

NATIONAL DAIRY AUTHORITY

DAIRY MONITORING SYSTEM: A COMPLETE USER'S MANUAL

2025 EDITION

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Don't forget—a push toward innovation is a push against the dark times. Your effort, no matter how simple, is enough. Hold on to that.

### I. BACKGROUND

DMS is a web-based platform designed to manage the daily operations of farms and monitor the dairy production of cattle and other milk-producing animals. It enables users to track vital information such as animal profiles, breeding records, health status, mortalities, treatments, and transfer history. By providing comprehensive historical data on animal management, DMS supports informed decision-making for farmers, stakeholders, and policymakers.

The primary goal of DMS is to assist the National Dairy Authority (NDA) in accurately evaluating the productivity, efficiency, and activities of dairy farms. Through an intuitive interface, the system captures and analyzes data, generating insightful reports that guide strategic decisions in the dairy sector.

### II. OVERVIEW

This document provides an in-depth and structured guide to effectively utilizing DMS. It serves as a centralized reference for understanding the system's core functionalities, with detailed explanations of record-keeping procedures across multiple modules—including breeding, calving, pregnancy diagnosis, milk production, and inventory management.

Each section is accompanied by clear, step-by-step instructions designed to help users perform tasks with confidence and accuracy. Whether you're entering data, generating reports, or managing workflows, this manual ensures that every action is supported by practical guidance and contextual examples.

In addition to technical instructions, the document is thoughtfully crafted to assist new users in becoming familiar with the system's interface, terminology, and operational logic. It aims to reduce the learning curve by offering intuitive navigation tips, visual cues, and usage scenarios that reflect real-world dairy management practices.

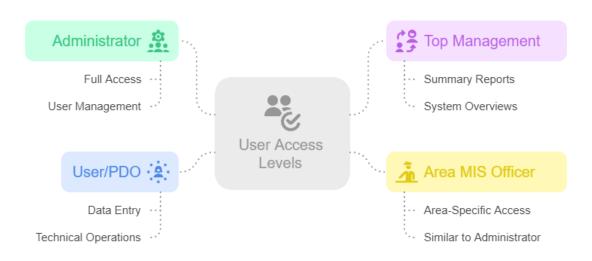
Ultimately, this manual is not just a reference—it's a tool for empowerment. By combining clarity, usability, and domain-specific insight, it enables users to maximize the value of DMS in improving farm efficiency, data integrity, and overall productivity.

### III. USER ACCESS

DMS is designed to accommodate a diverse range of users by offering multiple account categories, each tailored to specific operational roles and responsibilities within the dairy management ecosystem. These user categories are differentiated not only by their access levels but also by the interfaces they interact with, the functions they are authorized to perform, and the permissions granted to them across the system. This structured approach ensures that data integrity, workflow efficiency, and user accountability are maintained throughout the platform. Whether overseeing herd health, managing inventory, or analyzing production metrics, each user type plays a vital role in the overall functionality of the system. To support this, DMS defines four (4) primary account types, each with a distinct purpose and scope of access:

- Administrator: Has full access to all system features and manages other user accounts.
- Top Management: Can view summary reports and system overviews across all areas. This role is limited to high-level insights and does not engage with detailed operations.
- Area MIS Officer: Possesses similar access to the administrator but is restricted to specific areas assigned to their account.
- User/PDO: Responsible for daily data entry and technical operations related to dairy recording. This role is limited to routine tasks and does not include administrative or analytical functions.

### User Access Levels in Dairy Monitoring System



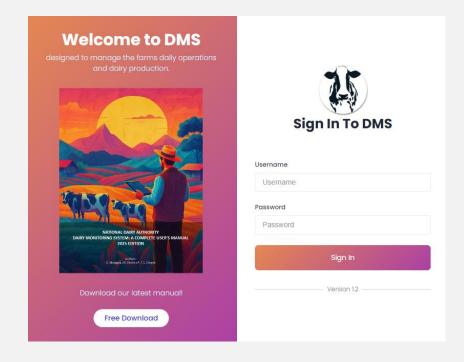
### IV. LOGIN

To access the Dairy Monitoring System (DMS), users must have an internet browser installed on their computer—such as Chrome, Firefox, or Internet Explorer—and an active internet connection.

The system can be reached via the following web address:

## https://www.dairymonitoringsystem.com/dms/.

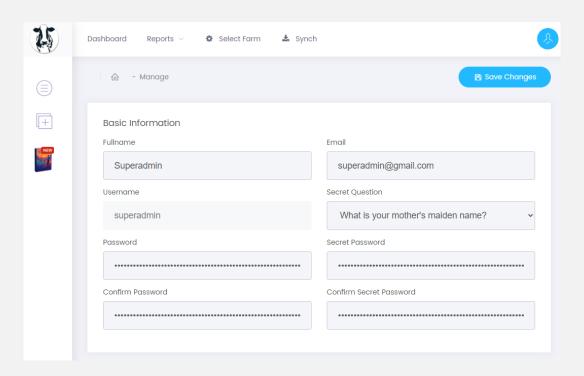
Simply enter this URL into the address bar of your preferred browser. Upon reaching the login page, users must enter their assigned username and password. These credentials are issued exclusively by the system administrator. If incorrect login details are entered, a notification will appear indicating the error. There is no limit to the number of login attempts allowed.



### V. PROFILE

User credentials initially assigned by the system administrator can be updated at any time through the Profile feature, which offers a personalized space for managing account details. To access this feature, users should click the blue button located in the upper banner menu of the interface, then select the "My Profile" link from the dropdown options. This action will redirect them to their dedicated profile page, where a range of editable fields and account insights are displayed.

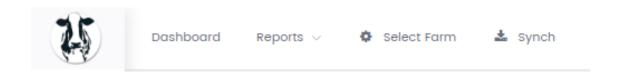
Within the profile page, users have the ability to update key personal information such as their profile picture, full name, email address, and password. These updates help ensure that account details remain accurate and secure. Beyond basic credentials, the profile page also provides a snapshot of the user's current account status. This includes dynamic elements like tokens earned, awards received, and other interactive features designed to enhance engagement and recognize user contributions. The Profile section serves not only as a hub for identity management but also as a motivational dashboard that reflects progress and participation within the system.



### VI. SYNCHRONIZATION

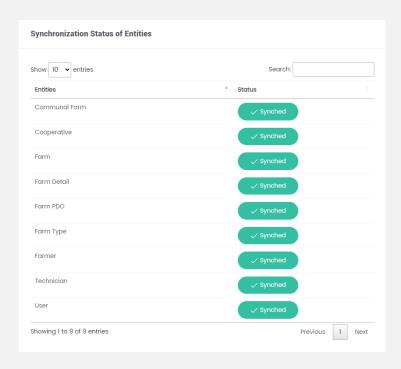
DMS integrates external libraries sourced from the Dairy Entity Information System (DEIS). These libraries contain essential data on entities such as farms, farmers, cooperatives, and technicians. By accessing this information, DMS enables users to accurately manage daily operations within the appropriate organizational context.

The system automatically synchronizes entity data from DEIS to DMS through a background process. However, if a manual update is needed, users can use the link button located on the top menu bar.



When the user clicks the "Synch" button, they are directed to a download interface where the system automatically begins synchronizing data. A successful sync is indicated by a green color and a checkmark icon, while a failed sync is marked by a red color and an exclamation icon within a circle.

To retry a failed synchronization, the user can click the red button to initiate the process again.

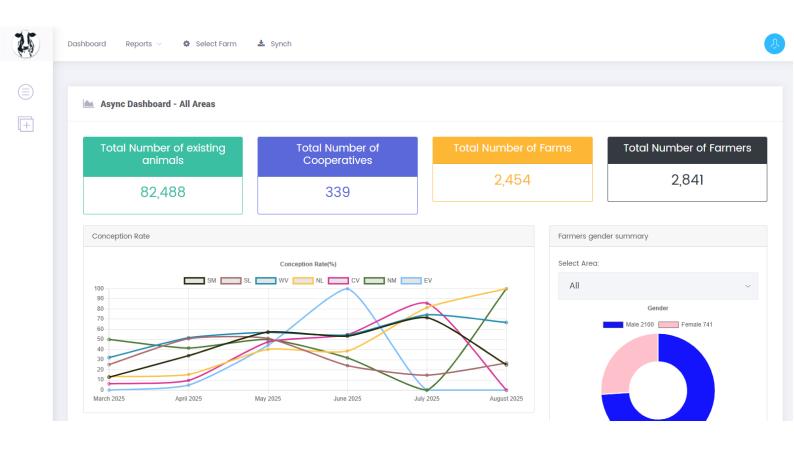


### VII. DASHBOARD

The Dashboard functions as a dynamic and intuitive interface that transforms raw data into meaningful visual insights. Designed to support both strategic oversight and day-to-day decision-making, the dashboard provides users with a centralized view of dairy-related activities, operational metrics, and key performance indicators. Through a combination of graphical views, interactive charts, and tabulated summaries, users can quickly assess trends, identify anomalies, and monitor progress across various farm operations.

Each dashboard is thoughtfully organized by area, allowing for localized data visualization that reflects the specific conditions and performance of individual areas. This spatial organization enhances clarity and enables users to compare performance across different zones with ease.

Moreover, the DMS dashboard is customized per user role, ensuring that the information displayed is both relevant and actionable. Whether the user is a farm technician, MIS manager, or NDA administrator, the dashboard adapts to their access level and assigned responsibilities, presenting only the data that aligns with their operational scope. This role-based customization not only streamlines the user experience but also reinforces data security and accountability by limiting access to sensitive information



### VIII. ANIMALS MODULES

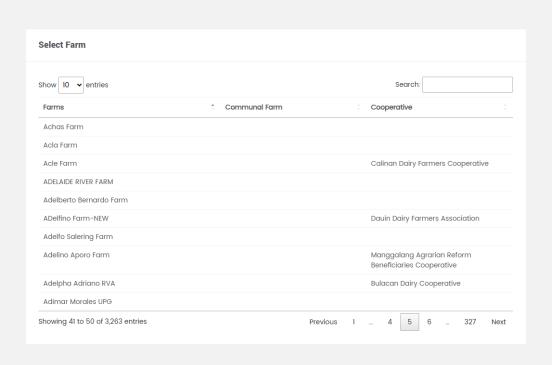
### A. FARM SELECTION

Before performing any data operations within the module, users must first select a farm. This can be done by clicking the "Select Farm" button—marked with a gear icon—located in the top banner menu. Upon clicking, users will be redirected to a list of active farms.



Please note that the farm list is filtered based on the user's assigned area. Once a farm is selected, all features within the module become accessible, and only data related to the chosen farm will be displayed.

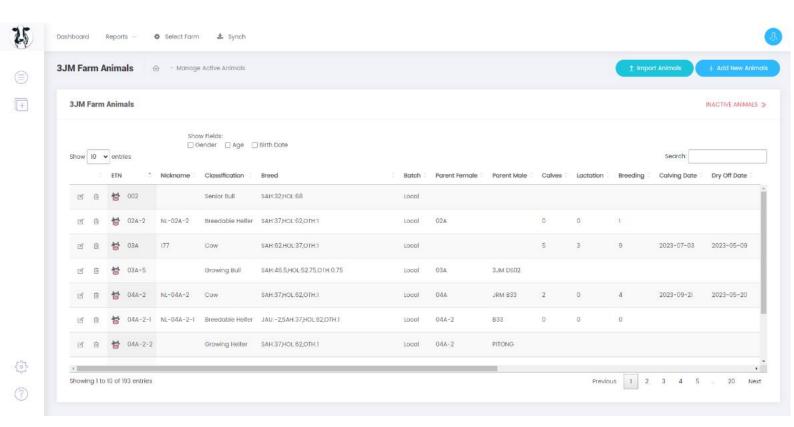
To switch to a different farm, simply click on another farm from the list.



#### B. ANIMAL MODULE

The Animals module provides users with tools to efficiently manage animal-related data. Through a structured table interface, users can view detailed information for each animal, including its ETN, classification, breeding history, and current status.

In addition to viewing records, users can create new entries and update key details such as nicknames, dam and sire lineage, and breeding attributes. The module also supports the activation and removal of animal records, ensuring flexible and accurate data management.



#### 1. Create Animal

To add a new animal, click the "Add New Animals" button located at the upper right corner of the managed table. This button is highlighted in blue for easy visibility. Once clicked, the user will be redirected to the Animal Form.

The form contains text fields that must be completed with accurate and valid information. Mandatory fields are highlighted in red with the message "This field is required."

