal count** can be one animal or a group of animals with the same characteristics.

– The **Feed curve** must have been created before moving animals in, see chapter 2 ”Feed curve”.

– The **Curve day** is calculated automatically based on the feed curve after you have entered the **Total weight** of all animals or individual **Animal weights**.

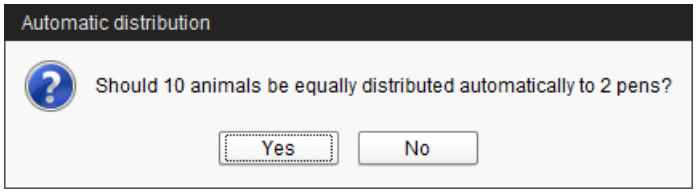
As soon as you have entered all bold mandatory information, the **Location** can be edited.

3. Select the correct move-in location from the farm structure under **Location**. Select multiple locations if you want to distribute the animal count to different locations.



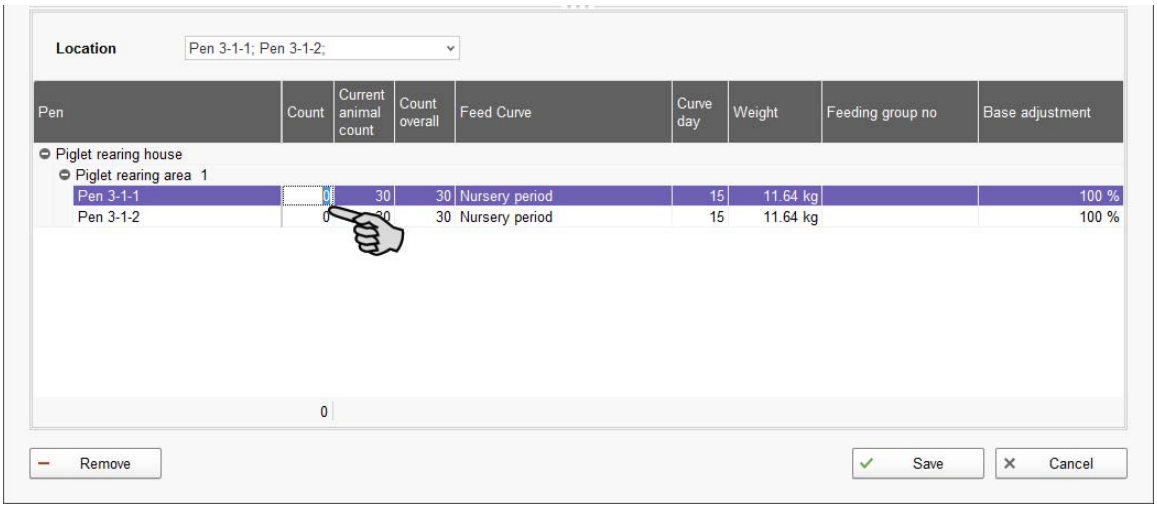
4. Confirm your selection by pressing Enter or by clicking into any empty space with the mouse.

5. Decide whether you want to distribute the animals equally to the selected locations.



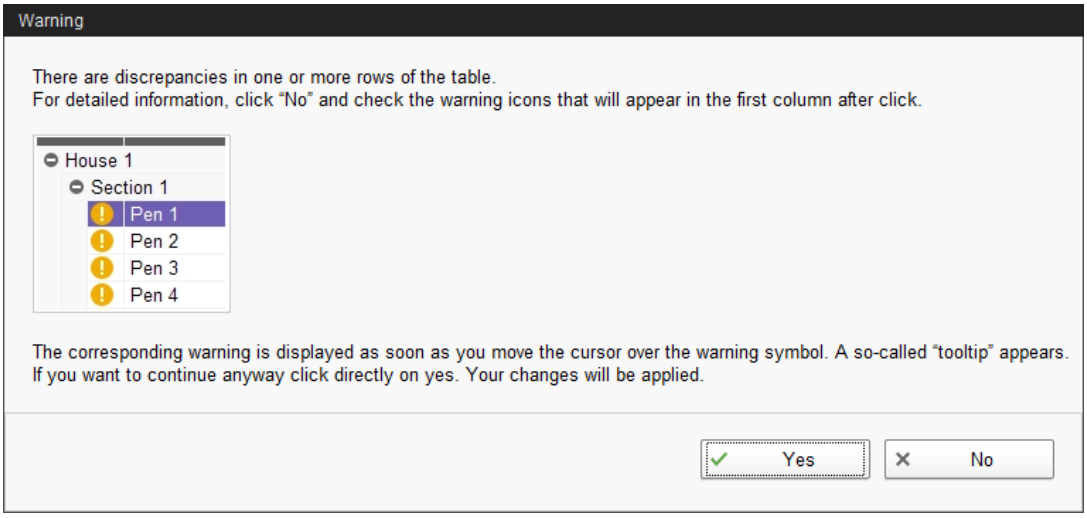
The number of animals to be moved in is displayed in the "Count" column.

If you do not want to distribute the animals equally, fill the column "Count" manually later on. You may add further locations subsequently or remove them by clicking on the button "Remove".



6. Click on "Save" to apply all data and to complete the moving-in process.

   The following message shows up if the system registers discrepancies during the moving-in process:



7. If you want to check the warning(s), click on "No". The move-in dialog remains open and warning icons indicate the locations with discrepancies.

   If you want to use your inputs without further checking, click on "Yes". The process is completed and the move-in dialog closes.

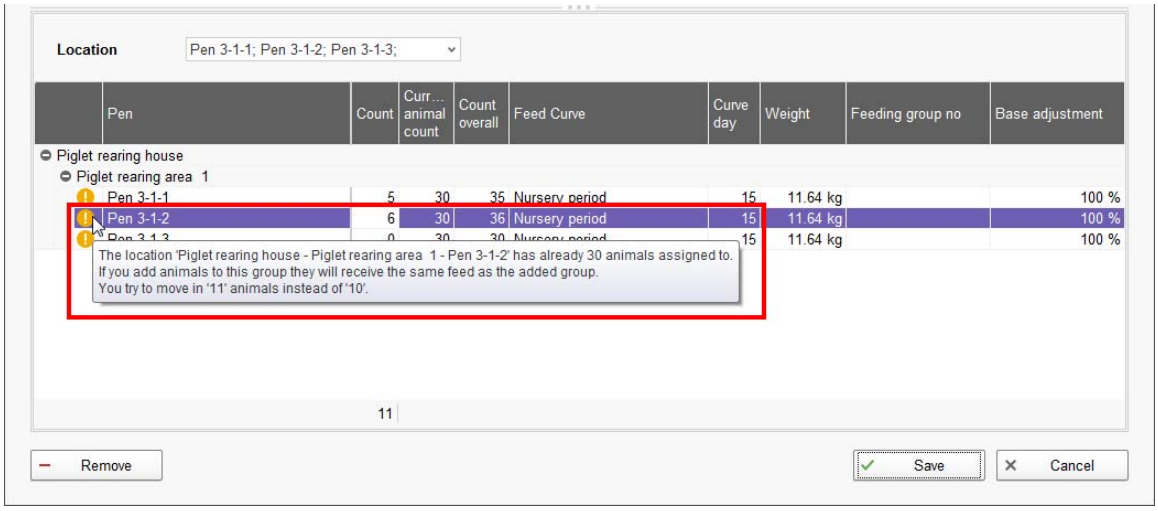
8. Move the mouse pointer over the warning icons to display each warning.

   Warnings come up for example when you

– try to move in more or less animals than indicated under **Animal count**.

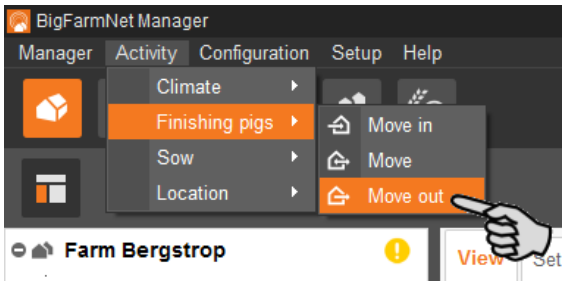
– move animals into a location which already has animals. The characteristics of the animals already in the location may differ from those of the new animals. The settings of the new animals are transferred to the existing ones.

– have not assigned any animals to a location.



3.2 Moving animals out

1. In the menu "Activity" > "Finishing pigs", click on "Move out".



2. The following editing options are available:

– By default, all locations are selected in the dialog window. Click on one location to de-select all other locations. You may check the box "Select all animals" again at any time.

– You may select a location and edit it individually, allowing you to input values directly into the table.

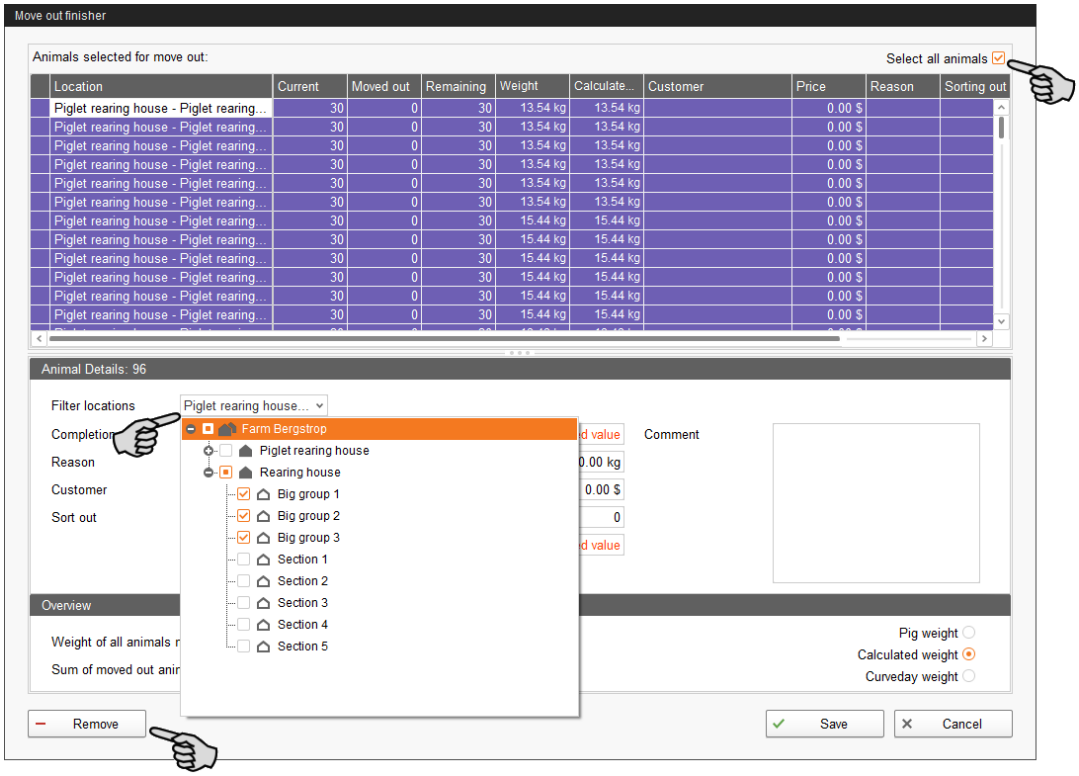
	When you have selected a location, use the arrow keys on your keyboard to move the selection up and down.

– You may select and edit multiple locations at the same time if you want to move out animals with identical characteristics from different locations. You can only input the corresponding values in the lower area under "Animal details". Some parameters show mixed values at first.

– You may filter the correct location(s) before editing so only these locations are displayed in the table.

– You may remove entire locations by clicking on the button "Remove". These locations can no longer be selected for moving out afterwards. Use this function to prevent animals from being moved out of specific locations by accident.

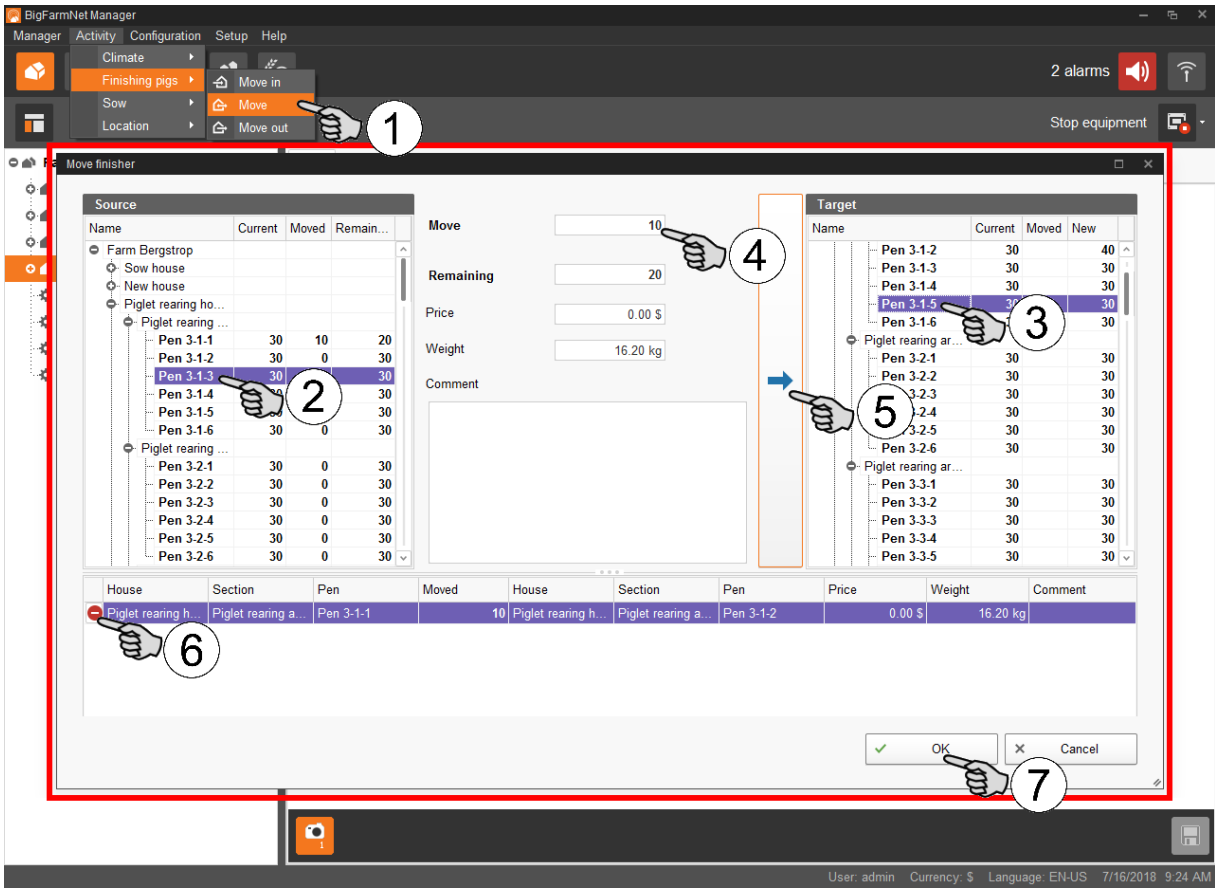
– Values can be input either for the moved-out animals (**Moved out)** or for the remaining animals (**Remaining**). The system automatically calculates the other value.



3. Click on "Save" to apply all data and to complete the moving-out process.

For other options to move out individual animal groups, see chapter 4.2.3 ”Editing activities”.

3.3 Moving animals to another location



1. In the menu "Activity" > "Finishing pigs", click on "Move".

   This opens the "Move finisher" dialog.

2. Select the location from which you want to remove pigs on the left-hand side under "Source".

3. Select the location to which you want to add the pigs on the right-hand side under "Target".

4. Enter the correct number of animals under **Move**.

   The system automatically calculates the remaining number of animals and the value under "Source" is adjusted correspondingly.

5. Click on the arrow pointing to the right to carry out the move.

   The move is indicated in the lower part of the window.

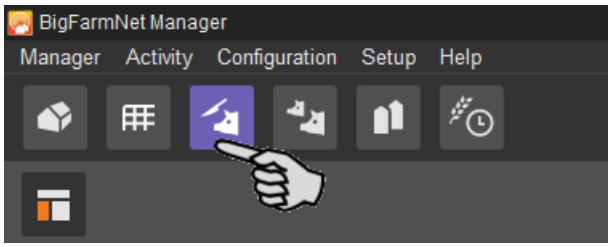
6. To reverse the move, click on the red button.

7. Click on "OK" to finish the move.

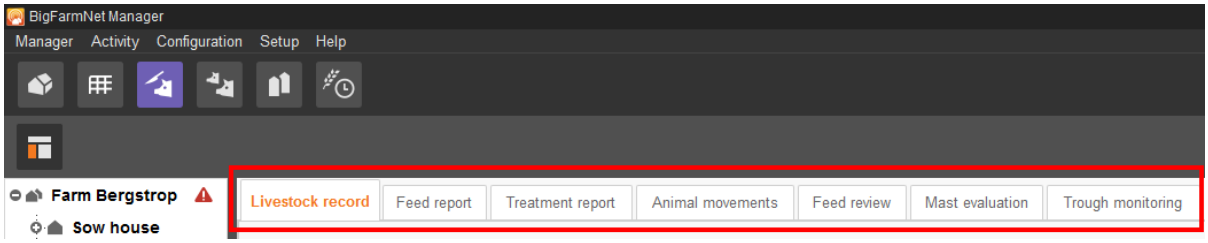
For other options to move individual animal groups to another location, see chapter 4.2.3 ”Editing activities”.

4 Managing the finishing pigs

Open the Finishing Manager by selecting the management area.



Access the following areas of the Finishing Manager by clicking on the corresponding tabs:

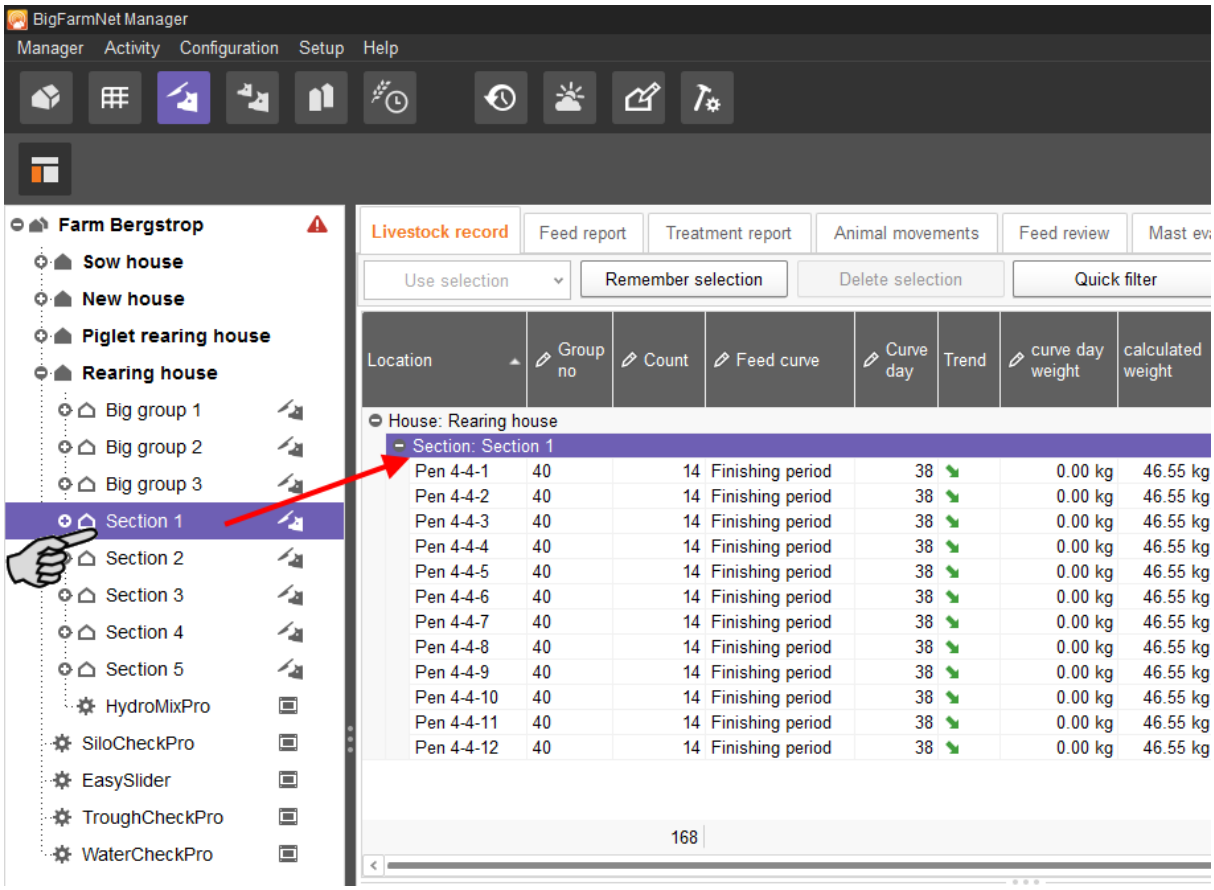


- The **livestock record** provides an overview of the current animal herd and its feeding. In the livestock record you can manage activities such as animal moves or medical treatments, see chapter 4.2 ”Livestock record”.
- The **feed report** lists all feeding times and feed amounts per feeding time of your animal groups in detail, see chapter 4.3 ”Feed report”.
- The **treatment report** includes all data on medical treatments of your animals, It also provides information on blocking periods during which the animals may not be sold or slaughtered due to administration of medication, see chapter 4.4 ”Treatment report”.
- Under **animal movements**, you can find information about all moving-in, moving and moving-out processes as well as dead animals, see chapter 4.5 ”Animal movements”.
- The **feed review** provides an overview of your animals' eating behaviour in the past seven days, see chapter 4.6 ”Feed review”.
- Use the **finishing evaluation** to compare feed costs with the weight gain of your pigs to check how the batch is performing, see chapter 4.7 ”Finishing evaluation”.
- The **trough monitoring** tab provides information on the status (empty or not empty) of your sensor troughs. This tab also has information on the eating speed, the eating time and the last feeding according to the sensor, see chapter 4.8 ”Trough monitoring”.

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 animals at this location in the table.

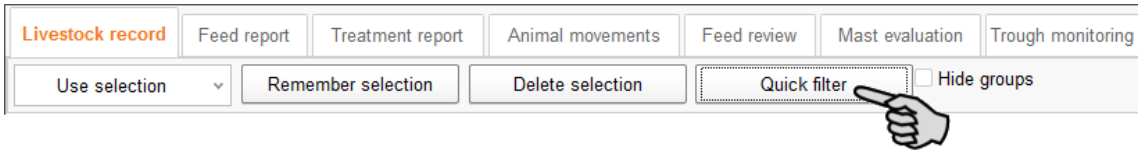


	Each of the following filter settings only shows the animals of the selected location. Click on the farm level in the farm structure to see all pigs on the farm.

4.1.2 Quick filter

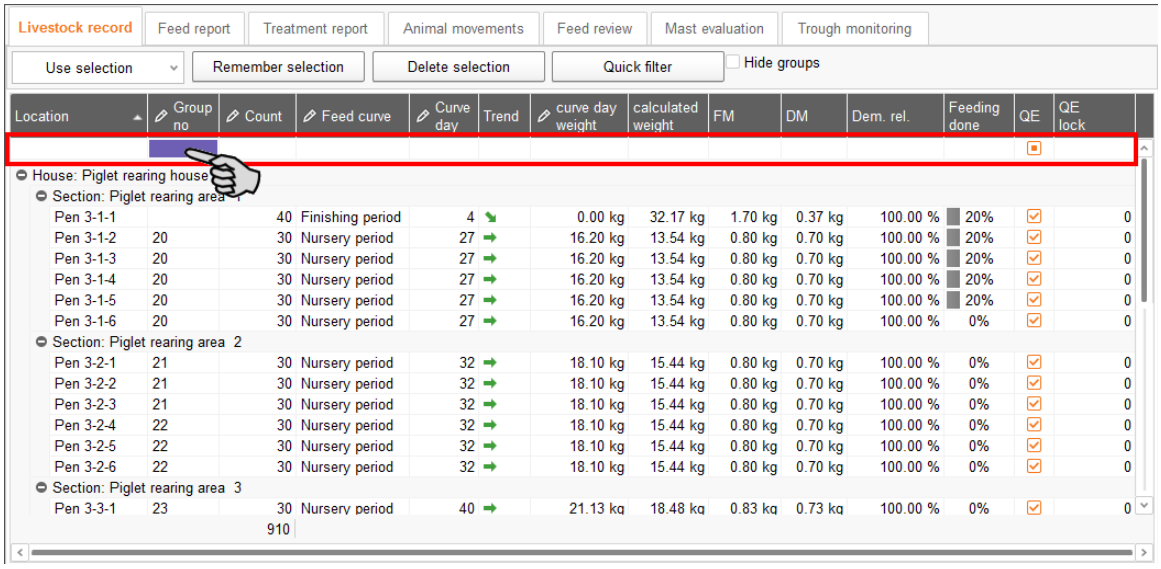
All areas except for the finishing evaluation and the trough monitoring tabs have a quick filter function to filter specific animals groups.

1. In the upper bar, click on the "Quick filter" button to activate the quick filter.



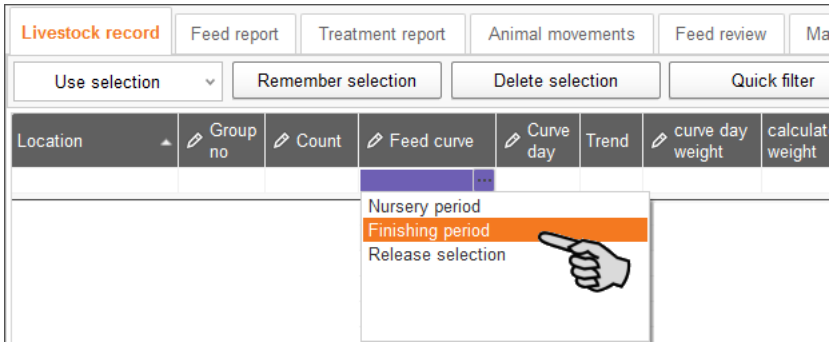
An additional line appears below the head line of the table.

2. In this additional line, click into the cell of the correct parameter.



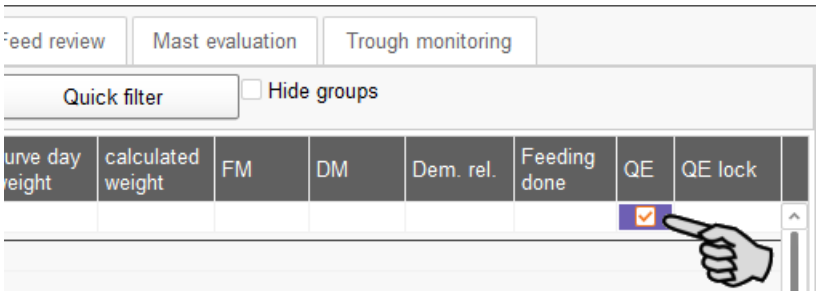
– For parameters with values, e.g. "Group no." or "Curve day", enter the corresponding number.

– For parameters that refer to saved data, such as "Feed curve" or "Valve", make the necessary selection.



– Use the parameters "QA" and "QA lock" to filter animal groups that are blocked until moving out because they have been medicated.

Click into the "QA" check box until the required information is displayed:



Only animal groups **without blocking period** are displayed.

All animal groups are displayed, irrespective of blocking periods.

Only animal groups **with blocking period** are shown.

Enter the number of days under "QA lock". This shows the animals blocked for the respective period.

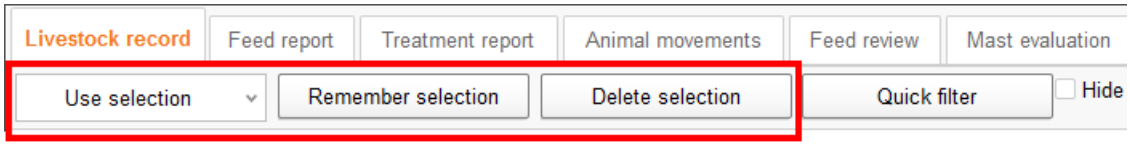
3. To cancel the quick filter, click on the "Quick filter" button again.

4.1.3 Filter result

After filtering, you may save the desired selection to retrieve it later on. With this option, you can follow the development of a specific animal group during the grow-out. You may also remove saved selection entries again.

These functions can be used via the buttons in the upper bar.

- Remember selection
- Use selection
- Delete selection



1. Filter the respective animal groups.
2. Select one or more animal groups.

   More information on multi-selection: see chapter 4.2.4 ”Editing multiple animal groups”.
3. Click on the "Remember selection" button.

4. In the next window, enter a name for the selection and click on "OK".
5. If you want to open a saved selection entry, click on "Use selection" and select the desired entry.
6. If you want to remove a saved selection entry, click on "Remove selection".

   The corresponding selection entry must be selected before it can be removed.

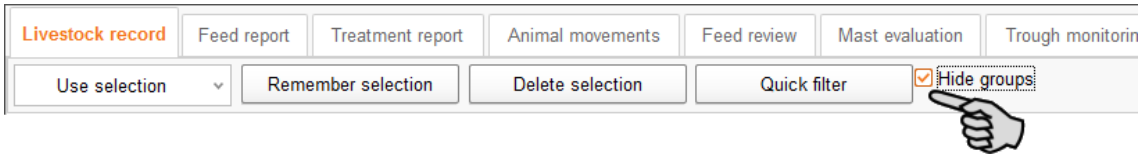
4.1.4 Adjusting views

You may adjust the table view as follows:

- **Hiding groups:**

  By default, the animals are grouped according to their location in the table.

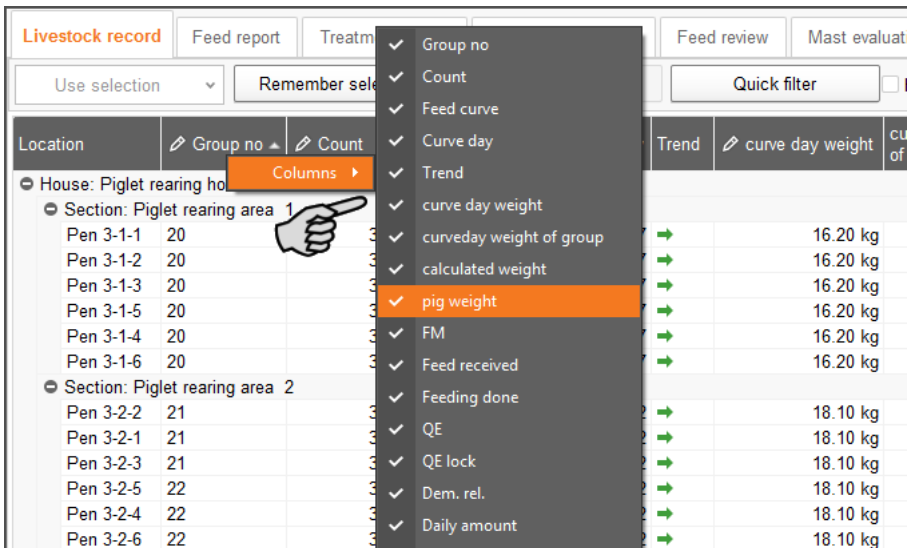
  Check the box "Hide groups" to see the pigs in one continuous list, if necessary.