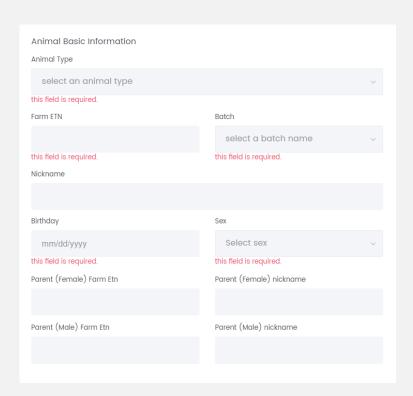
Below is a list of required fields along with their descriptions:

- Animal Type Specifies the category or species of the animal. Upon selecting a type, the breed component's text fields will appear.
- ETN (Electronic Tag Number) A unique identifier assigned to each animal within the farm.

- Batch Designates the group or batch to which the animal belongs.
- Birthday The animal's date of birth, used to determine its classification.
- Sex Indicates whether the animal is male or female.
- Breed Composition Specifies the breed percentages; the total must equal 100%.
- Infusion Date The date the animal was formally brought into the farm. Unlike the Birthday field, which records the animal's birth date, Infusion Date is used in certain reports where data is filtered based on the animal's entry into the farm.
- Ownership Reflects the current ownership status of the animal.

Complete all required fields, then click the "Save Changes" button to submit the new animal record. The system will automatically validate the entered data:

- If all inputs are valid, a confirmation message will appear, and the user will be redirected to the Animal Management page.
- If any errors are detected, an error message will be displayed, indicating the specific issue that needs to be corrected.

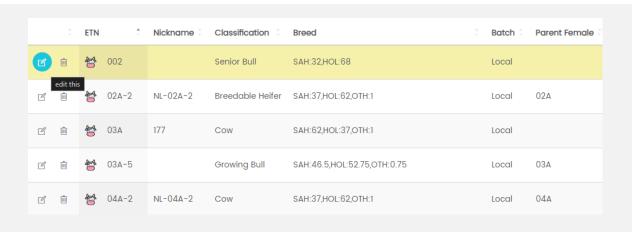


#### 2. Edit Animal

There may be cases where animal information needs to be updated. To edit a record, click the edit icon located on the left side of the animal list table. This action will redirect the user to the Animal Form page, where all existing data is automatically populated into their respective fields. The form layout mirrors the previously discussed interface.

Users can modify the necessary details and click the "Save Changes" button to apply updates. The system will then validate the input:

- If successful, a confirmation message will appear.
- If validation fails, a warning message will be displayed, indicating the specific error that needs correction.



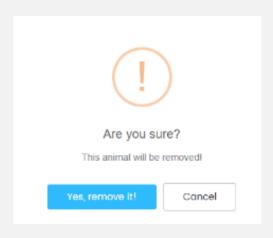
#### 3. Remove Animal

Animal records can be removed from active use; however, they are not permanently deleted. Instead, the record is disabled, meaning it can be reactivated or restored at any time. Disabled records are hidden from view and cannot be used in any transactions.

To remove an animal from the active list:

- Click the trash icon located on the left side of the animal list table.
- A confirmation message will appear, asking if you want to proceed with the removal.
- Select "Yes" to disable the record and move it to the Inactive List.
- Select "Cancel" to abort the process and keep the record active.

⚠ Important: Removing an animal record does not delete it permanently. The record is simply disabled and can be reactivated later if needed. A disabled animal record is not equivalent to an animal marked with a "Dead" status.



#### 4. Activate Animal

Disabled animal records are not permanently deleted and can be reactivated at any time. Once reactivated, the animal record will return to the active list and become available for transactions.

- To view removed records, go to the "Inactive Animals" page by clicking the link at the upper right corner of the animal data list.
- This will open a page displaying all disabled animal records.

#### To reactivate a record:

- Click the retrieve icon on the left side of the list.
- A confirmation message will appear, indicating that the record has been successfully reactivated.



### 5. Import Animal

While DMS allows manual entry of animal records, users can also upload large datasets—up to hundreds of entries—using the Import Animals feature.

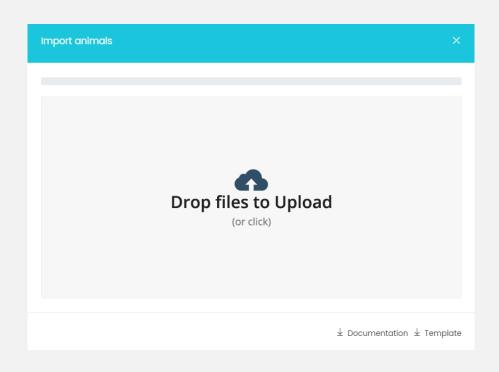
### To begin:

- Click the "Import Animals" button, located at the upper right corner of the managed table and highlighted in green.
- This opens the import interface. Users can either: Click the drop-box to browse and select a file, or drag and drop the file directly into the drop-box to initiate the upload.

⚠ Important: Each file can contain a maximum of 3,000 rows of data. The system only accepts uploads using a specific template format. To download this template:

- Click the "Template" button located at the lower right corner of the import interface.
- The template will be saved to your local computer.

Additionally, a documentation file is available for download. It includes detailed instructions and sample data to guide users in preparing valid entries.



### C. ANIMAL BREEDING MODULE

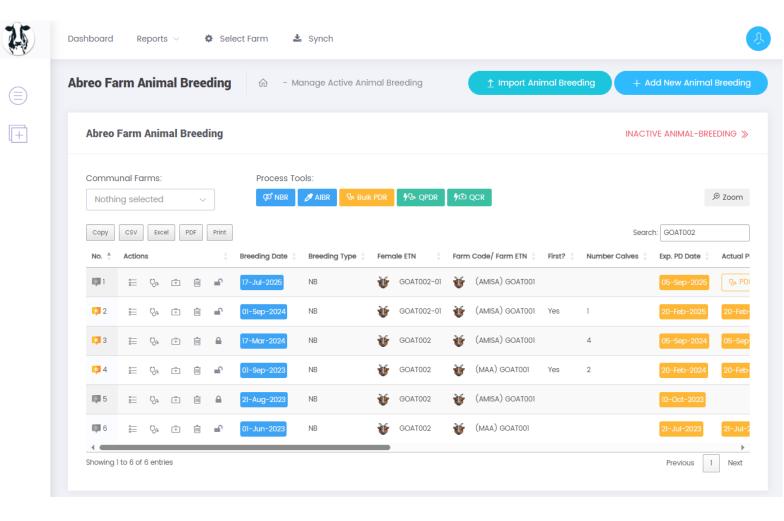
The Animal Breeding Record module enables users to efficiently monitor and manage breeding activities on the farm. Each record includes key details such as:

- Breeding events
- Pregnancy diagnosis
- Dry-off date range
- Offspring information
- Current status

All data is presented in a comprehensive and user-friendly grid, making it easy to view and interpret breeding history at a glance.

Users can quickly locate specific records using the search bar, positioned at the corner of the data list. By entering any keyword, the system will display results that match the entered characters.

To sort records, simply click on a column header. The system will automatically organize the data in either ascending or descending order, depending on the current sort state.



Below is a description of the key columns in the Breeding Record Grid, along with their purpose and usage:

- Actions Contains buttons for managing and updating individual records. Action columns has edit breeding, pregnancy, birthing info, delete, and lock functions.
- Breeding Date Displays the date of breeding and may include alerts such as "Due PD" (Pregnancy Diagnosis), "Due for dry-off", and "Due CDR" (Calving Date Record), indicating upcoming actions.
- Breeding Type Indicates the method of breeding used (e.g., natural, artificial insemination).
- Female ETN Shows the Electronic Tag Number of the dam (female animal).
- Farm Code & Male ETN Identifies the sire (male animal), which may be an actual male or a semen code. Note: Male animals can originate from another farm within the same area.
- First? Marks whether this is the female's first recorded breeding event. A first breeding means, dry-off is not required before birth of offspring.
- Number of Calves Displays the total number of offspring associated with the record.
- Expected PD Date A system-generated date for expected pregnancy diagnosis, useful for scheduling and calendar integration. The system automatically calculates the Expected Pregnancy Diagnosis by adding a predefined number of days to the Breeding Date. The number of days added varies based on the animal type, ensuring accurate scheduling aligned with species-specific reproductive timelines.
- PD Date The actual date when pregnancy diagnosis was conducted.
- Pregnancy Status Indicates the result of the diagnosis: Unverified, Not Pregnant, or Pregnant.
- Dry Date Indicates when the animal entered a non-milking period. The system calculates the expected dry-off date by marking the date two months before birthing date.
- Expected Calving Date A system-generated estimate of the calving date, also used in calendar task lists. Like expected PD, the system calculates the date by adding days from breeding date. Expected birthing date varies on animal type.
- Calving Date The actual date of birthing to animal.
- Offspring Birth Status Reflects the condition or outcome of the offspring.
- Offspring ETN Displays the Electronic Tag Number of the offspring.

• Calving Interval – Shows the number of days between the previous and current birthing events.

## ⚠ Important: Breeding Record Workflow and Rules

Breeding records follow a structured encoding process with specific rules to ensure accurate tracking and task scheduling. Here's how the workflow progresses:

## 1. Breeding Information Entry

- The process begins with recording breeding details (e.g., date, type, dam and sire info). This entry serves as the foundation for all subsequent reproductive tracking.
- In natural breeding, the breeding date is tag as estimation. The date is automatically computed once the birthing has taken place.

### 2. Pregnancy Diagnosis (PD)

- Once a breeding record is created, the system enables Pregnancy Diagnosis (PD) scheduling. The Expected PD Date is system-generated and used for calendar task planning.
- A system notification will appear if the record is due for PD.

### 3. Pregnancy Status

- After PD is conducted, the record is updated with a Pregnancy Status:
  - o Pregnant animal is pregnant and be viewed in birthing form.
  - O Not Pregnant animal will not be seen in birthing form.
  - Unverified means no PD conducted.

### 4. Dry-Off Date Requirement

- The Dry Date (non-milking period) is only required in the second offspring and onwards.
- This ensures proper tracking of lactation cycles and calving intervals.

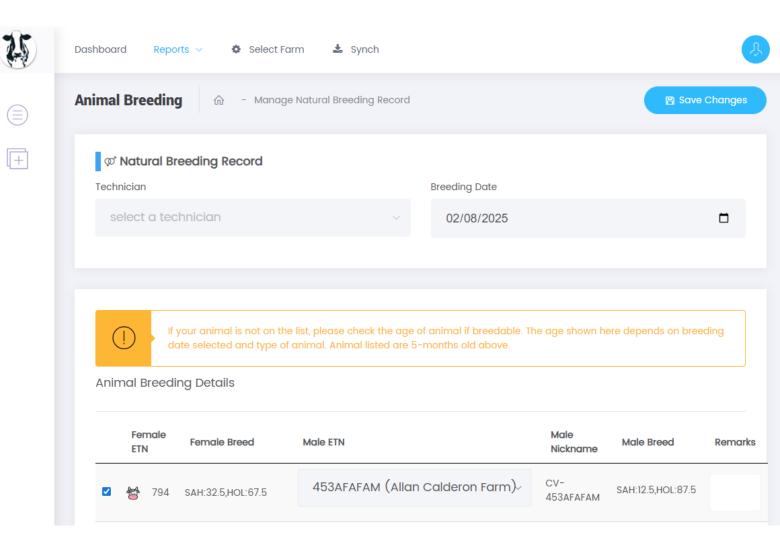
## 5. Birthing (Calving/Kidding)

- If the breeding is successful (Pregnant status) and the Expected Calving Date is reached, the Birthing feature becomes available.
- This allows entry of Calving Date, Child Birth Status, and Child ETN.

## 1. Create Natural Breeding Record (NBR)

Natural breeding refers to the reproductive process that occurs between a biological male and a biological female animal, typically without human intervention beyond monitoring and record-keeping. Since this type of breeding is not monitored, the exact breeding date is unknown. The system understands this process, so the breeding date is tagged as the estimated date and will adjust upon successful birth.

To initiate the documentation of a new breeding event within the system, users should click on the "NBR" button, which stands for "Natural Breeding Record." This button is prominently located at the left corner of the breeding list and is visually distinguished by its blue color for easy identification. Once the "NBR" button is selected, the system automatically redirects the user to the breeding-form page, where detailed information about the breeding event—such as the date, animal IDs, and any relevant observations—can be entered and saved for future reference and tracking.



The form displays text fields that must be completed with accurate and valid information. Fields that are mandatory are clearly marked in red with the message "this field is required" to guide the user during data entry.