- **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.

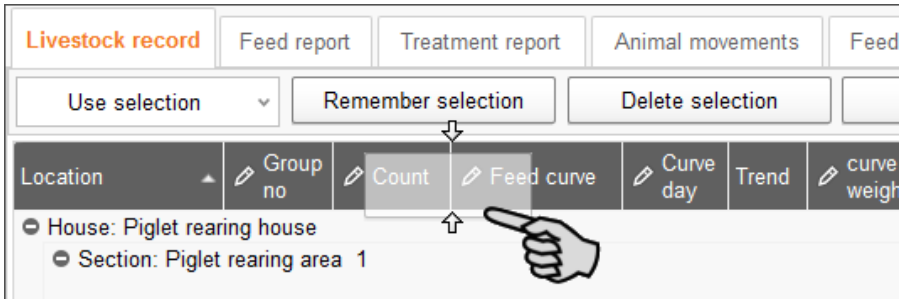


- **Rearranging columns:**

  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 assign the new position.



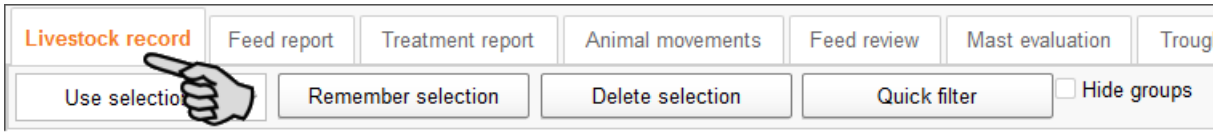
c) Release the mouse button.

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 Livestock record



The livestock record provides an overview of the entire animal herd and its feeding. If you want to view and/or edit specific animal groups, apply a filter first, see chapter 4.1. You may change the values of parameters with a pen icon directly in the table by double-clicking. The parameters are defined as follows:

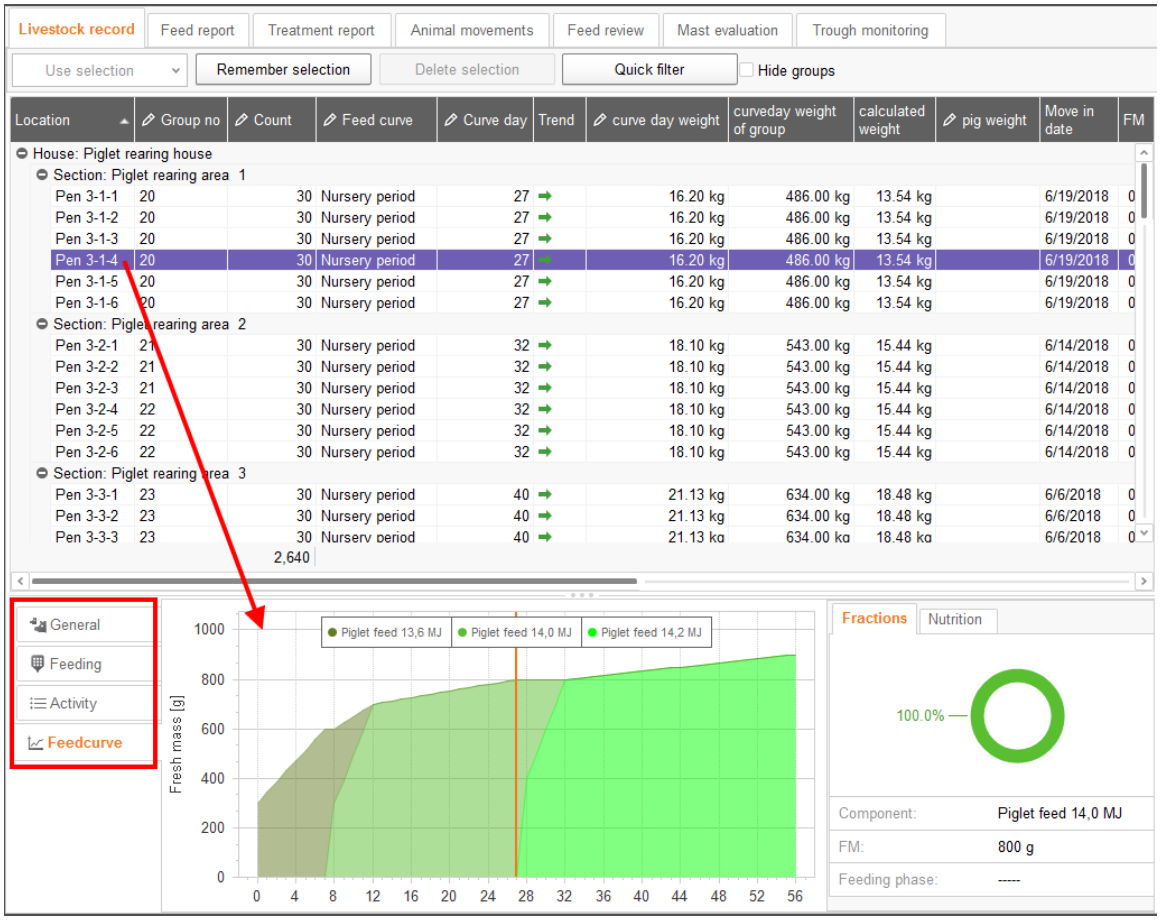
- **Group no.:** The group number can be edited manually to differentiate between animal groups.
- **Count:** The number of animals in the pen.
- **Feed curve:** The feed curve according to which feed is dispensed in the pen.
- **Curve day:** The curve day currently valid for the animals in the pen.
- **Trend:** The trend indicates the animals' eating behaviour, based on the feed curve.
  - Pigs request less feed.
  - The eating behaviour corresponds to the feed curve.
  - Pigs request more feed.
- **Curve day weight:** The weight that has been defined for the current curve day in the feed curve.
- **Curve day weight of group:** This weight is calculated by multiplying the values "Curve day weight" and "Count", i.e. the number of animals.

- **Calculated weight:** This weight is calculated based on the feed consumption that is defined in the feed curve. It may differ from the "Curve day weight" if more or less feed than defined in the feed curve is dispensed due to manual adjustments. This weight is important for animal groups that are fed via a feed curve that is based on the feed amount.
- **Pig weight:** This average weight of the animal group is determined by TriSort. The value is only displayed for pens equipped with TriSort.
- **FM:** This value shows the total daily amount of fresh matter; including added water for liquid feeding systems.
- **Feed received:** This value shows the entire amount of feed a group has received; including water for liquid feeding systems.
- **Feeding done:** This value indicates the percentage of the daily feed amount that has already been dispensed.
- **QE** (quality assurance) provides the following information:
  - – ☑ Animal groups **without blocking period** are displayed.
  - – ☐ Animal groups **with blocking period** are shown.
- **QE lock** indicates for how many more days the animals are blocked.
- **Dem. rel.:** This value provides an overview of the entire feed adjustment. It is calculated by multiplying "Base adj.", "Auto. adj." and "Curr. man. adj.".
- **Daily amount:** This value is calculated by multiplying "FM" and "Count" of the animals.
- **Curr. man. adj.** (current manual adjustment): This value indicates the manual feed adjustment valid for the current day, see chapter 4.2.2 ”Editing the feeding settings”.
- **Base adj.:** This value indicates the constant feed adjustment.
- **Auto. adj.** (automatic adjustment factor): This value indicates the feed adjustment calculated with the eating time correction. This only applies to sensor feeding.
- **Next feeding:** This value shows the entire amount of feed amount that will be dispensed during the next feeding for all animals of a group or pen in kg.
- **Next feeding per animal:** This value shows the amount of feed amount that will be dispensed per animal during the next feeding in kg.
- **Man. adj. factor** (manual adjustment 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.

- **Adjustment start date:** Start of manual feed adjustment.
- **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.
- **Move-in date**
- **Feeding timetable:** This parameter shows the eating time table in use, see chapter 5.6 ”Creating eating time tables”. Eating time tables are connected to "Auto. adj.".
- **Eval. group no.:** This number is assigned manually. This allows evaluating two different animal groups together or evaluating only individual animals of a group.
- **Feeding phase:** This parameter shows the feeding phase in use, chapter 5.5 ”Creating a feed phase”.
- **Days since move-in:** The number of days that have passed since the pigs were moved in.
- **Lock valve:**
  - 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.
- **Fixed feed amount:** Enter the amount of feed amount in kg per feeding for this parameter. The feed curve still defines the composition and the maximum amount of feed.

  Example: A pen should receive 38 kg of feed over 3 feedings, according to the feed curve. The fixed feed amount is set to 20 kg. For the first feeding, 20 kg of feed are dispensed, and another 20 kg during the second feeding. This means that the daily amount of 38 kg is exceeded as early as during the second feeding. No feed will be dispensed during the third feeding for this reason.

- **Remaining time:** Remaining time of the manual feed adjustment.

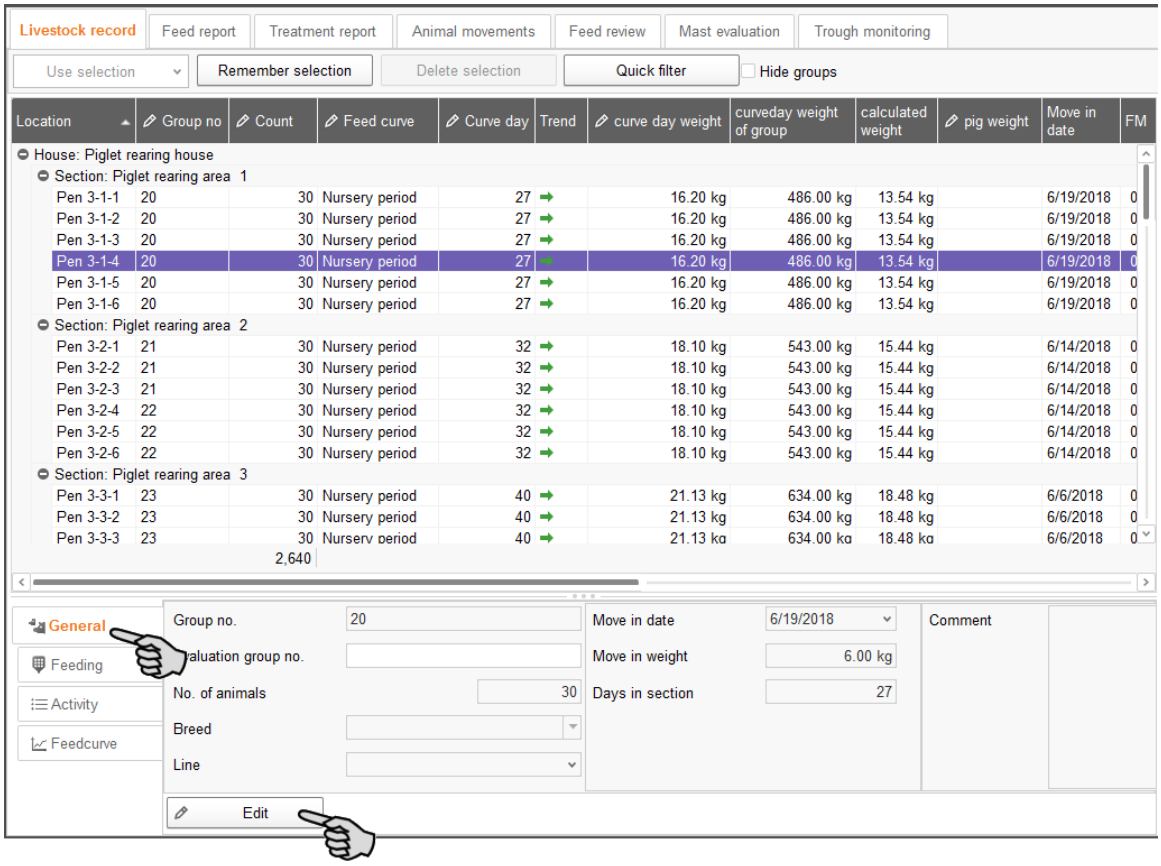


If you select an animal group, the lower part of the application window contains information on the following topics:

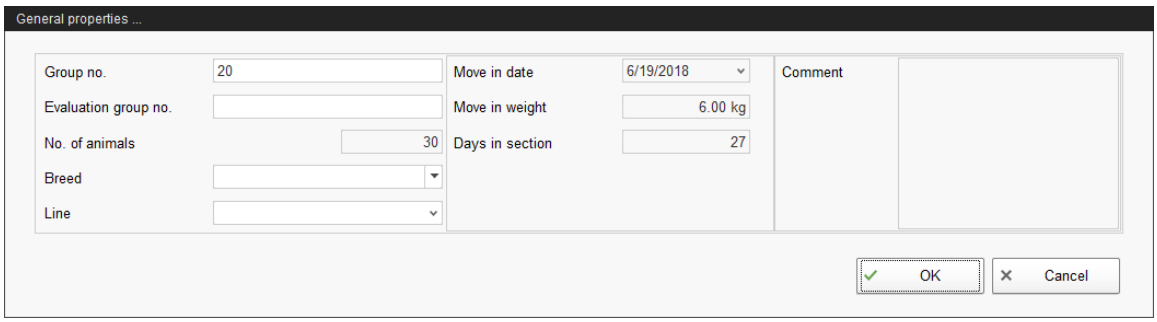
- General, see chapter 4.2.1
- Feeding, see chapter 4.2.2
- Activity, see chapter 4.2.3
- Feed curve, only as a view without options for editing

4.2.1 Changing the general animal data

1. Click on the "Livestock record" tab.
2. Click on the correct animal group in the table to mark it.
3. Under "General", click on "Edit".



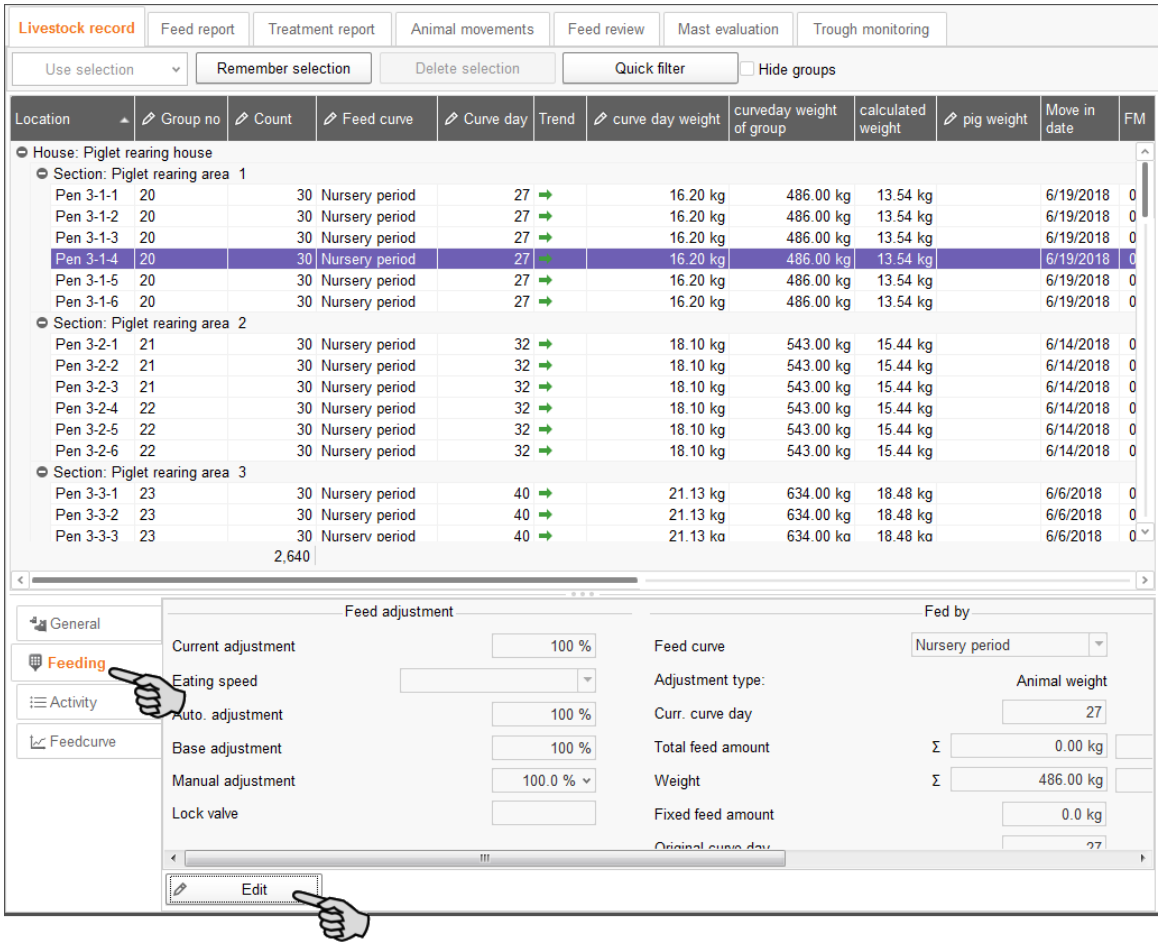
4. Change the data as required in the next dialog window.