The following list outlines the required fields in the breeding form along with their respective descriptions:

- Breeding Date This field is automatically populated with the current date upon opening the form. The list of animals displayed is dynamically generated based on the selected date. Changing the date will refresh the list to reflect animals that meet the breeding criteria for that specific day. The system calculates eligible animals using factors such as birthdate, age, and breeding availability.
- Male ETN This dropdown field presents a selection of available male animals suitable for breeding. The list is not restricted to males from the user's own farm; it also includes male animals from neighboring farms within the same geographic area, ensuring broader breeding options.
- Checkbox Each row in the animal list includes a checkbox. When checked,
  it signals the system to capture and process only the data from the selected
  rows. This allows users to selectively record breeding information for
  specific animal pairings.

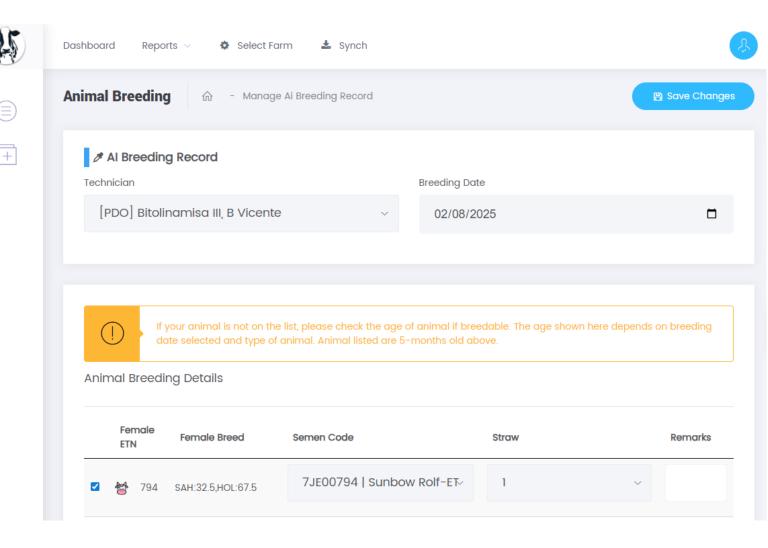
## **⚠ Important**: Step-by-Step Instructions:

- Enter the Breeding Date Begin by filling in the breeding date field. This action enables the system to generate a list of animals eligible for breeding based on the selected date, and availability.
- Select Female Animals Once the list is loaded, browse through the table and check the boxes corresponding to the female animals you wish to include. The system will only process the rows that are checked. Multiple selections are allowed.
- Choose a Male Animal After s0065`lecting the female animals, proceed to choose a male animal from the available options.
- Optional Remarks You may enter any additional notes or remarks in the designated field. This step is optional.
- Save and Validate Click the "Save Changes" button to submit the form.
   The system will then validate the entered data. If all inputs are valid, a success message will appear. If there are errors or missing required information, the process will be halted and an error message will be displayed to guide the user in correcting the input.

### 2. Create Artificial Insemination Breeding Record (AIBR)

Artificial Insemination (AI) breeding is a controlled reproductive technique involving the introduction of semen from a selected male animal into the reproductive tract of a female animal, without the need for natural mating.

To initiate a new breeding record using artificial insemination, users should click on the "AIBR" button, which stands for "Artificial Insemination Breeding Record." This button is prominently located at the left corner of the breeding list and is visually highlighted in blue for easy identification. Once the "AIBR" button is clicked, the system automatically redirects the user to the breeding-form page. Here, users can input relevant details such as the insemination date, semen stock identification, female animal selection, and any additional remarks. This structured process ensures accurate record-keeping and supports effective monitoring of breeding activities across farms.



The form displays text fields that must be completed with accurate and valid information. Fields that are mandatory are clearly marked in red with the message "this field is required" to guide the user during data entry.

The following list outlines the required fields and their descriptions for completing the Artificial Insemination Breeding Record (AIBR) form:

- Technician This field displays a list of technicians assigned to the selected farm. Technicians officially linked to the farm are labeled as PDOs. Other available technicians, not directly assigned, will appear with the designation Dairy Technician Specialist (DTS).
- Breeding Date This field is automatically filled with the current date.
   The list of animals shown is based on this date. Changing the breeding date will refresh the animal list. The system calculates eligible animals using their birthdate, age, and current breeding availability.
- Semen Code This field provides a list of available semen codes. Each code corresponds to a specific semen stock used for artificial insemination.
- Straw This field allows the user to select a number from one (1) to five (5), indicating the quantity of semen straws used during the insemination process.
- Checkbox When checked, this field instructs the system to capture and save information only from the rows that have been selected. This ensures that only relevant entries are included in the breeding record.

## ⚠ Important: Step-by-Step Instructions:

- Fill in the Technician and Breeding Date Begin by selecting the technician assigned to the farm and confirming the breeding date. This enables the system to generate a list of female animals eligible for artificial insemination based on the selected date.
- Select Female Animals Once the list is loaded, check the boxes beside the female animals you wish to include. The system will only process the rows that are checked. Multiple selections are allowed.
- Enter Semen Code and Straw Quantity After selecting the female animals, choose the appropriate semen code from the list and specify the number of straws to be used in the insemination process.

- Optional Remarks You may enter any additional notes or observations in the remarks field. This step is optional and can be left blank if not applicable.
- Save and Validate Click the "Save Changes" button to submit the
  form. The system will validate the entered data. If all required fields are
  correctly filled, a success message will appear. If any input is invalid or
  missing, the process will be halted and an error message will be
  displayed to guide the user in correcting the information.

## 3. Edit Breeding Record

Breeding records can be modified at any time, but only certain fields are editable depending on the status of the breeding cycle. The following rules apply specifically to natural breeding:

- Breeding Date Can be edited only if there is no pregnancy diagnosis date and no birthing date recorded. In natural breeding, the breeding date will adjust upon offspring birth. This ensures the timeline remains consistent with reproductive milestones.
- Animal Sire Editable only if the birthing process has not been entered.
   Once offspring is recorded, the sire information is locked to preserve lineage data.
- Semen Code Can be changed only if the birthing process is not yet recorded. This prevents inconsistencies in genetic tracking.
- Semen Straw Used Editable only if birthing process has not occurred. This field is locked post-birthing to maintain accurate usage records.
- Technician Always editable. You can update or correct technician details at any point in the breeding cycle.
- Remarks Always editable. This field allows for ongoing notes or updates and can be modified freely.



### 4. Create Pregnancy Diagnosis Record (PDR)

After the breeding process is completed, a qualified technician is responsible for verifying whether the breeding attempt was successful. This verification is essential for maintaining accurate reproductive records and ensuring proper herd management. The system includes a dedicated module that allows users to track the pregnancy status of each breeding record.

To create and add a Pregnancy Diagnosis Record (PDR), the user must click on the "PDR" button, which stands for Pregnancy Diagnosis Record. This button is located within the same record table, specifically under the Actual PD Date column, and is visually highlighted in yellow for easy identification.

For efficiency, users also have the option to use the Bulk PDR button. This feature allows technicians to simultaneously perform pregnancy diagnosis on multiple breeding records, streamlining the process for batch updates and saving valuable time during herd assessments.

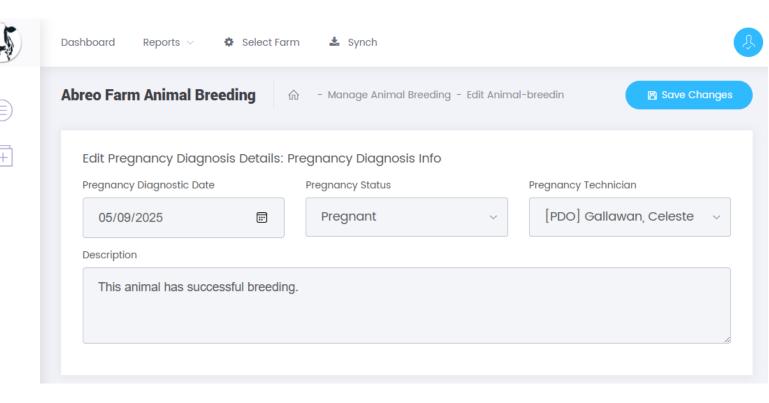
Upon clicking the "PDR" button, the system redirects the user to the pregnancy-diagnosis-form page. Here, the technician can input relevant details such as the diagnosis date, pregnancy status, and any additional remarks. This process ensures that each breeding record is updated with verified reproductive outcomes, supporting effective monitoring and decision-making across the breeding cycle.

When adding a Pregnancy Diagnosis Record (PDR), the form prompts several text fields that must be filled with valid data. Required fields are clearly indicated with red text labeled "this field is required." This ensures that technicians provide all necessary information before submitting the record.

The following list outlines the required fields and their descriptions:

- Pregnancy Diagnosis Date The date when the diagnosis was performed.
   This date must fall within the valid range, starting from the breeding date and extending up to the expected birthing date—typically nine (9) months for cattle and five (5) months for goat from the breeding record.
- Pregnancy Status The outcome of the diagnosis. The system supports the following pregnancy statuses:
  - Unverified No verification has been performed yet; this is the default status.
  - Pregnant The breeding was successful, and the animal is confirmed pregnant.
  - Not-Pregnant The breeding was unsuccessful, and the animal is not pregnant.

- Technician A dropdown list of technicians (PDOs) assigned to the selected farm. Technicians not assigned to the farm will appear with the designation Dairy Technician Specialist (DTS) for reference.
- Checkbox This field allows users to select specific rows for processing.
   Only rows with a checked box will be captured and included in the pregnancy diagnosis record.
- Expected Birthing (Calving/Kidding) Date The estimated date when calving may occur. Automatically set by the system: 9 months after breeding for cattle, and 5 months for goats. An extra 31 days is added to allow for late births.

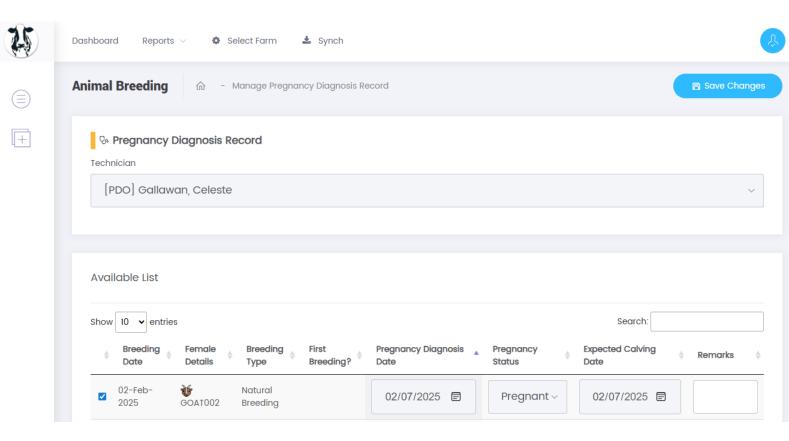


# ⚠ Important: Step-by-Step Instructions:

For Single Input PD:

- Select a technician Begin by choosing a technician from the provided list. This ensures that the record is properly attributed to the individual performing the diagnosis.
- Enter Pregnancy Diagnosis Date The date when the diagnosis is performed. This is auto-computed by the system based on the breeding date. The calendar range for the PD date starts from the breeding date and ends on either the expected calving date or current date—whichever is earlier. This keeps the diagnosis within a proper time frame.
- Select Pregnancy Status Choose the appropriate status: Pregnant, Not-Pregnant, or Unverified.

• Optional Remarks – You may enter additional notes or observations in the remarks field. This step is optional and can be used to provide context or technician comments.



### For Bulk Input PD:

- Select a technician Begin by choosing a technician from the provided list. This ensures that the record is properly attributed to the individual performing the diagnosis.
- Select Female Animals From the available list of breeding records, check the boxes beside the female animals you wish to include. The system will only process the rows that are checked. Multiple selections are allowed.
  - Note on Available List All entries in the "Available List" represent breeding records with an "Unverified" pregnancy status. These are the only records eligible for pregnancy diagnosis.
- Enter Diagnosis Details After selecting the animals, proceed to fill in the following fields:
  - o Pregnancy Diagnosis Date The date when the diagnosis is performed. This is auto-computed by the system based on the breeding date. The calendar range for the PD date starts

from the breeding date and ends on either the expected calving date or current date—whichever is earlier. This keeps the diagnosis within a proper time frame.

- Pregnancy Status Choose the appropriate status: Pregnant,
   Not-Pregnant, or Universified.
- Expected Birthing (Calving/Kidding) Date Automatically set by the system: 9 months after breeding for cattle, and 5 months for goats. An extra 31 days is added to allow for late births.
- Optional Remarks You may enter additional notes or observations in the remarks field. This step is optional and can be used to provide context or technician comments.
- Save and Validate Click the "Save Changes" button to submit the form.
  The system will validate the entered data. If all required fields are
  correctly filled, a success message will appear. If any input is invalid or
  missing, the process will be halted and an error message will be
  displayed to guide the user in correcting the information.