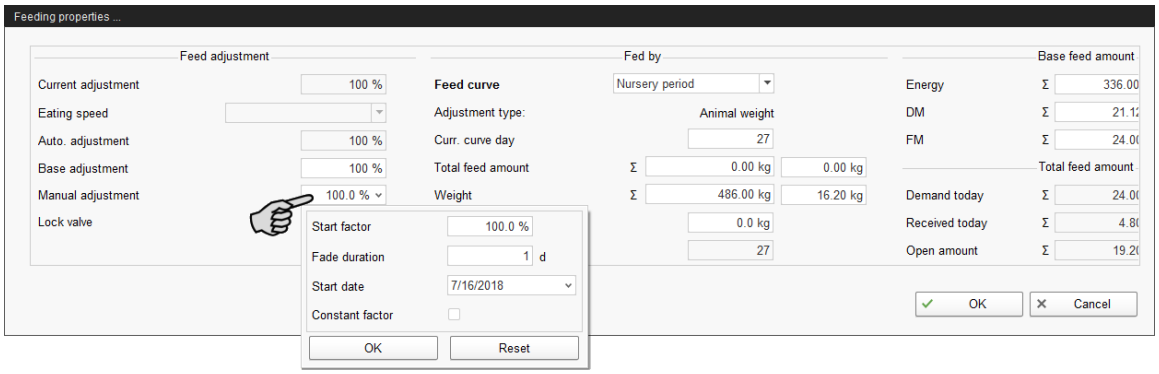
5. Click on "OK" to accept the changes.

4.2.2 Editing the feeding settings

1. Click on the "Livestock record" tab.
2. Click on the correct animal group in the table to mark it.
3. Under "Feeding", click on "Edit".



4. Change the data as required in the next dialog window. If you click into the "Manual adjustment" field, an extended dialog window opens.



Manual adjustment

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

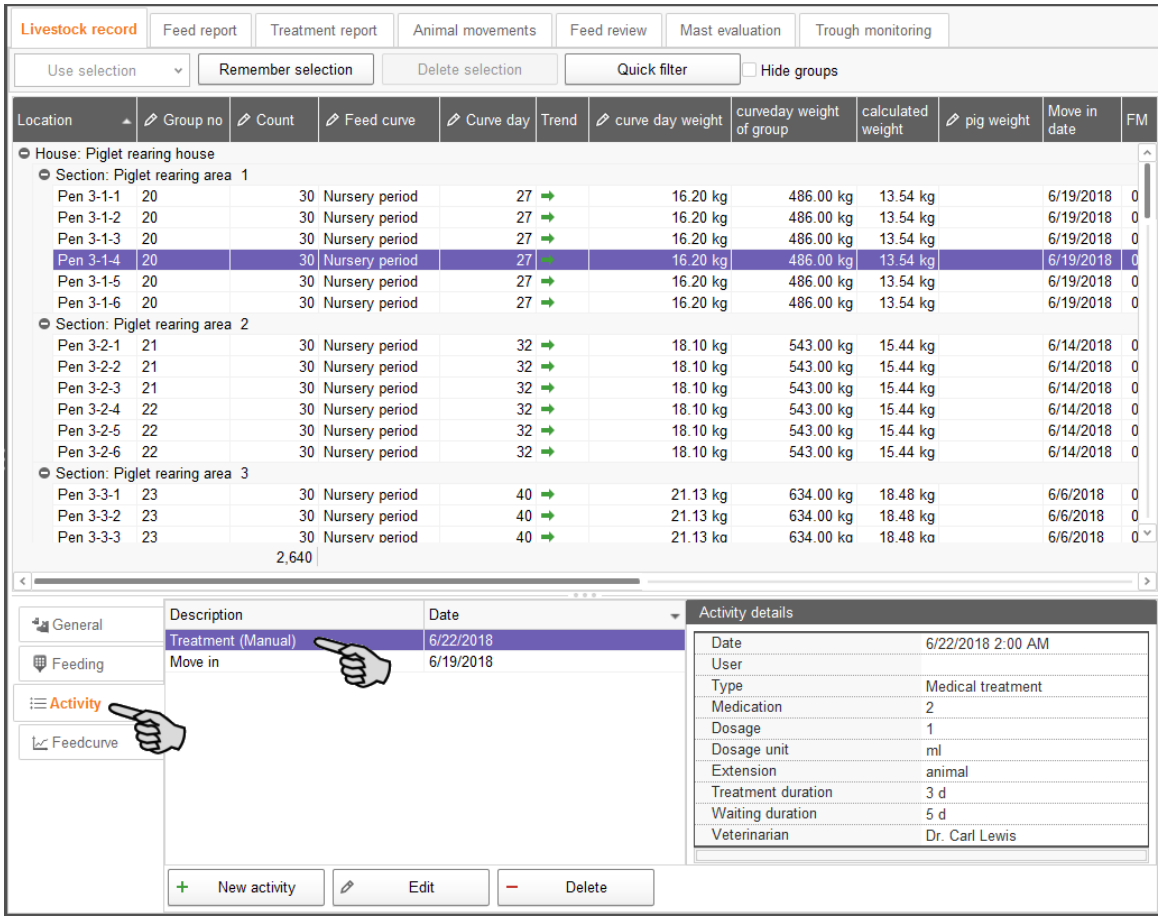
- **Start factor:** Defines by how much (percentage) the daily feed amount should be increased. If you enter 120 %, the animals receive 20 % more feed than defined in the feed curve, starting from the date entered as starting date.
- **Fade duration:** The number of days for which the animals are to 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.
- **Start date:** Start of the increased feed amount
- **Constant factor:** The specification made under "Start factor" is observed constantly for the number of days given under "Fade duration". This means that the animals will receive an increased amount of feed for a specific time period.

5. Click on "OK" to accept the changes.

4.2.3 Editing activities

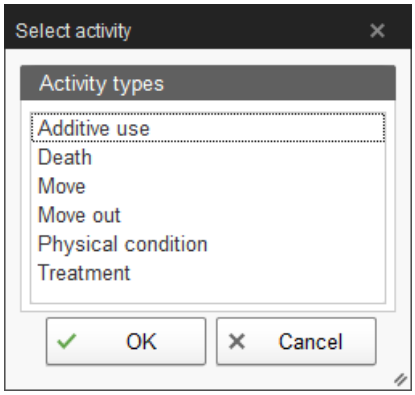
1. Click on the "Livestock record" tab.
2. Click on the correct animal group in the table to mark it.
3. Click on "Activity".

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



– You may edit or delete existing activities.

– You may add new activities.



"Reviving" animals that were moved out or marked as dead

If you have only moved out **some** animals from one location by accident, this process can be reversed in the livestock record. Select and delete the unwanted activity "Move out".

If you have accidentally moved out **all** animals from one location, you can only reverse this activity under "Animal movements", see chapter 4.5. As the location does not contain any more animals after the accidental moving-out process, the livestock record no longer displays this location.

The same applies to animals marked as dead (activity "Death/Dead animal").

4.2.4 Editing multiple animal groups

You can configure settings and activities for multiple animal groups at the same time:

- **Edit porker groups:** For example weight, curve day, feed curve, manual feed adjustment, valve lock
- **Add activities to groups:** Move out, move to another location, treatment, death, additive use

1. Click on the "Livestock record" tab.
2. Select multiple animal groups as follows:
   - Selecting neighboring animal groups:

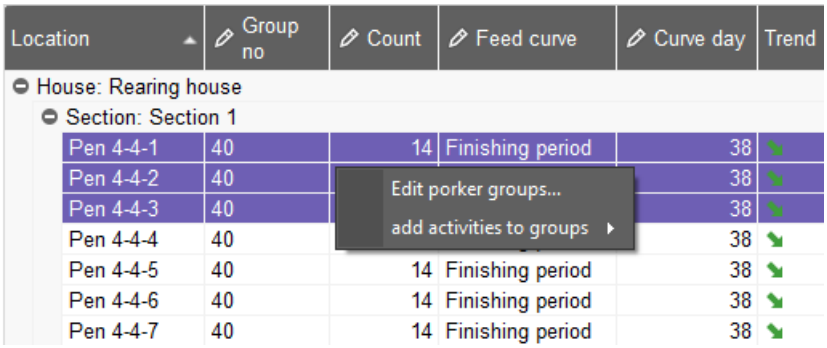
     Click on the first animal group to mark it, hold down the Shift key and click on the last animal group you want to mark.
   - Selecting non-neighboring animal groups:

     Click on the first animal group to mark it, hold down the Ctrl key and click on other animal groups you want to mark.
   - Selecting all animal groups:

     Click on the first animal group to mark it, hold down the Ctrl key and press A.

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

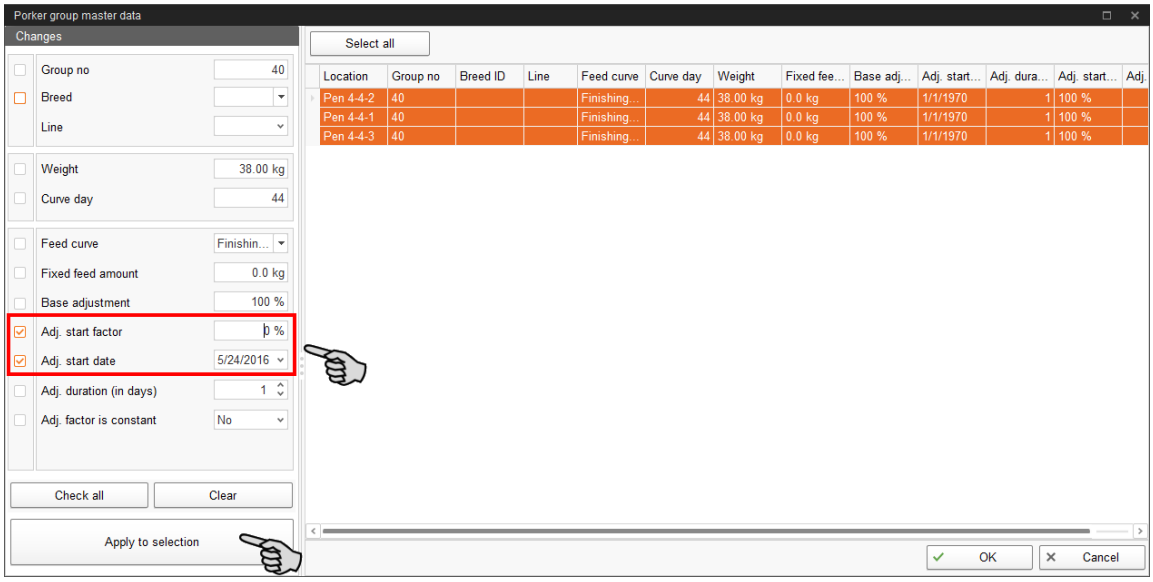
3. Right-click into the marked area to open the context menu.



– When you select an activity from "Add activities to groups", the corresponding activity dialog opens.

– Selecting "Edit porker groups" opens a dialog in which you can edit animal data and feeding data.

  In this dialog, you can change data either for all selected animal groups or for specific groups only.



a) Select all or individual animal groups.

b) Change the data.

c) Click on "Apply to selection".

   The data is changed for the selected animal groups.

d) Click on "OK" when you have finished to save the changes.

4.2.5 Treating animals

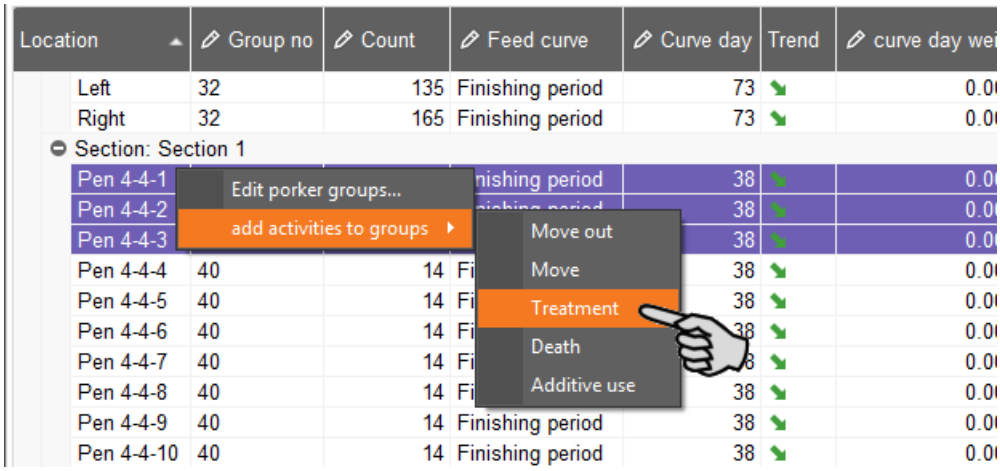
You may choose between two different types of treatment for your animals:

- **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.

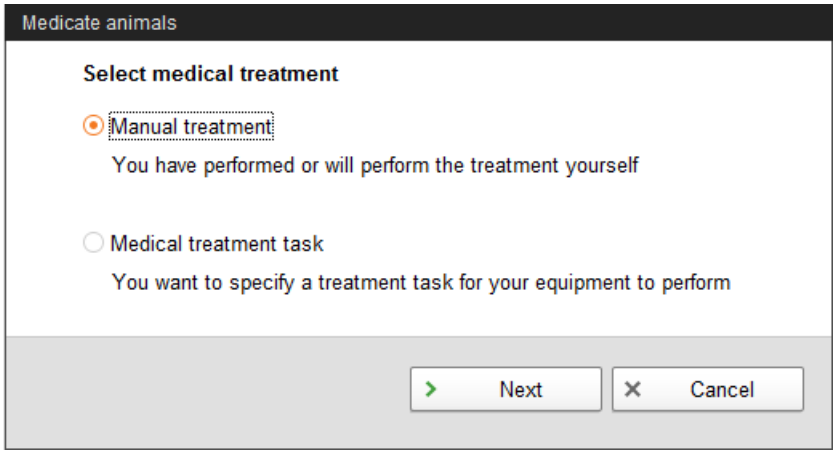
	A medical treatment **cannot** be deleted later under "Activity".

Manual treatment

1. Click on the "Livestock record" tab.
2. Select one or more animal groups.
3. Right-click into the marked area to open the context menu.
4. Click on "Add activities to groups" > "Treatment".

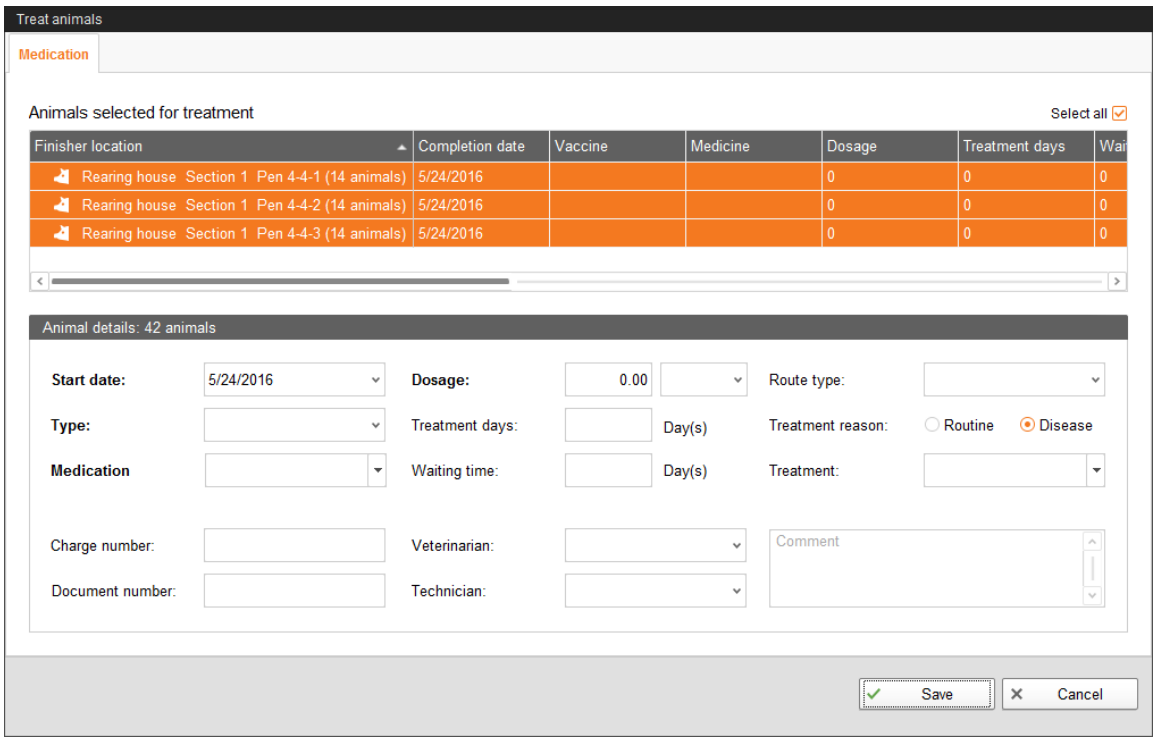


5. Select "Manual treatment" in the next dialog window and click on "Next".



6. In the next dialog window, define either identical treatment details for all groups or individual details for each group.
   - **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

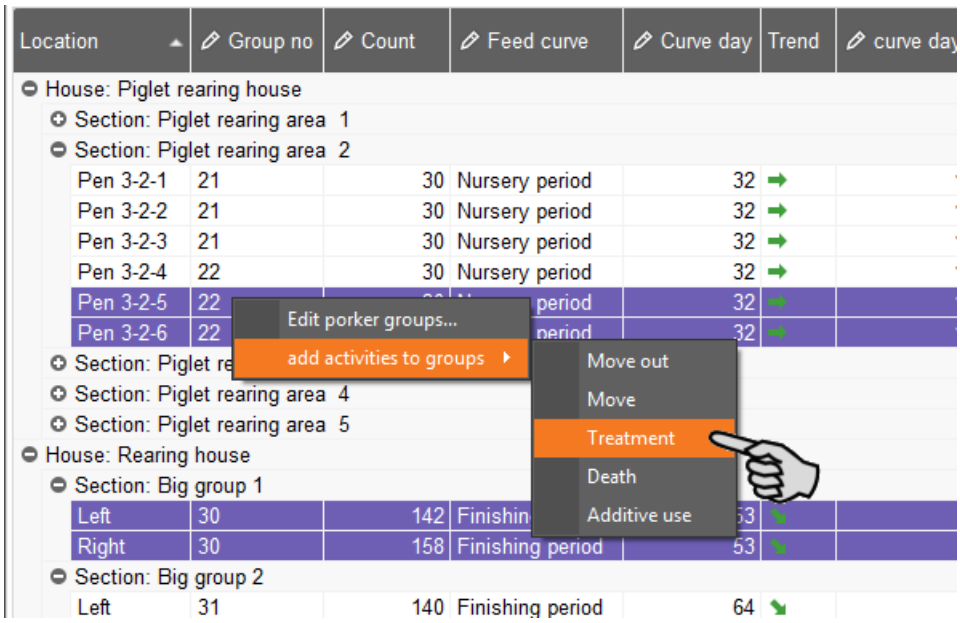
   Bold parameters are mandatory. All other information is optional.



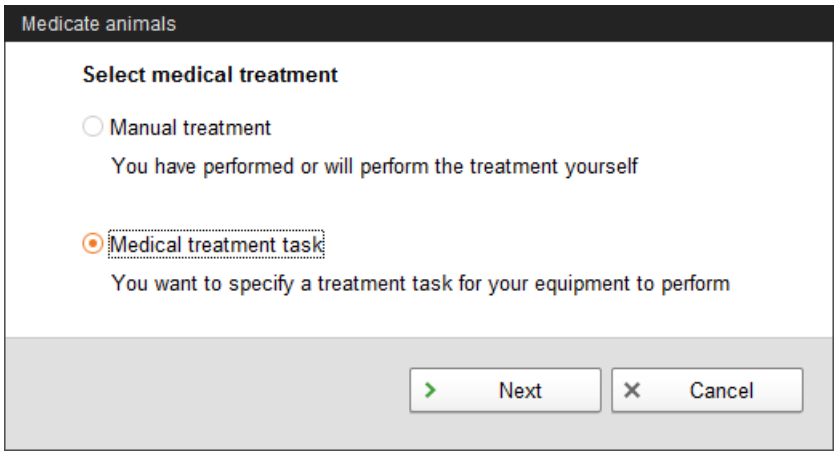
7. Click on "Save" after you have configured treatment details for all groups.

Medical treatment

1. Click on the "Livestock record" tab.
2. Select one or more animal groups.
3. Right-click into the marked area to open the context menu.
4. Click on "Add activities to groups" > "Treatment".

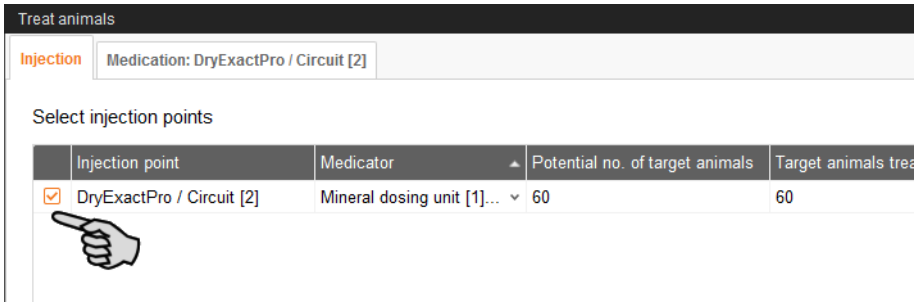


5. Select "Medical treatment task" in the next dialog window and click on "Next".



6. Activate the injection points.

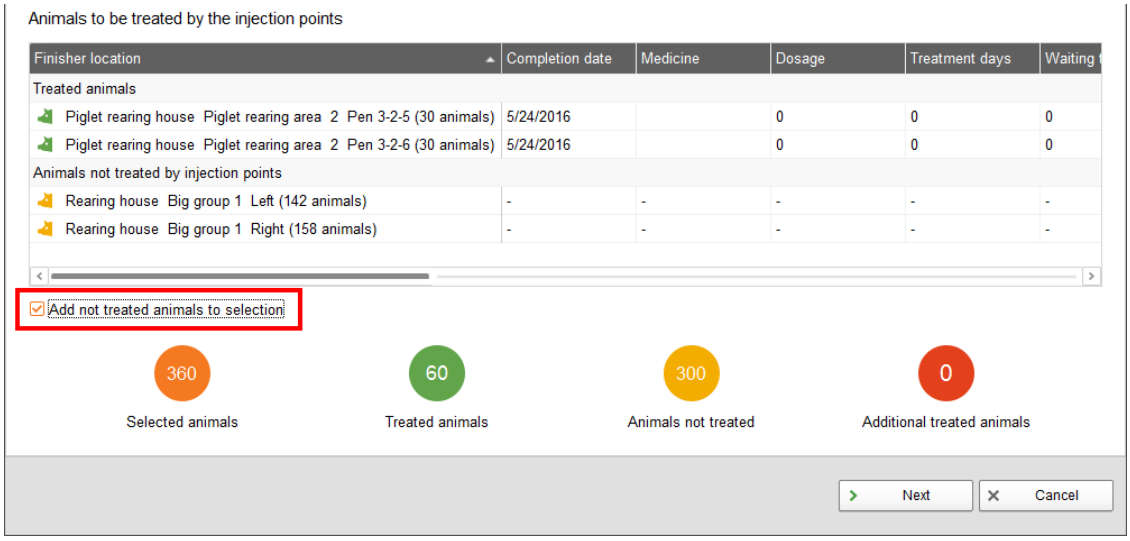
   The displayed injection points differ based on the feeding system. Additionally, the mineral dosing units may be selected under "Medicator".



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

   – 4 All animals selected for treatment.
   – 4 Animals that are treated according to the selected injection point.
   – 0 Animals that are not treated via the selected injection point.

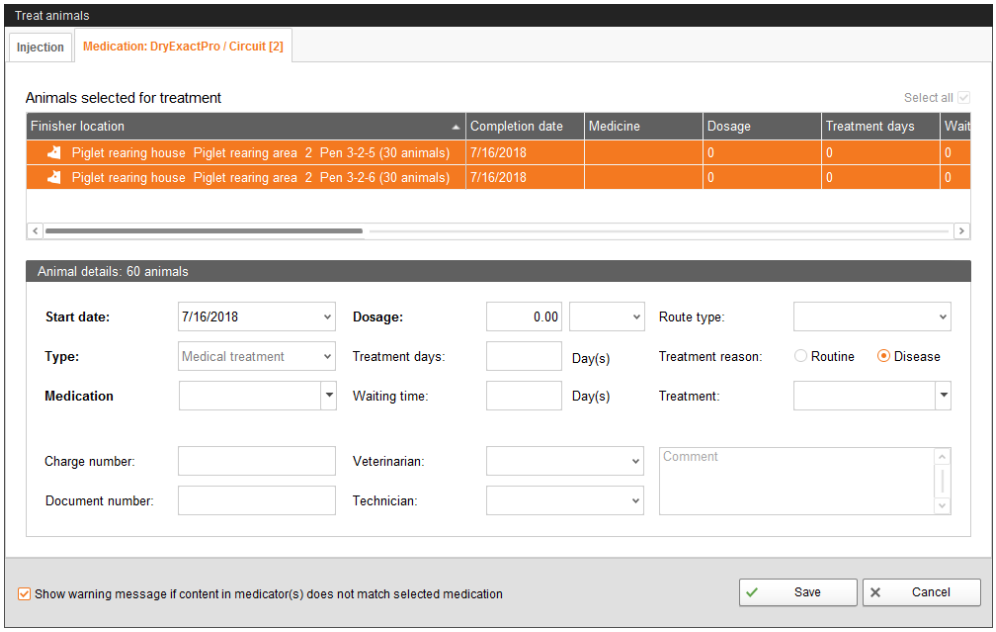
     You may add these animals to the selection by checking the box "Add not treated animals to selection". At the end of the treatment dialog, a dialog window in which you can save the selection opens. Restart the "Treatment" activity for these animals as described above using the button "Apply selection" (chapter 4.1.3 ”Filter result”).
   – 0 Animals that were not selected for treatment but will receive treatment. These animals are in the same location as the pigs to be treated, but the injection point cannot single out individual animals.



7. Click on "Next".

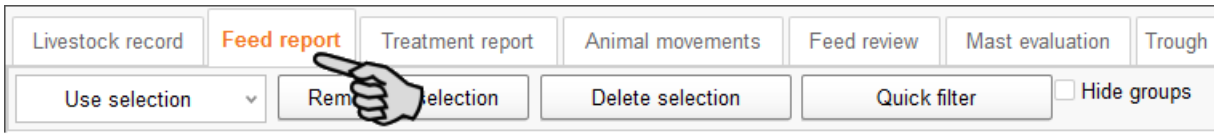
8. Fill in the following mandatory information under the next tab:
   - **Start date** = date of administration; backdating is possible
   - **Type** = pre-defined as medical treatment; no changes possible
   - **Medicine** = information on the drugs
   - **Dosage** = amount of the applied drug

   All other information is optional.

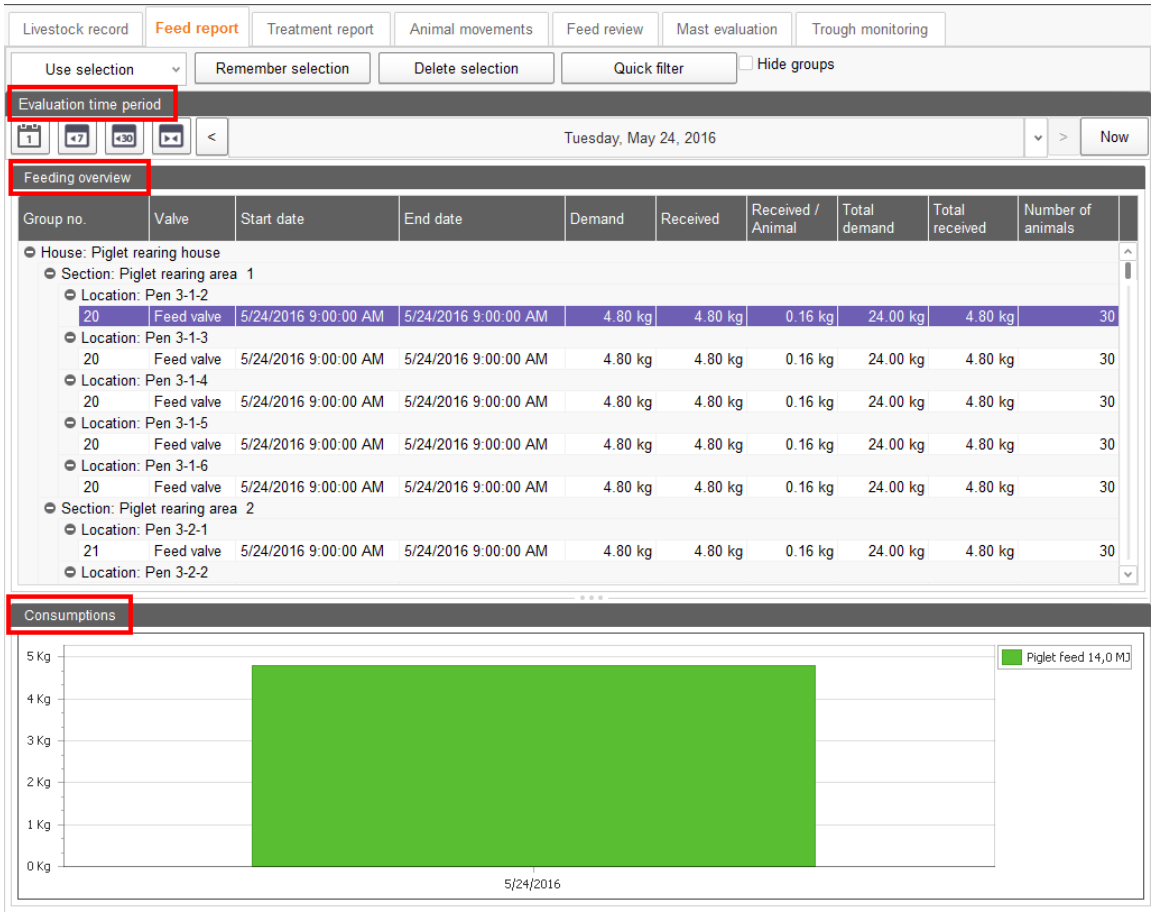


9. Click on "Save" after you have configured treatment details for all groups.

4.3 Feed report

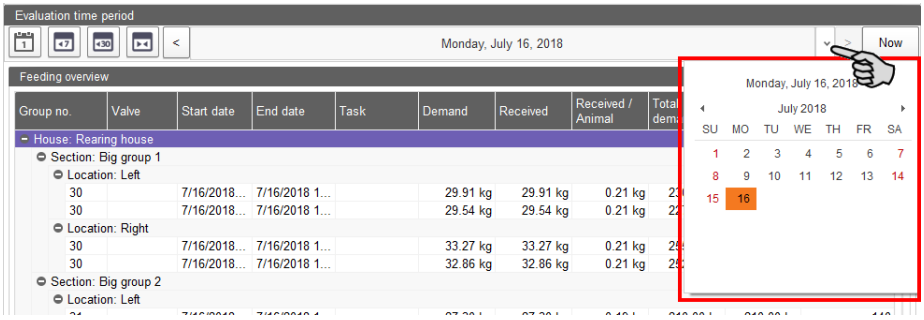


The feed report provides an overview of the feed consumption of your herd or a selected animal group.