### 5. Edit Pregnancy Diagnosis Record

Pregnancy records are designed to be flexible and editable to accommodate updates throughout the breeding cycle. However, to maintain data accuracy and consistency, only specific fields can be modified—and this depends on the current status of the animal's breeding and birthing records.

Below is a breakdown of which fields can be edited, along with the conditions for each:

 Pregnancy Diagnostic Date – This field can be updated as long as there is no birthing record associated with the breeding cycle. Once birthing has been recorded, the diagnostic date becomes locked to preserve the integrity of the timeline.

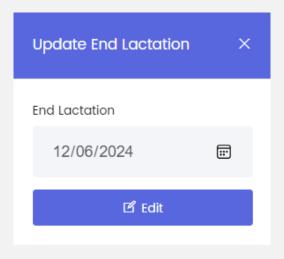
- Pregnancy Status Similar to the diagnostic date, the pregnancy status (e.g., pregnant, not pregnant, unverified) can be changed only if calving has not yet been recorded. This ensures that the status reflects the most accurate stage of the pregnancy.
- Pregnancy Technician This field remains editable at all times. You can
  update or correct the name of the technician who performed the
  diagnosis, regardless of the breeding or calving status.
- Description The description field is always open for edits. It allows users to add notes, observations, or any relevant details about the pregnancy diagnosis, and can be updated as needed.

### 6. Create End Lactation Date

The end lactation date refers to the practice of designating a specific period during which a dairy animal is identified as non-lactating or not producing milk. This classification is essential for managing the reproductive and milking cycles of the animal effectively. Tagging an animal with an end lactation status is only permitted after the confirmation of its second successful pregnancy, ensuring that the animal has reached a stage in its reproductive cycle where milk production should be temporarily halted.

Providing an accurate end lactation date is a critical component of responsible animal husbandry. It allows for proper rest and recovery of the animal's mammary system, supports optimal health, and prepares the animal for the next lactation period. This process also contributes to maintaining milk quality, improving reproductive performance, and aligning with best practices in dairy farm management.

Based on the outlined process, the system is designed to recognize and enforce this requirement—hence, providing an end lactation date is mandatory to ensure proper tracking and adherence to animal husbandry protocols.



Below is the field definition and conditions:

• Update End Lactation — The end lactation date is automatically calculated. The earliest allowable date is two (2) months prior to the expected birth of the offspring, while the latest permissible date extends up to the birthing date itself.

## ⚠ Important: Step-by-Step Instructions:

 Adding end lactation – To add an end lactation date, click the plus icon located in the End Lactation column of the corresponding record. The displayed date is automatically computed by the system. This button becomes visible only when the animal is marked as pregnant and is on its second pregnancy or beyond.

#### 7. Edit End Lactation Date

Users have the ability to edit the end-lactation date at any time. However, once a valid date has been assigned, it cannot be reverted to a null value. To modify the end-lactation date, click the edit icon located in the same column next to the existing end-lactation date. A form will appear, allowing you to input the updated value.

Below is the field definition and conditions:

• End Lactation – The current end-lactation date is auto-assign. The earliest allowable date is two (2) months prior to the expected birth of the offspring, while the latest permissible date extends up to the birthing date itself.

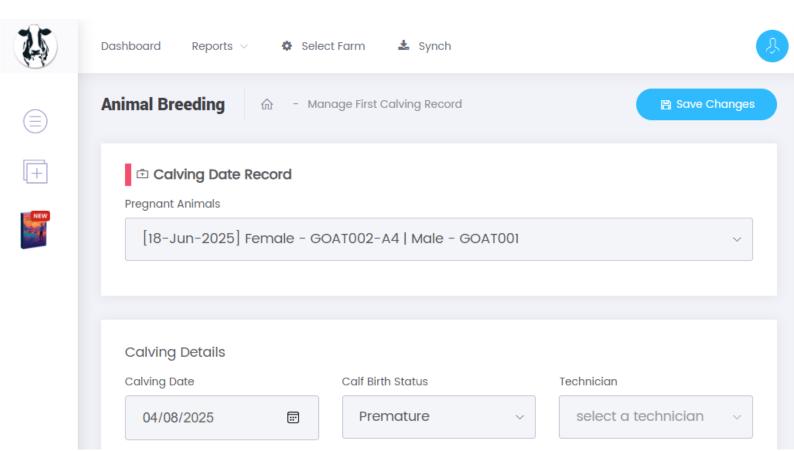
### 8. Create First Birthing (Calving/Kidding) Record (CDR)

Once the pregnancy diagnosis process is successfully completed—and particularly when a dry-off date has been assigned for animals in their second pregnancy or beyond—the system enables the pregnant animal to be viewed and managed within the First Birthing Process module.

This module plays a critical role in documenting the reproductive history of the animal. It captures detailed records of birthing outcomes, providing valuable insights into the condition and development of the offspring. The system allows users to classify the birthing result based on observed outcomes, which may include: Fully-developed, Premature, Aborted, and other outcomes.

In addition to documenting the birthing outcome, the system also automatically calculates the parent breed composition of the offspring. This feature ensures accurate genetic tracking by determining the breed lineage based on the recorded breeds of both the male and female animal parents.

By maintaining a comprehensive record of these events, the system supports better decision-making in herd management, health monitoring, and breeding strategies. It also ensures that each animal's reproductive history is accurately tracked for future reference and analysis.



All breeding records associated with a pregnant status and other required conditions are automatically made available within the First Birthing Record section of the system. The following list outlines the required fields and their descriptions:

- Pregnant Animals Displays a list of female animals currently marked with pregnant status. Selection of an animal triggers the system to evaluate expected calving parameters.
- Offspring (Calving/Kidding) Date Refers to the actual date of offspring recorded for the selected animal. This date determines which offspring birth status options are available. In natural breeding, the breeding date will adjust based on birthing date and type on animal.

- Calf Birth Status Auto-calculates the status base on birthing date that indicates the condition of the offspring at birth. The selection list is dynamically generated based on the selected animal and its birthing date:
  - Fully Developed Appears only if the birth date is within the normal expected range.
  - Premature Appears only if the birth date is before the expected range, but offspring is alive.
  - Abortion Appears if the birth date is before the expected range, but offspring is aborted. The offspring creation form will not be available as the animal is considered dead.
  - Resorption Appears if the birth date is before the expected range. The calf creation form will not be available.
  - Stillborn Appears if the birth date is outside the expected range.
     The offspring creation form will not be available.
  - Unknown Offspring Appears if the calving date is outside the expected range. The calf creation form will not be available.
  - Other Appears if the calving date is outside the expected range.
     The calf creation form will not be available.
- Technician Displays a list of technicians (PDOs) assigned to the selected farm. Technicians from other areas will appear with the designation of Dairy Technician Specialist (DTS).
- Farm ETN Refers to the unique Ear Tag Number assigned to the calf within the farm. This field is only available if the birth status is either Fully Developed or Premature. The parent mother of the offspring will inherit the ETN code as its predefined number. No ETN should be same within the same farm.
- Birth Date Specifies the actual date of birth of the offspring. This field is only available if the birth status is either Fully Developed or Premature. This field is auto-fill once birthing date field has value.
- Sex Defines the gender of the offspring. Options include Male or Female.

# <u>↑ Important</u>: Step-by-Step Instructions:

- Click the Create Offspring Record Button (CDR) the button is located at the Actual Offspring Birth Date column at the breeding management table. Button will only appear if animal is with pregnant status, and with dry-off date for secondary breeding.
- Select a Pregnant Animal Begin by choosing an animal from the list of those marked with a pregnant status. This list is dynamically generated based on breeding records and pregnancy diagnosis.
- Auto-Fill of Offspring Information Once an animal is selected; the system will automatically populate several fields related to the birthing event. These include:
  - Birthing Details such as expected birthing date and birth status.
     In natural breeding, the breeding date will adjust base on birthing date nine (9) months for cattle and five (5) months for goat.
  - Parent Details including breed composition and identifiers of both male and female parents.
  - Offspring Details preliminary data based on system calculations.
     This automation ensures consistency and reduces manual input errors.
- Input or Confirm Birthing Date If the auto-filled birth date does not match the actual date of birth, you may manually update it. The birthing date is critical, as it directly influences the available options for Offspring Birth Status.
- Select Offspring Birth Status The system will adjust the birth status options based on the selected animal and the entered birth date.

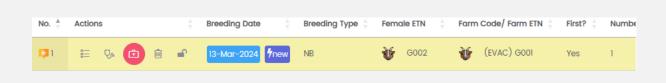
#### Available statuses include:

- o Fully Developed if the birth date falls within the expected range.
- o Premature if the birth date is slightly earlier than expected.
- Other statuses such as Abortion, Resorption, Stillborn, Unknown Offspring, and Other will appear if the birth date is outside the expected range.
  - Note: Only the Fully Developed and Premature statuses will enable the Offspring Information Form.
- Fill Out Offspring Information If the calf form is enabled, proceed to define the following:

- o Farm ETN an inherited Ear Tag Number assigned to the offspring within the farm from its mother.
- Sex specify whether the calf is male or female.
- Other fields such as breed composition and parents are autofilled based on system data.
- Save and Validate Once all required fields are completed, click the "Save Changes" button. The system will perform a validation check to ensure: All mandatory fields are filled. Values entered are within acceptable ranges or formats. The calving date and birth status are logically consistent.
- System Response If the input passes validation, a success message will be displayed, confirming that the calving record has been saved. If any errors are detected, the system will prevent submission and display an error message indicating which fields need correction.

## 9. Edit Birthing (Calving/Kidding) Record

Birthing records within the system are designed to remain editable, providing flexibility for users to update or correct information as needed. This functionality is available at any time, provided that the selected animal has an existing birthing detail recorded within its breeding cycle regardless if failed to produce offspring.



When editing a birthing record, the following fields are available for modification, depending on the context of the breeding cycle and offspring data:

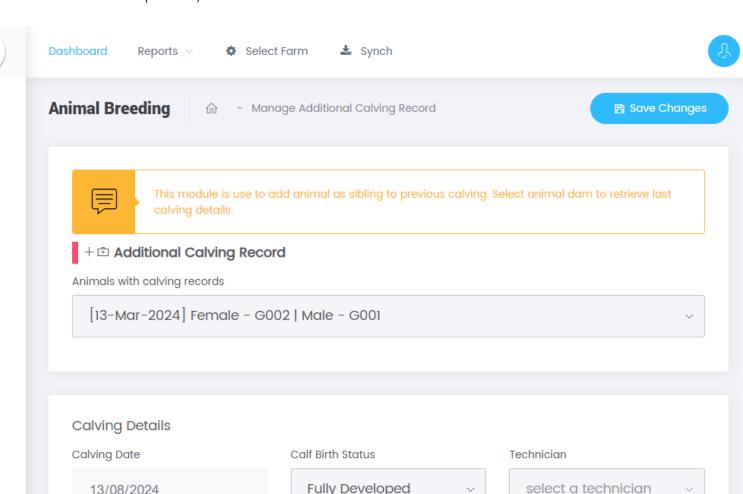
- Offspring Displays the list of offspring associated with the selected breeding event. If multiple offspring (siblings) are present, the birthdate field becomes disabled to prevent conflicting data entries.
- Birthing (Calving/Kidding) Date Represents the actual date of birthing, which also serves as the birthdate of the offspring. This field is editable only when the calf has no siblings, ensuring consistency in birth records for single births.

## 10. Additional Offspring (Calving/Kidding) Record (ACR)

In certain breeding events, a female animal may produce more than one offspring. To accommodate this, the system includes a dedicated module that allows users to record and manage multiple offspring within a single breeding record. This functionality ensures that all calves born from the same pregnancy are accurately documented and linked to their parent animal.

The system supports a maximum of four (4) offspring per breeding instance. This limit is in place to maintain data integrity and reflect realistic biological outcomes. Female animals that have already produced offspring but have not yet reached the defined limit are automatically included in the additional offspring selection list, allowing users to continue adding additional calves as needed.

Each offspring recorded through this module is fully integrated into the system's tracking features. This means that users can view and manage the birthing record of every offspring, including details such as birth status, breed composition, and other relevant data.