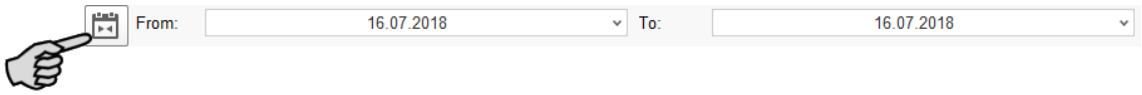


In the upper part of the window, select the evaluation time period for the feed consumption:

- Use < > to switch between days.
- Use the calendar to select a specific day.



- View the current day / return to the current day.
- View the current week.
- View the current month.
- View a specific time period within the batch.

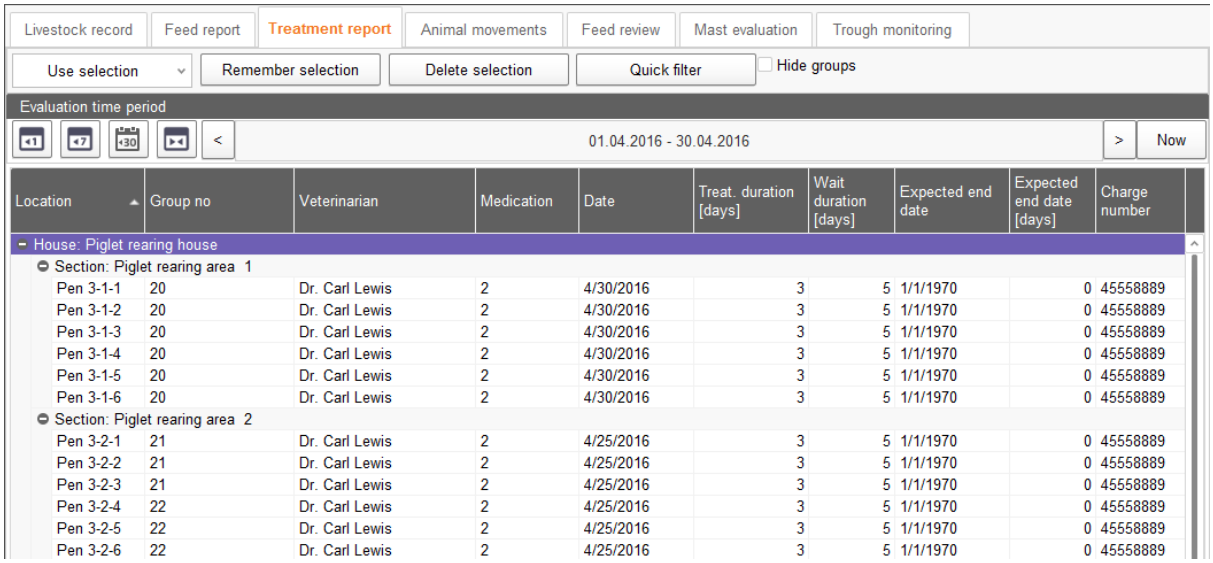


The central part of the window shows the feeding times per animal group. The amount of feed the animals received per feeding time is displayed.

The lower part shows the feed consumption per valve as a diagram.

4.4 Treatment report

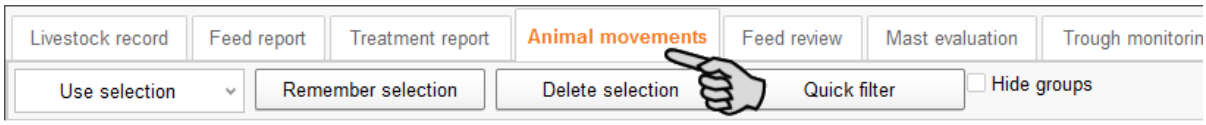
The treatment report shows all data regarding medical treatment of your animals. It also provides information on blocking periods during which the animals may not be sold or slaughtered due to administration of medication.



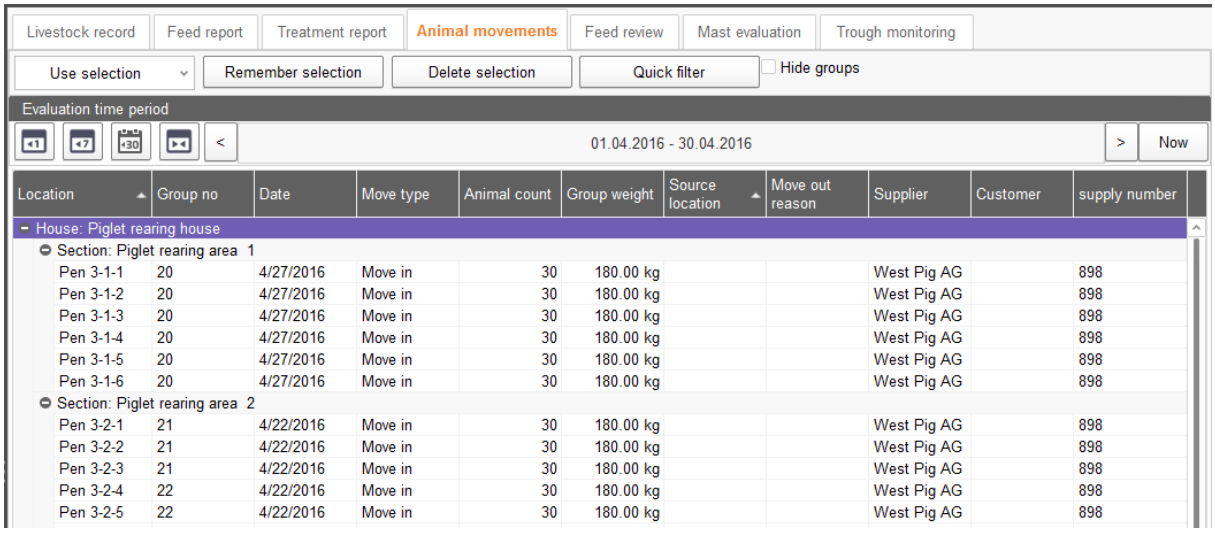
Location	Group no	Veterinarian	Medication	Date	Treat. duration [days]	Wait duration [days]	Expected end date	Expected end date [days]	Charge number
House: Piglet rearing house									
Section: Piglet rearing area 1									
Pen 3-1-1	20	Dr. Carl Lewis	2	4/30/2016	3	5	1/1/1970	0	45558889
Pen 3-1-2	20	Dr. Carl Lewis	2	4/30/2016	3	5	1/1/1970	0	45558889
Pen 3-1-3	20	Dr. Carl Lewis	2	4/30/2016	3	5	1/1/1970	0	45558889
Pen 3-1-4	20	Dr. Carl Lewis	2	4/30/2016	3	5	1/1/1970	0	45558889
Pen 3-1-5	20	Dr. Carl Lewis	2	4/30/2016	3	5	1/1/1970	0	45558889
Pen 3-1-6	20	Dr. Carl Lewis	2	4/30/2016	3	5	1/1/1970	0	45558889
Section: Piglet rearing area 2									
Pen 3-2-1	21	Dr. Carl Lewis	2	4/25/2016	3	5	1/1/1970	0	45558889
Pen 3-2-2	21	Dr. Carl Lewis	2	4/25/2016	3	5	1/1/1970	0	45558889
Pen 3-2-3	21	Dr. Carl Lewis	2	4/25/2016	3	5	1/1/1970	0	45558889
Pen 3-2-4	22	Dr. Carl Lewis	2	4/25/2016	3	5	1/1/1970	0	45558889
Pen 3-2-5	22	Dr. Carl Lewis	2	4/25/2016	3	5	1/1/1970	0	45558889
Pen 3-2-6	22	Dr. Carl Lewis	2	4/25/2016	3	5	1/1/1970	0	45558889

Use the filter functions to filter specific animal groups, see chapter 4.1 ”Filter functions”. Select the desired treatment time period under "Evaluation time period", see the explanation in chapter 4.3 ”Feed report”.

4.5 Animal movements



The "Animal movements" tab shows all moving-in, moving and moving-out processes. The activity "Death/Dead animal" is also listed under animal movements.



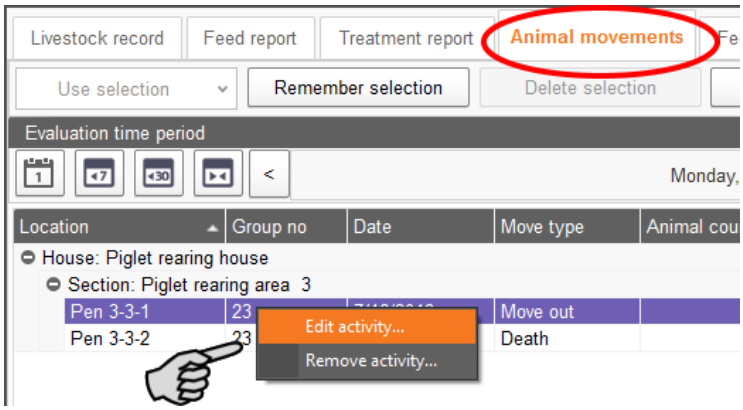
Location	Group no	Date	Move type	Animal count	Group weight	Source location	Move out reason	Supplier	Customer	supply number
House: Piglet rearing house										
Section: Piglet rearing area 1										
Pen 3-1-1	20	4/27/2016	Move in	30	180.00 kg			West Pig AG		898
Pen 3-1-2	20	4/27/2016	Move in	30	180.00 kg			West Pig AG		898
Pen 3-1-3	20	4/27/2016	Move in	30	180.00 kg			West Pig AG		898
Pen 3-1-4	20	4/27/2016	Move in	30	180.00 kg			West Pig AG		898
Pen 3-1-5	20	4/27/2016	Move in	30	180.00 kg			West Pig AG		898
Pen 3-1-6	20	4/27/2016	Move in	30	180.00 kg			West Pig AG		898
Section: Piglet rearing area 2										
Pen 3-2-1	21	4/22/2016	Move in	30	180.00 kg			West Pig AG		898
Pen 3-2-2	21	4/22/2016	Move in	30	180.00 kg			West Pig AG		898
Pen 3-2-3	21	4/22/2016	Move in	30	180.00 kg			West Pig AG		898
Pen 3-2-4	22	4/22/2016	Move in	30	180.00 kg			West Pig AG		898
Pen 3-2-5	22	4/22/2016	Move in	30	180.00 kg			West Pig AG		898

Use the filter functions to filter specific animal groups, see chapter 4.1 ”Filter functions”. Select the desired time period under "Evaluation time period", see the explanation in chapter 4.3 ”Feed report”.

4.5.1 Editing/removing animal movements

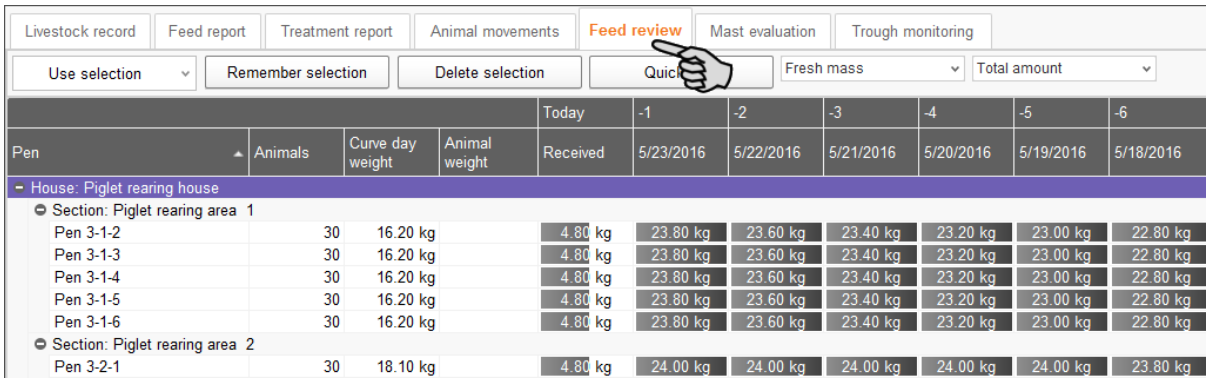
If you want to edit or reverse an animal movement, proceed as follows:

1. Filter and select the animal movement.
2. Right-click into the marked area to open the context menu.



3. Select the correct edit activity.

4.6 Feed review



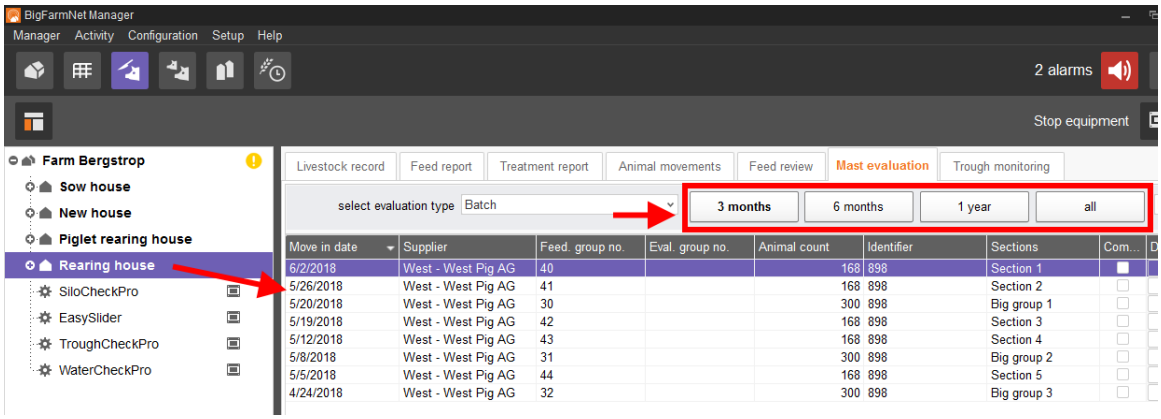
The feed review provides an overview of the animals' eating behaviour of the current and the past six days.

4.7 Finishing evaluation

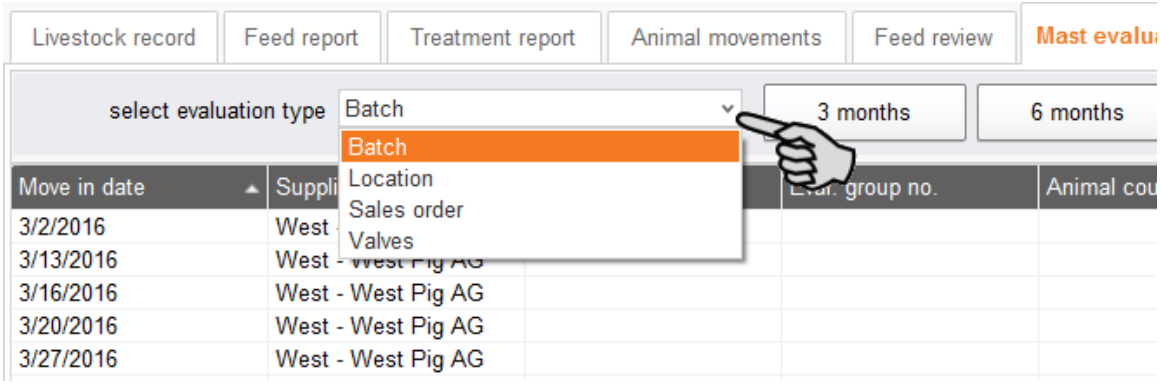
The finishing evaluation provides an overview of the success of your batch.

1. Filter the correct animal groups using the farm structure and/or using the past 3 months, 6 months or 1 year.

   Use the button "all" to discard the selection of a specific past time period.



2. Select the correct evaluation type:



– **Batch:**

  > Animal groups with the same move-in date and from the same supplier are added and displayed together.

  > Animal groups with the same move-in date but from two different suppliers are displayed separately in two cells.

– **Location:** The entire farm structure is displayed.

– **Sales order:**

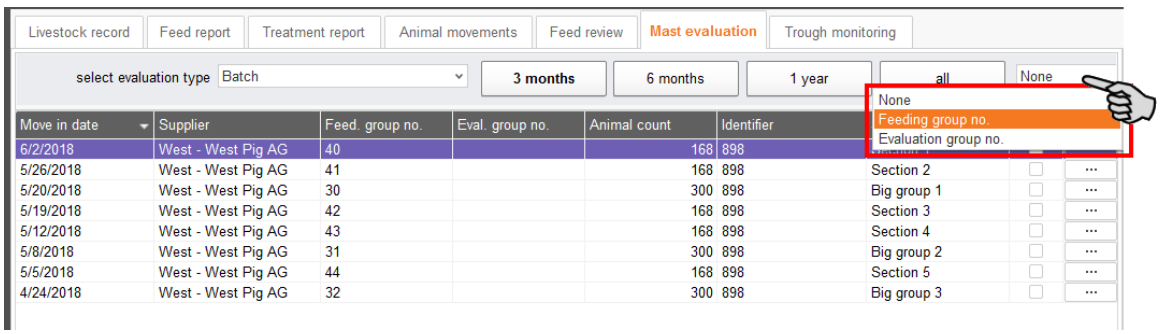
  > Animal groups with the same move-in date are added and displayed together.

  > Animal groups with the same move-in date that were sold to different customers at different points of time are displayed in separate cells.

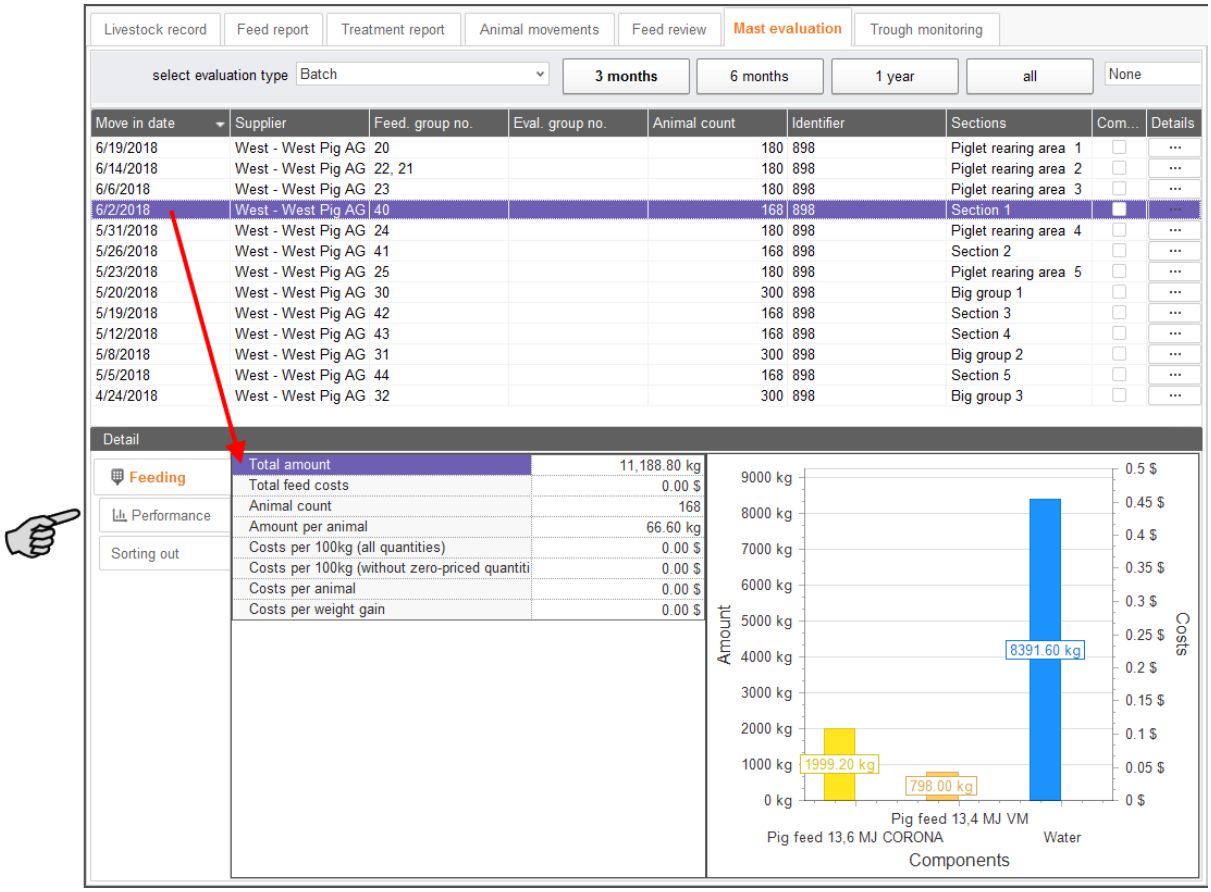
– **Valves:** The current animal groups are shown according to the corresponding valves and circuits.

	If you have filtered with the farm structure, only the selected location / circuit with the corresponding animal groups / feed valves is displayed.

3. You may additionally limit your previous selection according to feeding group number or evaluation group number.



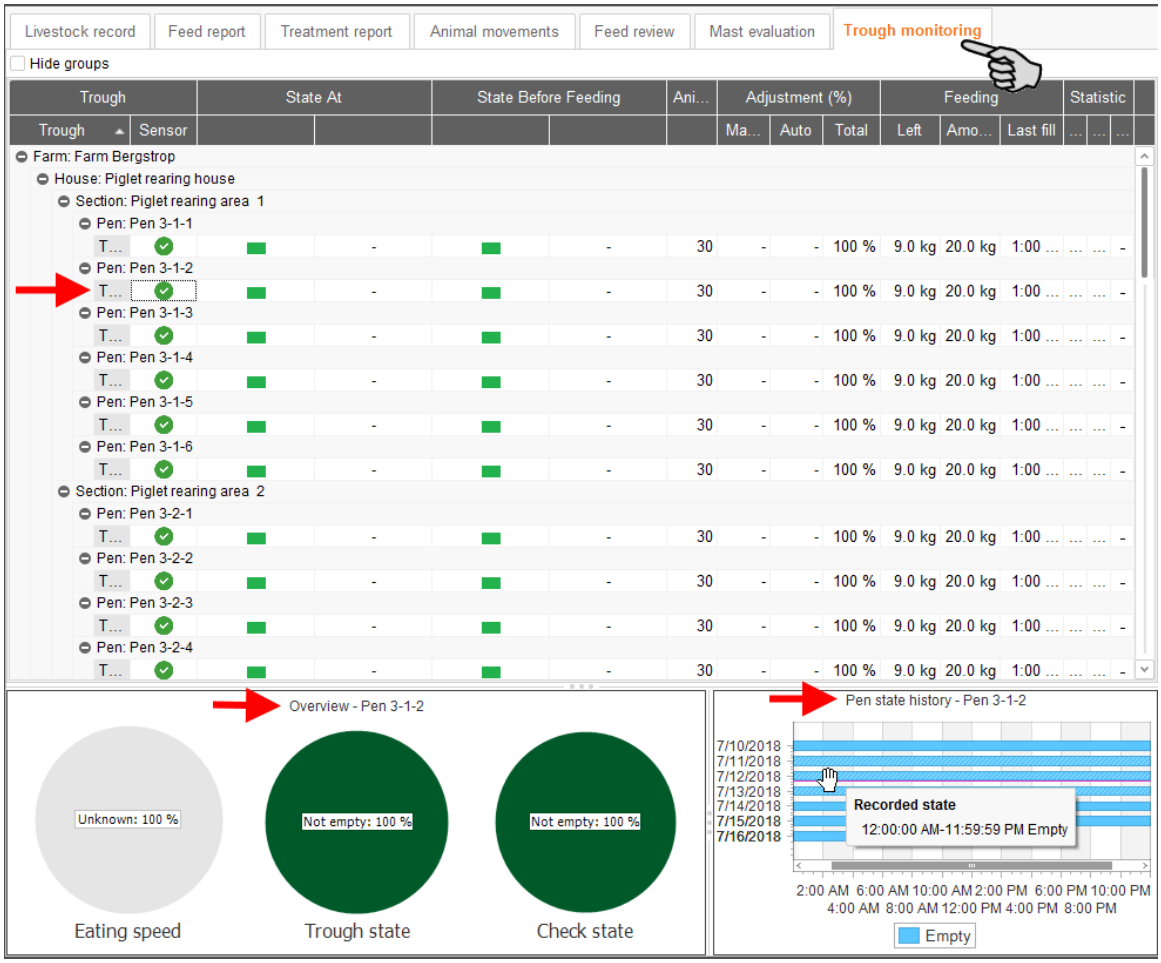
Mark a line to view additional information in the "Detail" area:



- **Feeding:** The diagram depicts the feed components in relation to the feed amount and the feed costs.
- **Performance:** View the actual weight gain of your animals. The pie chart depicts the total number of animal groups in relation to the animals that were relocated or moved out.
- **Sorting out:** This table only contains information in connection with TriSort.

4.8 Trough monitoring

The trough monitoring tab provides information on the status (empty or not empty) of your sensor troughs. This tab also has information on the eating speed, the eating time and the last feeding according to the sensor. The diagram in the lower right corner shows the state history of the current day and the past six days.



Even though the trough status is checked regularly, you can also check the current trough status manually at any time:

1. Click on the colored block of the correct trough in the **State at** column.

   This opens the dialog window "Refresh trough state".

2. Confirm the dialog by clicking on "OK".

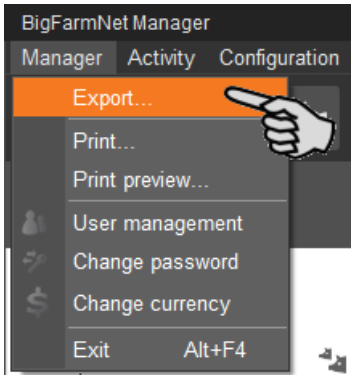
4.9 Data export

The Finishing Manger allows the export of data from the following tabs into an Excel file:

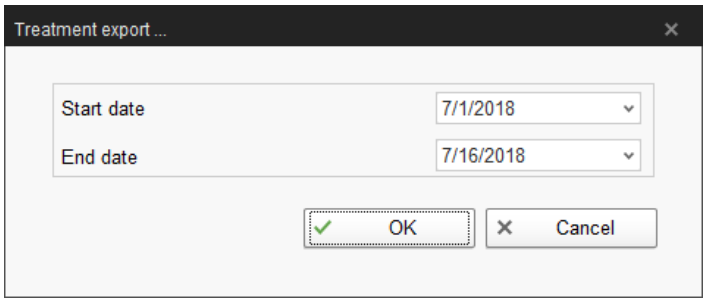
- Feed report
- Treatment report
- Feeding review
- Finishing evaluation

All data of the entire finishing area are exported, irrespective of the location filter.

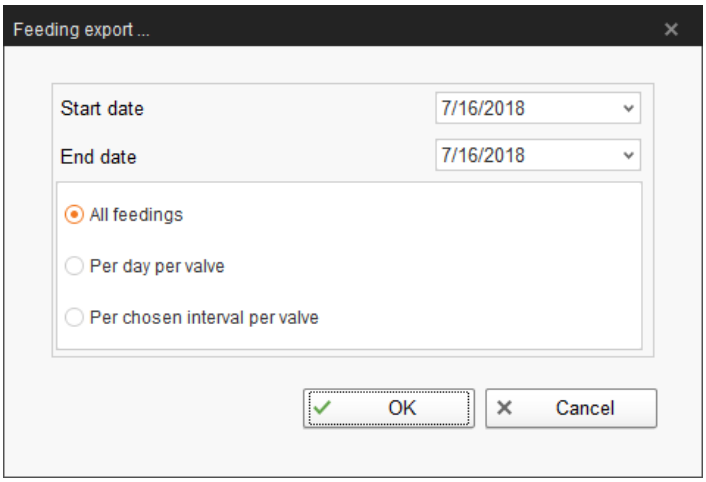
1. Click on the correct tab.
2. Click on "Export" in the "Manager" menu.



- If you export data from the **Feed review** or the **Finishing evaluation**, this directly opens the "Save as" dialog of your operating system.
- To export data from the **Treatment report**, a dialog in which you need to define the time period opens. Confirm with "OK" and the "Save as" dialog of your operating system opens.



- If you export data from the **Feed report**, this opens a dialog in which you need to make the following selection in addition to defining the time period:



  – "All feedings": All feedings (possibly several per day) per valve are exported for the selected time period. The amount of data is very large in this case.

  – "Per day per valve": The entire amount of feed per day and per valve is exported for the selected time period. The amount of data is average in this case.