To record additional offspring from the same breeding event—such as twins, triplets, or up to the system's limit of four offspring—users must access the Additional Offspring Form. This can be done by clicking the "ACR" button, which is located in the same row of the Breeding List under the Additional Offspring column. The button is highlighted in red for easy identification and only appears when the breeding record is eligible for multiple offspring entries.

Upon clicking the "ACR" button, the system will redirect the user to the Additional Offspring Form Page, where the following actions can be performed:

- Animals with Calving Records Displays female animals that have recorded calving events but do not yet have reach the limit. These animals are eligible for additional offspring entries.
- Farm ETN Represents the unique Ear Tag Number (ETN) assigned to each calf within the farm. This field is only available when the calf's birth status is marked as either Fully Developed or Premature.
- Technician Lists the PDOs assigned to the selected farm. Technicians from other farms will also appear, labeled with the status Dairy Technician Specialist (DTS).
- Sex Indicates the gender of the calf. Options include Male or Female.

# ⚠ Important: Step-by-Step Instructions:

- To begin the process, the user must first select an animal from the initial dropdown menu labeled "Animals with Calving Records." This list includes female animals that have recorded calving events but do not reach the limit. Once an animal is selected, the system will automatically retrieve and populate relevant data fields associated with that animal, including calculated values based on its historical records and breeding information.
- It is important to note that while most fields will be auto-filled, the following must be manually entered by the user:
  - Technician Select the appropriate Production and Development Officer (PDO) or Dairy Technician Specialist (DTS) assigned to the farm.
  - Farm ETN Input the unique Ear Tag Number for the calf, applicable only if the birth status is either Fully Developed or Premature.
  - Sex Specify the gender of the calf by selecting either Male or Female.

- After all the required fields have been completed, the user should click the "Save Changes" button to initiate the submission process. The system will then perform a validation check on the entered data to ensure accuracy, completeness, and compliance with predefined rules.
  - If the input passes validation, the system will display a confirmation message indicating that the data has been successfully saved.
  - o If any errors or inconsistencies are detected, the submission will be halted, and an error message will be shown to guide the user in correcting the issue before resubmitting.

## 11. Quick Pregnancy Diagnosis Record (QPDR)

To streamline the documentation of breeding and pregnancy diagnosis events, the system includes a dedicated feature known as the Quick Pregnancy Diagnosis Record (QPDR) module. This module is specifically designed to simplify and accelerate the process of encoding pregnancy-related data, particularly in cases where both breeding and diagnosis records need to be created simultaneously.

Users can initiate this process directly from the Breeding management interface. The "QPDR" button positioned at the upper table under "Process Tools", highlighted in green for easy identification. This visual cue helps users quickly locate and access the quick-entry functionality.

Upon clicking the "QPDR" button, the system will automatically redirect the user to the Quick Pregnancy Diagnosis Form Page. Here, users can input essential details such as:

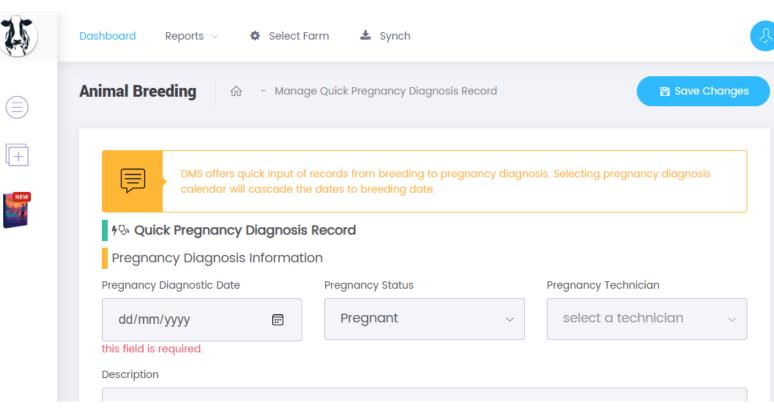
- Pregnancy diagnosis result
- Breeding date and animal

This module is particularly useful for technicians and farm managers who need to record pregnancy outcomes efficiently during field visits or routine herd assessments. By combining breeding and diagnosis into a single-entry point, the system, improves data entry, and enhances overall workflow efficiency.

The following list describes the behavior of fields when value is given:

 Pregnancy Diagnostic Date – Allows the user to select any date prior to the current date. Once selected, the system will automatically calculate the breeding date by assigning a value that is 150 days earlier than the

- chosen diagnosis date. This ensures consistency in the breeding timeline and supports accurate recordkeeping.
- Pregnancy Status Indicates the outcome of the breeding event. The user can select whether the animal is Pregnant or Not Pregnant, based on the results of the diagnosis. This status determines the next steps in the reproductive tracking process.
- Breeding date This field is auto-calculated based on the selected pregnancy diagnosis date. The system assigns a breeding date that is exactly 150 days before the diagnosis. The field is restricted to this range to maintain biological accuracy and prevent manual errors.
- Animal Type Determines the category of animals involved in the breeding event. Options may include Cattle, Carabao, or Goat. Selecting an animal type will dynamically filter the list of available animals, ensuring that only compatible male and female animals are shown.
- Breeding Type Defines the method of breeding used. The selected breeding type directly influences the list of male options:
  - Natural Breeding Displays a list of male animals available within the same farm or area.
  - Artificial Insemination (AI) Displays a list of semen codes that match the selected animal type. This ensures proper genetic tracking and compatibility.



 Straws – Refers to the number of semen straws used during artificial insemination. This field is only applicable when Artificial Insemination is selected as the breeding type. Recording the number of straws helps monitor resource usage and supports reproductive analysis.

# ⚠ Important: Step-by-Step Instructions:

- This module functions similarly to the standard Breeding and Pregnancy Diagnosis modules, but is presented in a streamlined format designed for faster and more efficient data entry.
- To begin encoding a pregnancy diagnosis record using the Quick Pregnancy Diagnosis Module, the user must first select a pregnancy diagnosis date. This date serves as the foundation for the record and triggers a series of automated actions within the form:
  - The selected date will cascade into the breeding date field, ensuring chronological consistency between breeding and diagnosis.
  - o Fields that were previously disabled will now be enabled, allowing the user to proceed with entering additional details.
  - The system will also auto-fill relevant fields based on existing records associated with the selected animal, streamlining the data entry process and reducing manual input.
- Next, the user must choose the animal type involved in the breeding event. Available options typically include, Cattle, Carabao, and Goat.
- Upon selecting an animal type, the system will dynamically update the lists of parent animals: The male and female selection lists will be filtered to show only animals of the chosen type. This ensures that breeding records remain biologically accurate and contextually relevant.
- Once the animal type is selected, the breeding type field becomes active. The user can then specify the method of breeding used in the event:
  - Artificial Insemination (AI) If this option is selected, the system will require the user to input a semen code, which identifies the genetic source used for insemination. This field is mandatory to ensure traceability and proper documentation.
  - Natural Breeding If this method is chosen, the user can select a male animal from the same geographical area or farm. The system filters available male based on location to maintain breeding integrity and record cross-farm breeding.
- This structured and responsive interface is designed to guide users through the pregnancy diagnosis process efficiently, ensuring that all

necessary data is captured accurately while minimizing the risk of errors. By automating field behavior and cascading values based on user selections, the module supports faster input and improved record quality.

- Once all required fields are completed, users can click the "Save Changes" button to submit the record. The system will then perform a validation check to ensure that all inputs meet the necessary criteria.
  - o If the data is valid, a success message will confirm that the record has been saved.
  - o If the data is invalid, the system will prevent submission and display an error message indicating which fields need correction.

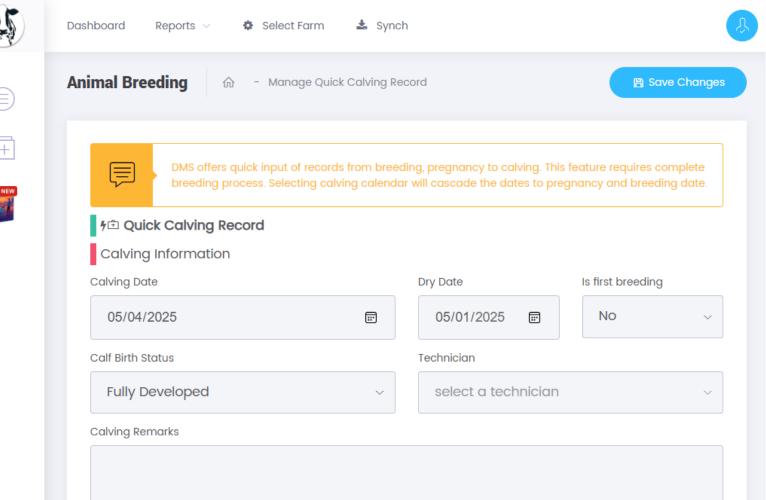
## 12. Quick Calving Record (QCR)

The system provides a streamlined feature that enables users to encode a complete breeding cycle, starting from the initial breeding period and extending all the way to the birthing stage. This functionality is accessible through the Quick Calving Record module, which is specifically designed to support the entry of historical or previously completed breeding data. It is particularly useful for backtracking and documenting events that occurred prior to system adoption or during offline periods.

The following list describes the behavior of fields when value is given:

- Calving Date Enables the user to select any date prior to the current date to represent the actual birthing event. Once a calving date is selected, the system will automatically cascade updates to related fields:
  - Breeding Date Calculated as 275 days before the selected calving date.
- Dry Date Required only if the breeding event is secondary or beyond (i.e., not the first breeding). This field marks the start of the drying-off period and is essential for tracking lactation cycles and reproductive intervals.
- Is First Breeding A Yes/No selection that determines whether the breeding event is the animal's first. The value selected here directly influences whether the Dry Date field is required. If "No" is selected, the Dry Date becomes mandatory.

- Offspring (Calving/Kidding) Birth Status Allows the user to select the condition of the offspring at birth. Options may include: Fully Developed, Premature, Aborted, Stillborn, Resorbed, Unknown, and Other.
- Pregnancy Diagnostic Date This field is auto-calculated based on the selected calving date. The system restricts the selection to a range of 150 days before the birthing event, ensuring biological plausibility and consistency with standard reproductive timelines.
- Pregnancy Status Indicates the result of the pregnancy diagnosis. In this
  module, the status is fixed to "Pregnant", as it is assumed that only
  successful pregnancies are recorded through the Quick Calving Record
  module.
- Breeding Type Defines the method of breeding used. The selected breeding type directly influences the list of male options:
  - Natural Breeding Displays a list of male animals available within the same farm or area.
  - o Artificial Insemination (AI) Displays a list of semen codes that match the selected animal type. This ensures proper genetic tracking and compatibility.
- Breeding date Automatically calculated based on the selected birthing date. The system assigns a breeding date that is 275 days prior to the birth event. This field is locked to this range to maintain biological accuracy and prevent manual errors.
- Offspring ETN The system automatically assigns an Ear Tag Number (ETN) to the offspring, which is inherited from the female parent. This ensures continuity in identification and simplifies tracking across generations.
- Sex Allows the user to define the gender of the offspring, with selectable options: Male and Female.



# ▲ Important: Step-by-Step Instructions:

- To initiate the process, users must click the "QCR" button, which is clearly
  marked in green and located at the top-left corner of the Breeding List
  interface. This button acts as a direct shortcut to the calving record
  workflow, eliminating the need to navigate through multiple modules or
  pages.
- Setting dates Start by selecting the birthing date, which refers to the
  actual calving or kidding event. Once this date is chosen, the system will
  automatically compute and populate two critical fields: the breeding
  date, calculated as 275 days prior, and the pregnancy diagnosis date, set
  150 days before the birthing date. These auto-filled values ensure
  consistency with biological timelines and reduce manual entry errors.
- The Dry-off and First Breeding In the birthing section, you'll need to
  indicate whether the current breeding is the animal's first. If you select
  "No", the system assumes this is a subsequent breeding cycle and will
  require you to manually enter a Dry-Off Date, which marks the end of
  lactation before the next breeding. If you select "Yes", confirming that

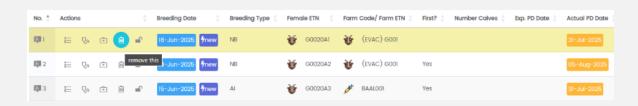
this is the first breeding, the system will automatically disable the Dry-Off field, as it's not applicable for animals that haven't previously lactated.