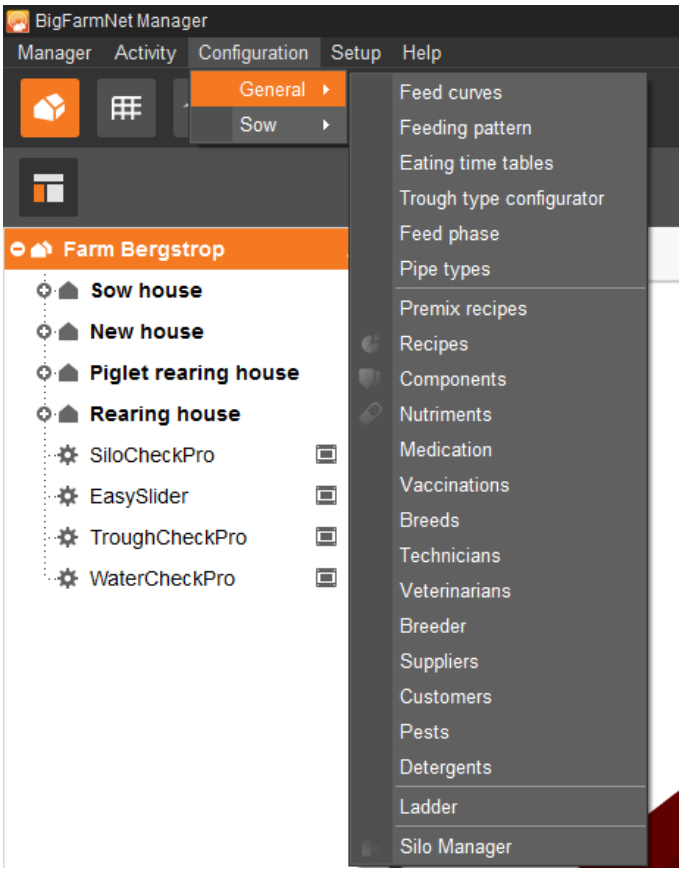
  – "Per chosen interval per valve": The entire feed amount per valve dispensed in the selected time period is listed. Only one value per valve is exported in this case.

3. Enter a file name for the Excel document.
4. Select the storage location and confirm with "OK".

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”

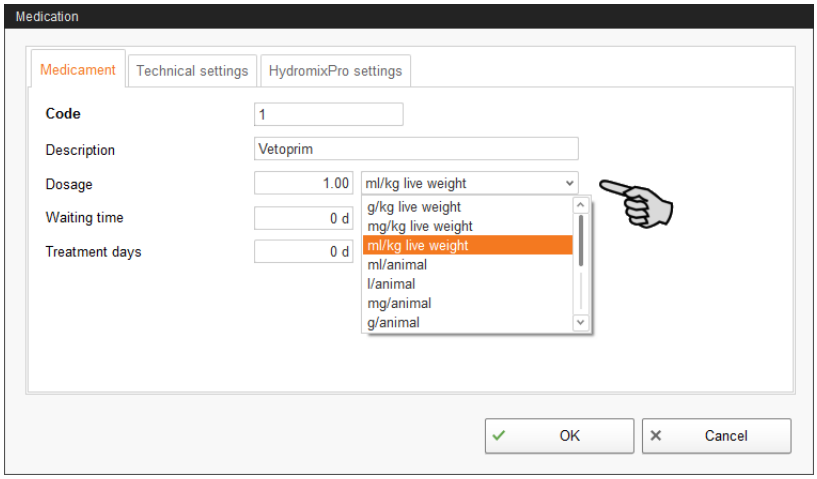
As an example, master data for medication, breeds and suppliers will be created in the following. The procedure is identical for all master data.

	Fields with bold text are mandatory.

5.1 Creating a medication

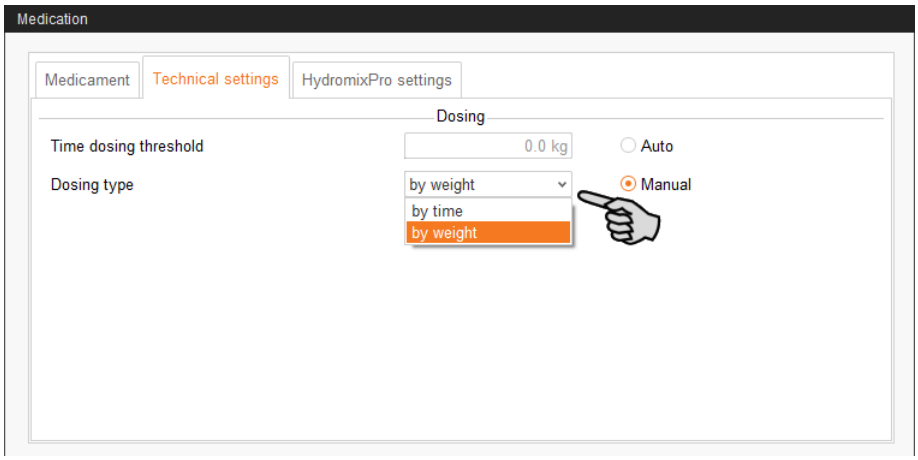
1. In the menu "Configuration" > "General", click on "Medication".
2. In the dialog window "Medication", click on "Add".

   The dialog window "Medication" lists all created drugs which you can edit, copy or remove later on, if necessary.
3. Fill in the information for the medication under the first tab.



   a) Enter a "waiting time" if a blocking period is necessary after the medication was administered before the animals can be sold or slaughtered.

      This waiting time will be indicated under "QA block" in the livestock record table. In case of several treatments, the longest blocking period is listed.
4. Determine the dosage under the tab "Technical settings".

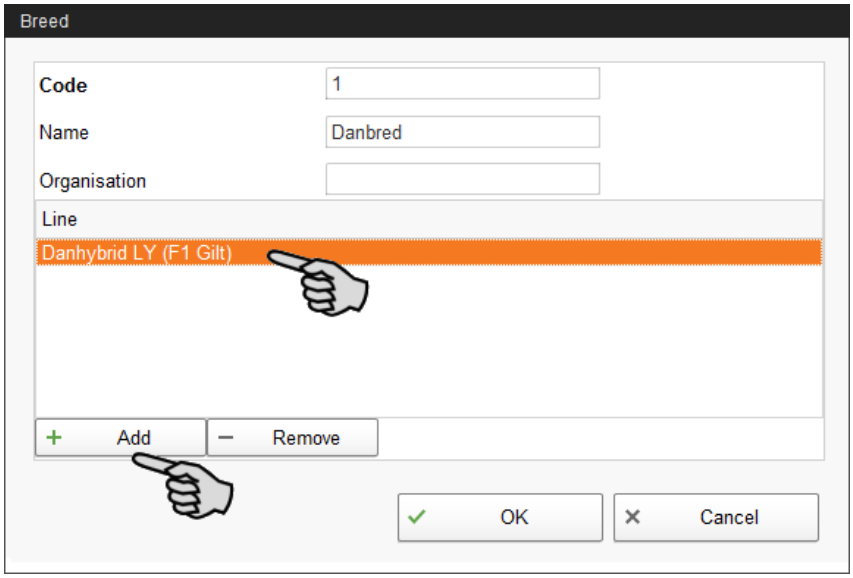


5. Configure the necessary settings under the tab "Liquid feeding settings".
6. Accept your inputs by clicking on "OK".

5.2 Creating a breed

1. In the menu "Configuration" > "General", click on "Breeds".
2. In the dialog window "Breeds", click on "Add".

   The dialog window "Breeds" lists all created breeds which you can edit, copy or delete later on, if necessary.
3. Fill in the information for the breed.
4. If you want to create a line, click on "Add" and enter a name into the marked area.

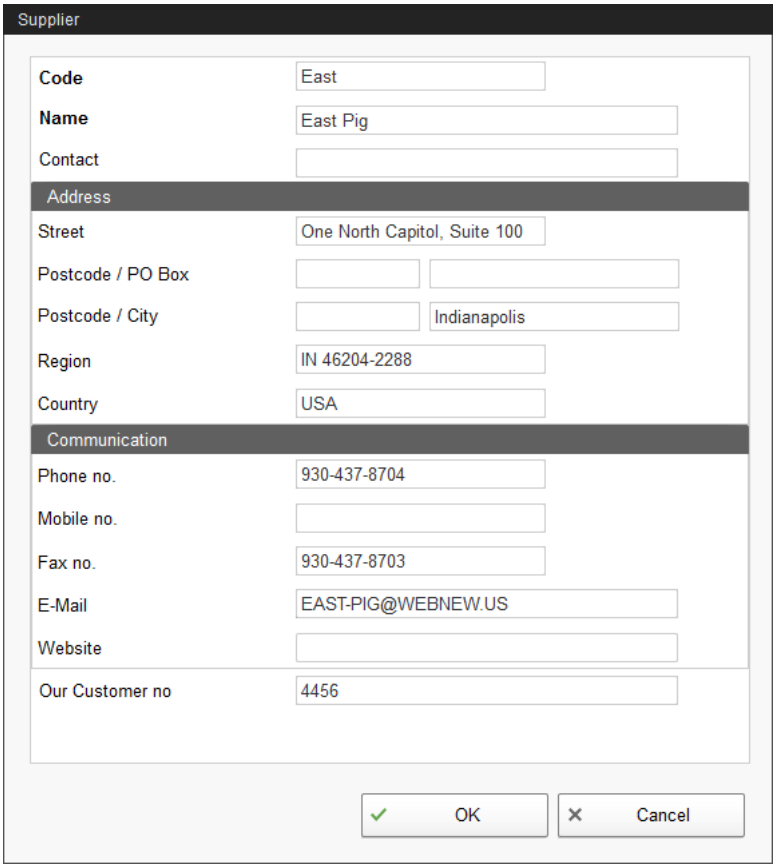


5. Accept your inputs by clicking on "OK".

5.3 Adding suppliers

1. In the menu "Configuration" > "General", click on "Suppliers".
2. In the dialog window "Suppliers", click on "Add".

   The dialog window "Suppliers" lists all created suppliers which you can edit, copy or delete later on, if necessary.
3. Fill in the information for the supplier.

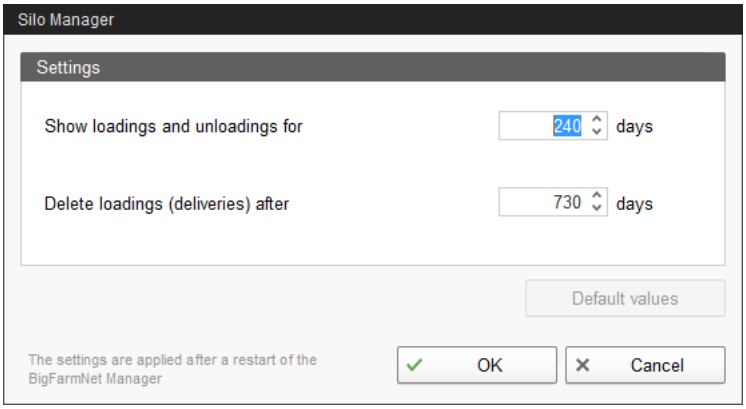


4. Accept your inputs by clicking on "OK".

5.4 Settings for deliveries and consumption

Each loading and unloading from a silo is registered and available in the Silo Manager. With time, a large amount of data will accumulate in the display window. Manage this data as follows:

1. In the menu "Configuration" > "General", click on "Silo Manager".
2. Enter the desired number of days for the specific settings.



3. Click on "OK" to accept these settings.

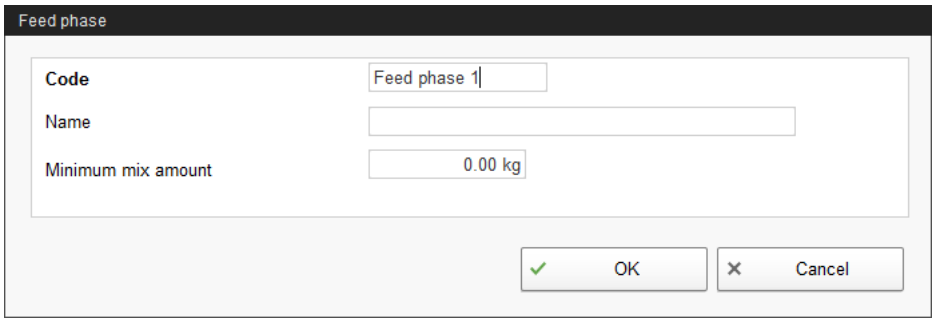
5.5 Creating a feed phase

The individual curve days of a feed curve can be assigned to feed phases. Feed phases allow for an automatic switch to a higher or lower number of feeding times.

Save a feed task for each feed phase. Feed tasks are defined in the Task Manager .

1. In the menu "Configuration" > "General", click on "Feed phase".
2. In the dialog window "Feed phase", click on "Add".

   The dialog window "Feed phase" lists any created feed phases which you can edit, copy or delete later on, if necessary.
3. Enter a code for the feed phase and add a description in the "Name" field, if necessary.



4. Click on "OK" to accept these settings.

5.6 Creating eating time tables

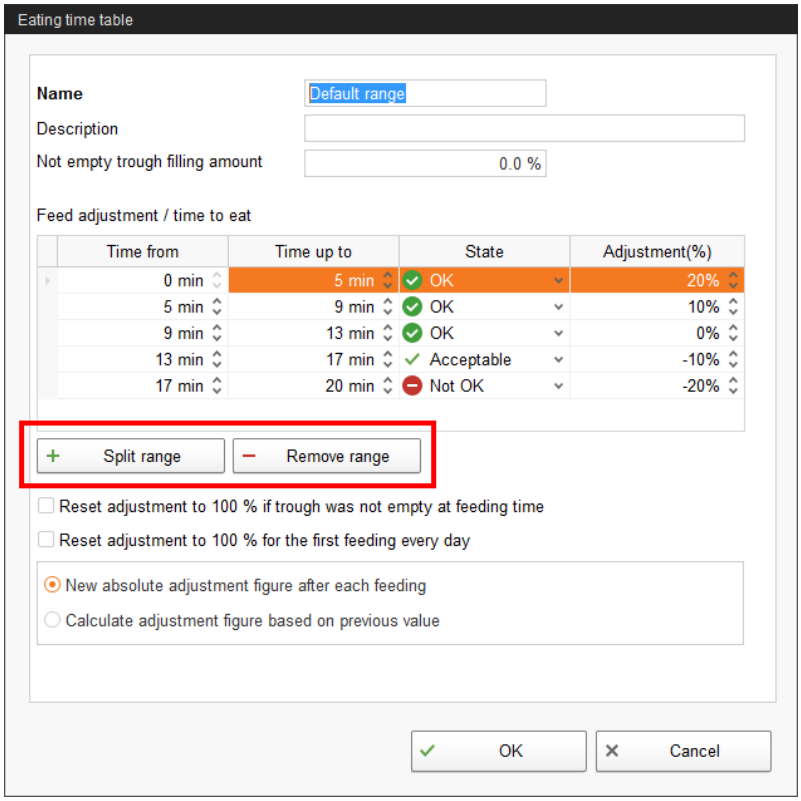
Eating time tables are used for (ad libitum) sensor feeding. The sensor measures whether the trough was emptied or not and transmits this information to the BigFarmNet Manager. Based on this information you can see at which times the trough was emptied how quickly and when it was not. Using the eating time table, you can then adjust the feed according to the corresponding eating times. Eating time tables are selected as option when defining a feed curve for the liquid feeding system, see chapter 2.6 ”Defining a feed curve for liquid feed”.

1. In the menu "Configuration" > "General", click on "Eating time tables".
2. In the dialog window "Eating time table", click on "Add".

   The dialog window "Eating time table" lists any created time tables which you can edit, copy or delete later on, if necessary.

3. Enter a name for the time table.

   Information regarding "Description" and "Filling amount non-empty trough" are optional.



4. Adjust the eating times and the amount of feed as necessary. The pre-set values can be used as reference.

   a) Click into the time period you want to edit.

   b) To split the time period, click on the "Split range" button.

      Or:

      To remove a time period, click on the "Remove range" button.

   c) Change the time period values and the percentage using the arrows pointing up and down next to the input field.

      Or:

      Click into the input field and enter the desired value directly.

   d) Click into the input field below the "State" column and select the state for the time period.