- Birth Status Selection Proceed to the birth status field and choose the
  appropriate condition of the offspring at birth. Options typically include
  Fully Developed, Premature, Stillborn, or Aborted. If you select either
  Fully Developed or Premature, the system will recognize that viable
  offspring are present and will automatically prompt the Offspring Form,
  allowing you to enter offspring-specific details such as sex and
  identification.
- Pregnancy Diagnosis (PD) Form The diagnosis date in the PD form is automatically set based on the birthing date, ensuring alignment with standard veterinary timelines. You can also manually set the pregnancy status, which typically defaults to Pregnant if the calving record is being created.
- Breeding Form Details The breeding date is auto-computed and locked to 275 days before the birthing date, maintaining consistency across records. You'll need to select the breeding type, which determines the source of the male genetic material. If you choose Natural Breeding, the system will display a list of male animals available for pairing. If you choose Artificial Insemination (AI), it will show semen codes that match the selected species and breed, allowing you to document the specific genetic input used.
- Offspring Form Completion Once the form is enabled, you can enter details about the newborn animal. The sex of the offspring must be selected manually (Male or Female). The Ear Tag Number (ETN) is automatically generated by the system, typically derived from the female animal parent ETN and the birth sequence. This ensures each offspring has a unique identifier for tracking and future recordkeeping.

## 13. Remove Breeding Record

An animal breeding record can be removed from the system when necessary, such as in cases of incorrect data entry, canceled breeding plans, or administrative adjustments. However, it's important to note that when a breeding record is removed, it is not permanently deleted from the database. Instead, the system marks the record as disabled, which means the data remains stored internally but is no longer visible or accessible through standard user interfaces.

This approach ensures that historical breeding information is preserved for future reference, auditing, or potential recovery, without cluttering active records or interfering with ongoing workflows. A disabled breeding record can be reactivated or retrieved at any time if needed, allowing users to restore the entry to its original state and resume tracking or editing as required. This functionality supports data integrity and flexibility, giving users control over record visibility without risking permanent data loss.



To initiate the removal of a breeding record, locate the trash icon positioned on the left side of the animal breeding list table, adjacent to the corresponding record you wish to remove. This icon serves as the action trigger for disabling the selected breeding entry.

Once the trash icon is clicked, the system will immediately display a confirmation prompt, asking the user to verify whether they wish to proceed with the removal process. This safeguard ensures that records are not disabled unintentionally.

- If the user clicks "Yes", the system will proceed to disable the breeding record and transfer it to the inactive list, effectively removing it from active views and workflows. The record will no longer be visible in standard interfaces but remains stored in the system for future retrieval or audit purposes.
- If the user clicks "Cancel", the process will be aborted, and the breeding record will remain unchanged and fully accessible in its current state. This removal mechanism ensures that users maintain control over data visibility while preserving the integrity and recoverability of breeding records.

## 14. Activate Breeding Record

Breeding records that have been disabled are not permanently deleted and can be retrieved or reactivated as needed. These records are stored in the "Inactive Animal Breeding" section for reference and potential restoration.

To access this section:

- Navigate to the animal breeding data list page.
- Locate and click the "Inactive Animal Breeding" link positioned at the upper right corner of the interface.

Upon clicking the link, the system will redirect the user to a dedicated page displaying all disabled breeding records. From this view, users can review previously removed entries and, if necessary, initiate actions to reactivate specific records.

This feature ensures that data remains accessible and manageable, supporting both operational flexibility and historical tracking.



To restore a previously disabled breeding record, navigate to the Inactive Animal Breeding page where all removed entries are listed. Each record in this list includes a retrieve icon located on the left side of the row, which serves as the action button for reactivation.

When the user clicks the retrieve icon, the system will immediately process the request and display a confirmation message indicating that the selected breeding record has been successfully activated. Once reactivated, the record will be moved back to the active breeding list, making it visible and accessible for further updates, tracking, or reporting.

This reactivation process ensures that users can easily recover and reinstate breeding records without data loss, supporting flexible record management and maintaining the integrity of historical breeding information.

## 15. Import Breeding Record

While the DMS allows for manual creation of animal breeding records, this method can be time-consuming, especially when dealing with large volumes of data. To address this challenge, DMS offers a more efficient solution through its Import Animal Breeding feature, which enables users to upload hundreds or even thousands of records in a single operation.

To begin the upload process:

- Navigate to the animal breeding management table.
- Locate the "Import Animal Breeding" button positioned at the upper right corner of the interface. This button is clearly marked in green for easy identification.
- Click the button to open the import interface, where users can initiate the file upload.

Within the import interface, users have two options for uploading their data file:

- Click the drop-box area to open the file directory and manually select the desired file.
- Drag and drop the file directly into the drop-box area to automatically begin the upload process.

It's important to note that the system supports bulk uploads with a maximum limit of 3,000 rows per file. This ensures optimal performance and prevents processing delays during large data imports.

By leveraging this feature, users can significantly reduce the time and effort required to encode breeding records, improving operational efficiency and ensuring timely data integration across the system.

Moreover, the system only accepts files that follow a specific template. To download this template, users can click the "Template" button located at the lower right corner of the prompted interface, which will save the file to their local computer.

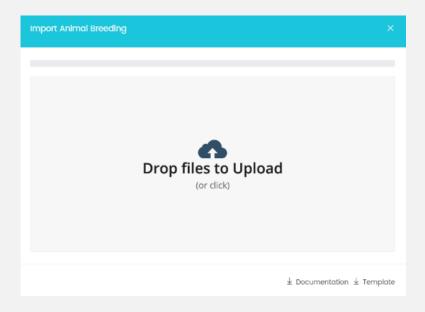
Additionally, a documentation file is available for download, providing detailed instructions and basic examples to guide users in preparing their data correctly. By using the proper template and referring to the documentation, users can streamline the data entry process and ensure accurate integration of breeding records into the system.

The following list are the important part of the template and their description and rules:

• Farm Code – This column is mandatory. The farm code must match the currently selected farm in the system. Users can obtain the correct farm

- code from the DEIS platform or by requesting it from the MIS Officer. Mismatched codes will result in upload errors.
- Breeding Type Specifies the breeding method used: either Natural or Artificial. This value is case sensitive and must be entered exactly as defined. If "Natural" is selected, the system will reference male animals from the specified farm. If "Artificial" is selected, the system will use the semen code provided. Incorrect casing or spelling may result in failed record processing.
- Breeding Date Indicates the date the female animal was bred. The
  format must follow DD/MM/YYYY. If the system detects a conflict with
  an existing breeding record for the same animal, it will skip the row and
  continue processing the next entry. Proper formatting is essential for
  successful import.
- Female Farm ETN The Ear Tag Number (ETN) of the female animal must exist within the currently selected farm. If the system detects a conflict—such as overlapping breeding records—it will halt processing for that row and move to the next. This field is required for all breeding entries.
- Male Farm Code Used when the breeding type is Natural. The system will access this farm to locate the male animal specified. Ensure the farm code is valid and corresponds to an existing farm in the system.
- Male Farm ETN Required only for Natural Breeding. The ETN must belong to a male animal within the specified farm or area. If the breeding type is Artificial, this column will be ignored.
- Semen Code Required only for Artificial Breeding. The semen code must match the selected animal type and is case sensitive. Incorrect casing or invalid codes will result in skipped rows.
- Semen Straw Also required for Artificial Breeding. Indicates the number of semen straws used during the breeding process. This value helps track resource usage and breeding efficiency.
- PD Date If a valid date is provided in this column, the system will initiate the pregnancy diagnosis process. If left blank, the system will process only the breeding portion of the record. The format must be DD/MM/YYYY.
- Pregnancy Status Defines the outcome of the pregnancy diagnosis.
   Acceptable values are pregnant or not-pregnant, and the field is case sensitive. Any extra characters or incorrect casing will default the status to not-pregnant.
- Offspring (Calving/Kidding) Date If a valid date is entered, the system will trigger the birthing process. If left blank, only breeding and pregnancy data will be processed. The format must be DD/MM/YYYY.

- Offspring Birth Status accepts value such as fully-developed, premature, stillborn, unknown-calf, abortion, stillbirth, and resorption. This column is case sensitive, and incorrect entries may result in skipped birthing records.
- Offspring Farm ETN The Ear Tag Number of the offspring must be unique within the farm. The system will only trigger the birthing process if the birth status is either fully-developed or premature. Duplicate ETNs will cause the row to be skipped.
- Offspring Sex Acceptable values are male or female. This column is case sensitive, and incorrect casing may result in failed data processing.



## 16. Lock Breeding Record

The Dairy Management System (DMS) includes a record locking feature designed to enhance data integrity and protect sensitive information from unauthorized modifications.

This functionality allows users to lock individual row entries, effectively restricting any further edits to the data once it has been finalized or verified. When a record is locked, standard users are unable to make changes, ensuring that critical breeding information remains secure and unaltered.

Only users with elevated access privileges—such as those in Management Information Systems (MIS) roles—have the authority to unlock or re-enable the

record for editing. This controlled access mechanism supports better oversight, prevents accidental data loss or tampering, and reinforces accountability within the system's data management processes.



To perform locking or unlocking actions within the system, the user must have the locking functionality enabled on their account. This permission is typically granted based on role or access level, ensuring that only authorized personnel can secure or modify sensitive records.

- Within the animal breeding data table, each row includes a lock icon—visually represented by a padlock—positioned alongside other action buttons. This icon serves as the control point for managing the lock status of individual records.
- To lock a record, the user simply clicks the lock icon associated with the desired row.
- Upon doing so, the system will display a confirmation prompt, asking the user to verify whether they wish to proceed with the locking action.
  - o If confirmed, the system will execute the lock and display a success message indicating that the record has been secured and is no longer editable.
  - Conversely, to unlock a record, the user must possess a higher level of access, such as that granted to MIS personnel or system administrators.
- The unlocking process follows the same interaction flow:
  - o clicking the lock icon triggers a confirmation prompt, and upon approval, the system will unlock the record and display a message confirming the action.

This feature ensures that critical data remains protected while still allowing for controlled updates when necessary.

#### D. ANIMAL HEALTH

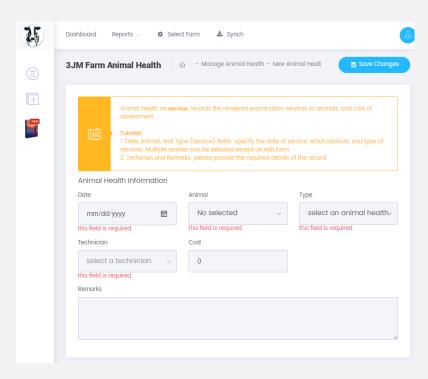
The Animal Health Module serves as a comprehensive tool for documenting and managing veterinary services provided to livestock. It enables technicians and farm managers to systematically record the nature of health-related interventions—such as treatments, vaccinations, or diagnostic procedures—performed on individual animals or groups, all within a defined time frame.

This module empowers users to actively monitor and update the health status of each animal, ensuring that medical histories remain accurate and accessible. Through its intuitive interface, users can initiate batch entries, allowing multiple health services to be assigned to several animals simultaneously. This significantly streamlines the workflow, especially in large-scale operations where efficiency and traceability are paramount.

#### 1. Create Health

To initiate the process of recording a new health service for an animal, begin by locating the "Add New Services" button. This action button is prominently positioned at the top-right corner of the animal health management table and is visually distinguished by its blue color, signaling its primary function within the interface.

Once clicked, the system will seamlessly redirect the user to the Animal Health Form Page, where detailed information about the health service can be entered. This form serves as the central input interface for capturing veterinary interventions, diagnostic procedures, or any other health-related activity performed on the animal.



The form consists of multiple text fields and selection inputs, each designed to collect specific data points relevant to the health record. Users are expected to provide valid and complete information in each field to ensure data integrity and traceability.

Fields that are mandatory for submission are clearly marked with a red warning label stating "This field is required." This visual cue helps prevent incomplete entries and guides users toward successful form completion.

When completing the Animal Health Form, users are required to provide valid entries in the following key fields. Each field plays a critical role in ensuring the accuracy, traceability, and usefulness of the health record:

- Date Specifies the exact calendar date on which the health service was performed. This field ensures chronological tracking of medical interventions and is essential for historical analysis and reporting.
- Animal Selection Displays a filtered list of animals associated with the currently selected farm. Users can select one or multiple animals to apply the same health service across a group. This multi-selection capability streamlines batch processing and reduces repetitive data entry.
- Type of Health Service Provides a predefined dropdown list of common health service types (e.g., ear-tagging, deworming, tuberculosis). If the specific service conducted is not listed, users may choose the "Others" option. Upon selecting "Others," they are prompted to enter a custom description in the Remarks field to specify the nature of the service.
- Technician Offers a selection of registered technicians responsible for administering the health service. This field helps attribute accountability and supports technician performance tracking.
- Cost This field captures the actual expense incurred, whether it's for medication, labor, equipment usage, or any other service-related charge.
   Recording the cost ensures financial transparency and supports budgeting, reporting, and cost-benefit analysis across animal health operations.

Once all required fields have been accurately completed—including Date, Animal Selection, Health Type, Technician, Cost, and any applicable Remarks—the user can proceed by clicking the "Save Changes" button located at the bottom of the form interface.

Upon submission, the system performs a real-time validation check to ensure that all entries meet the expected format and that no mandatory fields are left blank.

- If all data passes validation, the system will display a confirmation box indicating that the health record has been successfully created. Immediately after, the user is redirected to the Animal Health Management Page, where the newly added record will appear in the list view.
- If any issues are detected—such as missing required fields, invalid formats, or unrecognized entries—the system will trigger an error message.

#### 2. Edit Health

There may be instances when previously recorded animal health information requires revision—such as correcting data entry errors, updating service details, or modifying technician assignments. In such cases, editing the record becomes necessary.

To begin the process, the user should click the edit icon located on the left side of the animal health list table. This action will redirect the user to the animal health form page, where all existing data is automatically populated into their respective fields for easy review and modification.

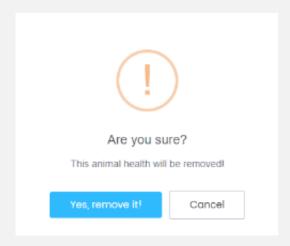
Once the necessary updates have been made, the user must click the "Save Changes" button to submit the revised information. The system will then validate the input data to ensure accuracy and completeness.

- If the update is successful, a confirmation message will appear indicating success.
- However, if the system detects any issues—such as missing required fields or invalid formats—a warning message will be displayed, clearly stating the cause of the error so the user can make the appropriate corrections.

#### 3. Remove Health

Animal health records can be removed from active view when necessary. However, removal does not equate to permanent deletion. Instead, the system disables the selected record, allowing it to be reactivated or retrieved at a later time if needed. To initiate this process, the user must click the trash icon located on the left side of the animal health list table.

Upon clicking, the system will display a confirmation prompt asking whether the user wishes to proceed. Selecting "Yes" will disable the record and transfer it to the inactive list, effectively removing it from the active dashboard. If the user selects "Cancel," the operation will be aborted and no changes will be made.

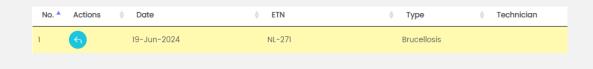


#### 4. Active Health

Removed animal health records are not permanently deleted but instead moved to an inactive state, allowing users to retrieve or reactivate them when needed. These disabled records are accessible via the "Inactive Animal-Health" page.

To navigate to this section, click the link located at the upper right corner of the animal data list. This action will redirect the user to a dedicated page displaying all inactive health records.

To reactivate a specific record, click the retrieve icon positioned on the left side of the corresponding entry. Upon selection, the system will display a confirmation message indicating that the record has been successfully reactivated. Once activated, the record will return to the active animal health list and become available for further updates or review.



#### 5. Import Health

While the Dairy Management System (DMS) allows users to manually create individual animal health records, this approach can be time-consuming—especially when dealing with large volumes of data. To streamline this process, the system provides an Import Animal Health feature, enabling users to upload hundreds or even thousands of records in a single operation.

To begin the import process, navigate to the managed animal health table and locate the "Import Animal Health" button positioned at the upper right corner of the interface. This button is visually distinguished by its green color, indicating its function as a bulk upload tool. Upon clicking the button, the system will display an upload interface where users can either click the drop-box to browse and select a file from their local directory, or drag and drop the file directly into the designated area to initiate the upload. It is important to note that each file can accommodate a maximum of 3,000 rows of data, ensuring optimal performance and validation accuracy.

To maintain consistency and prevent formatting errors, the system only accepts files that conform to a specific template structure. Users can obtain a copy of this required template by clicking the "Template" button located at the lower right corner of the upload interface. Once clicked, the template file will be automatically downloaded to the user's local computer. In addition to the template, a documentation file is also available for download. This supplementary file contains detailed instructions, formatting guidelines, and sample entries to help users prepare their data correctly before uploading.

By leveraging the import function, users can significantly reduce manual workload, improve data accuracy, and ensure faster integration of animal health records into the system. This feature is especially useful for farms or facilities managing large herds, where efficiency and scalability are critical.

## 6. Create Check-up

The Animal Health Check-up Module is designed to document the physical condition of animals during routine assessments, along with the associated cost of each evaluation. This module plays a critical role in early detection and ongoing monitoring of health issues, allowing users to maintain a comprehensive record of each animal's wellness status.

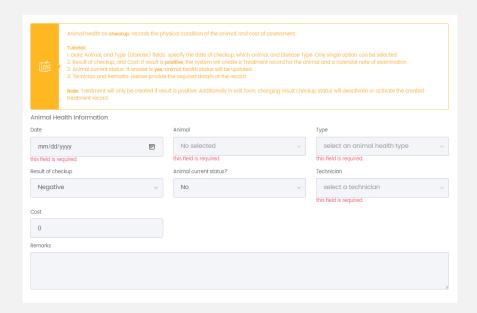
In cases where an animal is diagnosed with a health concern and requires a series of treatments, the system is fully equipped to manage such scenarios. Through the check-up module, users can record multiple health evaluations over time, tracking the progression or regression of the animal's condition. Each check-up entry captures vital information such as symptoms, observations, and technician notes, ensuring that the animal's medical history remains complete and traceable.

If a check-up result indicates a positive diagnosis—meaning the animal requires medical intervention—the system will automatically generate a Treatment Ticket. This ticket serves as a centralized log for all subsequent treatments related to that specific health issue. Users can update the ticket with detailed information for each procedure performed, including medication administered, follow-up assessments, technician involvement, and incurred costs.

The treatment ticket remains active until the animal's health status is updated to negative, signifying recovery. This workflow ensures that all stages of care—from initial check-up to final recovery—are documented in a structured and accessible format, supporting both operational efficiency and animal welfare.

The following list are fields and its description and behaviors when selected.

- Date The calendar date when the check-up was conducted. This serves as the timestamp for the health record.
- Animal A dropdown selection of animals registered within the selected farm. This links the check-up to a specific animal profile.
- Type The suspected or diagnosed disease type. This helps categorize the check-up and supports analytics for disease tracking and prevalence.
- Result of checkup Indicates the outcome of the health assessment:
   Positive triggers automatic creation of a Treatment Ticket for follow-up care.
   Negative no treatment ticket is generated.
- Animal current status A Boolean or toggle field (e.g., Yes/No). Yes –
  marks this check-up as the most recent and active health status of the
  animal. No used for historical or archived records. Influences system
  logic for status tracking and reporting.
- Technician Name of the person who performed the check-up. Used for tracking and accountability.
- Cost Total expense of the check-up. Useful for financial records and reports.
- Remarks Extra notes or observations. Adds context to the check-up.



# <u>↑ Important</u>: Step-by-Step Instructions:

- Specify the Date, Animal, and Disease Type Begin by entering the date when the check-up occurred. Then, select the animal from the dropdown list associated with the current farm. Choose the type of disease being assessed.
- Enter the Result of the Check-up and Associated Cost Indicate whether
  the outcome of the check-up is positive or negative. If the result is
  positive, the system will automatically generate a Treatment Ticket for
  the animal and create a calendar note marking the examination date.
  Next, input the cost of the check-up, which may include labor,
  medication, or diagnostic expenses.
- Set the Animal's Current Health Status Specify whether this check-up reflects the animal's current health condition by selecting "Yes" or "No."
  - Selecting Yes will update the animal's active health status in the system.
  - o Selecting No will store the record as historical data without affecting the current status.
- Provide Technician Details and Remarks Choose the technician who
  performed the check-up from the available list. Add any remarks or
  observations relevant to the check-up—such as symptoms, treatment
  recommendations, or environmental notes—to ensure the record is
  complete and informative.

## E. ANIMAL TREATMENT

Animal treatment records are generated through the health module whenever an animal receives a positive diagnosis during a check-up. This automated process ensures that any instance of illness or medical intervention—such as the administration of medication, therapeutic procedures, or follow-up care—is systematically documented for tracking and analysis.

Each treatment entry serves as a detailed log of the care provided, capturing essential information such as the type of treatment, technician involved, date of administration, and associated costs. This not only supports operational transparency but also enables farm managers and veterinarians to monitor the progress of recovery and adjust care plans as needed.

Over time, the system builds a comprehensive medical history for each animal. By reviewing these historical records, users can identify recurring health issues, evaluate the effectiveness of past treatments, and make informed decisions about

future care. This longitudinal view of animal health is especially valuable for breeding programs, herd management, and disease prevention strategies.

#### 1. Creation and Edit Treatment

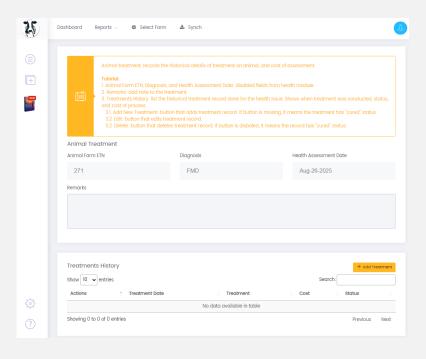
The Animal Treatment Module is designed to manage and document medical interventions for animals diagnosed with health issues. Treatment records can only be created through the Health Module, and only when a check-up result is marked as positive. This ensures that treatments are directly linked to verified diagnoses, maintaining consistency and traceability across the system.

Once a treatment record is generated, users have the option to edit and enrich it with historical treatment data. To do so, navigate to the Animal Treatment List Table and click the edit icon located on the left side of the corresponding entry. This action redirects the user to the Treatment Form Page, where all previously recorded data is auto-filled into their respective fields for review and update.

The following list are fields that describes the definition and behavior:

- Animal farm ETN Displays the unique identification number of the animal. Status: Disabled (read-only).
- Diagnosis Shows the disease identified during the check-up. Status:
   Disabled (read-only)
- Health Assessment Date Indicates the date the check-up was conducted. Status: Disabled (read-only)
- Treatment History Table Lists all treatments previously administered to the animal. This table provides a chronological view of medical interventions and displays the total cost of all treatments. Users can add new entries by clicking the "Add Treatment" button, which opens a dedicated form requiring the following fields:
  - o Treatment date The date on which the treatment was performed.
  - Technician The name of the technician who administered the treatment.
  - Cost The financial cost associated with the treatment procedure.
  - Results Indicates the outcome of the treatment: "Ongoing" means the animal is still under treatment. While, "Cured" means treatment is considered successful, and the animal has recovered.
  - Actual Weight The animal's weight at the time of treatment.
     Required for monitoring progress and dosage accuracy.

- Ideal Weight The target weight based on the animal's age, breed, and health status. Helps assess recovery and nutritional balance.
- Unit of Measure Specifies the measurement unit used typically KG (kilograms) or BCS (Body Condition Score).
- Treatment Note A free-text field for technician observations, special instructions, or remarks related to the treatment.



# ⚠ Important: Step-by-Step Instructions:

- Initiate Treatment Entry Click the "Add Treatment" button located on the right side of the Treatment History Table. This button is highlighted in yellow, indicating its function for adding new treatment records. Once clicked, a treatment form will appear, prompting the user to input relevant details.
- Define Treatment Date, Technician, and Cost
  - o Treatment Date: Select a date within the valid range—from the original health assessment date up to the current date.
  - o Technician: Choose from a dropdown list of technicians who administered the treatment.

o Cost: Enter the monetary value of the treatment. This field accepts numerical values only and contributes to the total cost displayed in the treatment history.

## Specify Treatment Result

- Ongoing: Indicates that the animal is still undergoing treatment. The system will retain the animal's health status as sick.
- Cured: Marks the treatment as successful. The system will automatically update the animal's health status to cured, reflecting recovery.

## • Enter Weight Information

- Actual Weight: Input the animal's weight at the time of treatment. This field accepts numerical values only.
- o Ideal Weight: Specify the expected or target weight based on the animal's age, breed, and health condition.
- Unit of Measure: Select the appropriate unit—typically KG (kilograms) or BCS (Body Condition Score)—to define how weight is measured.
- Add Treatment Notes Provide any additional remarks or observations from the technician. This field accepts both text and numerical values, allowing for detailed documentation of the treatment process.
- Save and Validate After completing all required fields, click the "Save Changes" button to submit the treatment record. The system will perform a validation check to ensure all inputs are complete and correctly formatted.
  - o If successful, a "Success" alert message will confirm the update.
  - o If validation fails, a "Warning" message will appear, indicating the specific cause of the error so the user can make corrections.

# 2. Remove Treatment or Treatment History

#### Removing Whole Treatment Record

In the Animal Treatment Module, treatment records are directly tied to the results of health check-ups conducted within the Health Module. Because treatments are only generated when a check-up result is marked as positive, managing or removing a treatment requires updating the original health record.

To remove a treatment, the user must first navigate to the Health Module where the corresponding check-up was recorded. Within the check-up form, locate the Result of Check-up field and change its value from Positive to Negative. This update signals that the animal no longer requires medical intervention, and as a result, the system will automatically deactivate or suppress the associated treatment record. The treatment will no longer appear in the active treatment list, and the animal will no longer be flagged for ongoing care.

If the situation changes—such as a reassessment confirming the animal is still sick—the user can easily restore the treatment record by returning to the same health check-up and switching the Result of Check-up back to Positive. This action will re-trigger the system to regenerate the treatment ticket, allowing the user to resume documentation of medical procedures, technician involvement, and recovery progress.

This dynamic linkage between health status and treatment ensures that the system remains consistent, responsive, and aligned with real-time animal health conditions. It also helps prevent unnecessary treatments from being recorded, while preserving the flexibility to reinitiate care when needed.

## Removing Single Historical Treatment Record

To remove a specific treatment entry from an animal's medical history, the user must first access the Treatment History Table associated with that animal. This table displays all previously recorded treatments in chronological order, allowing users to review and manage each entry individually.

To initiate the removal of a treatment record, locate the trash icon positioned on the left side of the corresponding row within the table. This icon serves as the action trigger for deactivating the selected treatment. Once clicked, the system will display a confirmation prompt, asking the user to verify whether they wish to proceed with the removal.

If the user selects "Yes", the system will execute the action by disabling the treatment record and transferring it to the inactive list. This ensures that the record is no longer visible in the active treatment view but remains stored in the system for historical reference or future retrieval. On the other hand, if the user selects "Cancel", the operation will be aborted, and no changes will be made to the record.

This approach maintains data integrity by preserving historical treatment information while allowing users to manage visibility and relevance within the active workflow. It also supports audit trails and long-term health tracking without permanently deleting valuable medical data.

#### 3. Activate Treatment

#### Activate Whole Treatment Record

To reactivate the full treatment record, the user simply needs to return to the original health check-up entry and update the Result of Check-up field back to Positive. This change signals the system to automatically regenerate the associated treatment ticket, restoring all linked treatment functionalities and allowing the user to continue documenting medical procedures for the animal.

## Activate Single Historical Treatment Record

Treatment records that have been previously removed or deactivated are not permanently deleted from the system. Instead, they are securely stored and can be retrieved or reactivated at any time, ensuring that historical data remains accessible for future reference, audits, or corrections.

To view and manage these inactive records, navigate to the "Inactive Animal-Treatment History" section. This dedicated table consolidates all treatment entries that have been disabled, allowing users to review and selectively restore them as needed.

To reactivate a specific record: Identify the treatment entry you wish to restore. On the left side of the row, click the retrieve icon—this icon represents the action to reinstate the record. Once clicked, the system will immediately trigger a confirmation message, notifying the user that the selected treatment record has been successfully reactivated. The restored entry will then be moved back to the active treatment list, making it visible and usable within the standard workflow.

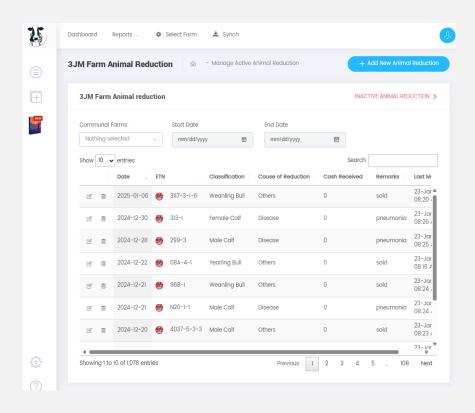
## F. ANIMAL REDUCTION

The Animal Reduction Module serves as a vital component in maintaining accurate and transparent records of livestock inventory changes due to non-transfer events. Specifically, it is designed to document and monitor instances where animals are removed from the farm population as a result of death, culling, or meat sales. These reductions may occur for a variety of reasons, including disease outbreaks, agerelated decline, reproductive inefficiency, or strategic herd management decisions.

By capturing detailed information about each reduction event, the module ensures that farm managers, technicians, and oversight bodies have access to reliable data for analysis, reporting, and compliance. For example, when an animal dies due to illness or injury, the system allows users to log the cause, date, and relevant

observations. In cases of culling—whether for genetic selection, health concerns, or productivity issues—the module records the rationale and outcome.

This structured approach not only supports operational accountability but also contributes to broader herd health monitoring, resource planning, and policy development. By maintaining a clear historical record of reductions, farms can identify patterns, assess risks, and make informed decisions to improve animal welfare and optimize herd performance.



## 1. Create Reduction

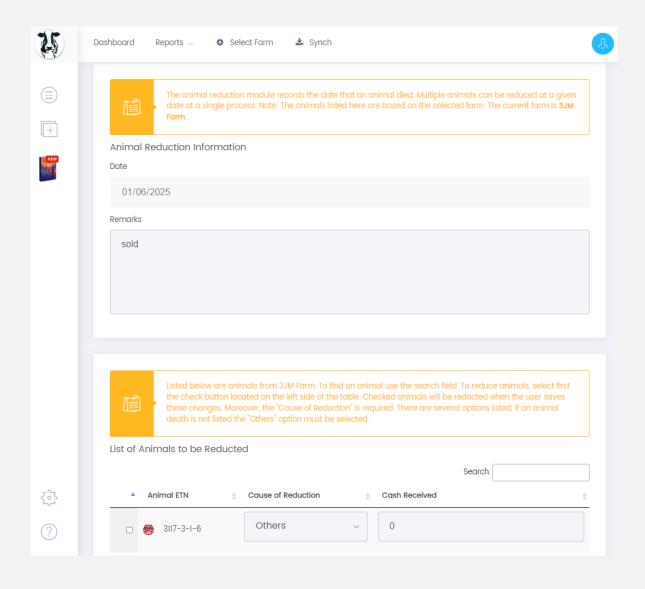
To create a new animal reduction record, begin by clicking the "Add New Animal Reduction" button, which is prominently located at the upper right corner of the managed table and highlighted in blue for easy identification. This action will redirect you to the Reduction Form Page, where you can input the necessary details related to the reduction event.

The form presents several text fields that must be completed with valid information. Fields that are mandatory are clearly marked with red text labeled "this field is required." These required entries include the following:

- Date which specifies when the reduction occurred.
- Remarks which provide a brief description or context for the event.

- Checkbox which, when selected, allows the system to process only the checked rows.
- Cause of Reduction offering a list of possible reasons such as disease, culling, or sale for meat.
- Cash Received which records any amount received if the reduction involved a financial transaction

To finalize the creation of a new animal reduction record, the user must complete all required fields in the form with valid and accurate data. Once the necessary entries are filled in, clicking the "Save Changes" button will initiate the system's validation process. If the submitted information meets all criteria, a success notification will appear, confirming that the record has been saved. In cases where the data is incomplete or invalid, the system will display an error message identifying the specific issue that needs correction. Upon successful validation and save, the user is automatically redirected to the Animal Reduction Management page, where the newly created record will be listed and available for review or further action.



#### 2. Edit Reduction

At times, adjustments to an existing animal reduction record may be required, making it necessary to edit the entry. To begin the editing process, the user should click the edit icon located on the left side of the animal reduction list table. This action will redirect them to the reduction form page, where all previously entered data will be automatically populated into their respective fields. It's important to note that some fields may be locked and cannot be modified.

Once the necessary updates have been made, the user must click the "Save Changes" button to submit the revised information. The system will then validate the input data. If the update is successful, a confirmation alert will appear indicating success. If any issues are detected, a warning message will be displayed, specifying the cause of the error so the user can make the appropriate corrections.

#### 3. Remove Reduction

Animal reduction records can be removed, when necessary, but it's important to note that removal does not equate to permanent deletion. Instead, the system disables the record, allowing it to be reactivated or retrieved at a later time if needed.

To initiate this process, the user must click the trash icon located on the left side of the animal reduction list table. Upon doing so, a confirmation prompt will appear, asking whether the user wishes to proceed. Selecting "Yes" will disable the record and transfer it to the inactive list, effectively removing it from active view. If the user selects "Cancel," the action will be aborted and the record will remain unchanged.

#### 4. Activate Reduction

Previously removed animal reduction records are not permanently deleted—they are simply disabled and can be reactivated when needed. These inactive records are accessible through the "Inactive Animal-Reduction" page. To navigate there, click the link located at the upper right corner of the animal data list. This will redirect you to a dedicated page displaying all disabled reduction records.

To reactivate a specific entry, click the retrieve icon found on the left side of the corresponding record. Once clicked, the system will confirm the action by displaying a prompt message indicating that the record has been successfully activated and restored to the active list.

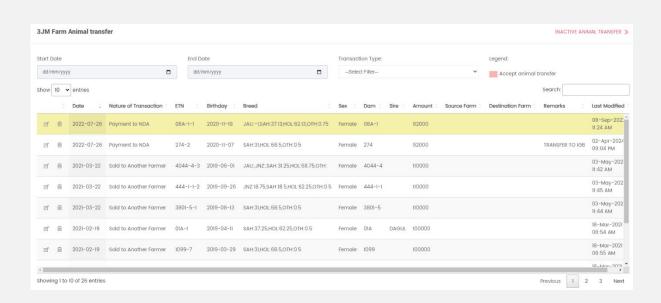
#### G. ANIMAL TRANSFER

The Animal Transfer module is designed to facilitate and document the movement of animals either into or out of a farm. This functionality is essential for maintaining accurate inventory records, supporting operational transparency, and ensuring that animal data remains consistent across modules.

When an animal is transferred into a farm, the system automatically generates a corresponding animal record. This record is immediately added to the farm's active animal list and becomes visible within the Animal Inventory module of the selected farm. This seamless integration ensures that newly arrived animals are properly tracked and managed without requiring manual data entry, reducing the risk of errors and improving workflow efficiency.

Conversely, when an animal is transferred out of a farm, the system automatically disassociates the animal from that farm's inventory. As a result, the animal will no longer appear in the Animal Maintenance module of the originating farm. This prevents further updates or actions from being performed on the animal within that context, reflecting its new status and location.

Importantly, even after an animal has been transferred out, its historical records—including treatments, weight logs, and other relevant data—remain accessible for reference. This ensures continuity in documentation and supports retrospective analysis, audits, or reporting needs. Users can still view these records to understand the animal's previous status and history while it was part of the farm.



#### 1. Create Transfer

To initiate a new animal transfer, click the "Add New Animal Transfer" button located at the upper right corner of the Managed Animal Transfer Table. This button is visually distinguished by its blue color, making it easy to locate during navigation.

Upon clicking, the system will display a modal interface presenting a list of transfer types. Each option corresponds to a specific scenario of animal movement and should be selected based on the nature of the transaction:

- Animal Purchase Select this option when acquiring an animal from a third party outside of NDA. This typically applies to transfers from another farm or an independent farmer not affiliated with NDA.
- Received from NDA Use this type when the animal is received directly from NDA or on NDA's behalf. Animals received under this category are expected to be paid for in kind—usually by transferring another animal back to NDA at a later date.
- Payment to NDA This option is used when an animal is transferred out
  of the farm and returned to NDA as payment for a previously received
  animal. It completes the reciprocal transaction initiated under the
  "Received from NDA" type.
- Sold to Another Farmer (NDA) Choose this type when the animal is sold to another farmer who is part of NDA's monitoring system. This ensures the record remains within the NDA tracking framework.
- Sold to Another Farmer (Non-NDA) Select this when the animal is sold to a farmer outside of NDA's monitoring system. This type marks the animal's exit from NDA-related oversight.

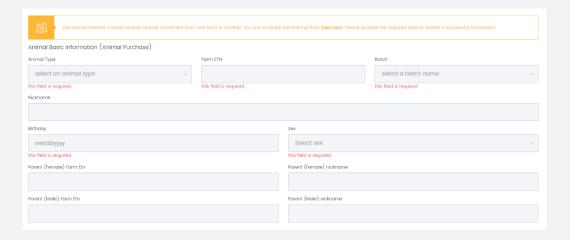


Once the appropriate transfer type is selected, the system automatically redirects the user to the corresponding Animal Transfer Form. This form presents a series of input fields that must be completed with accurate and valid data. Fields marked with red text labeled "This field is required" indicate mandatory information that must be provided before the record can be saved.

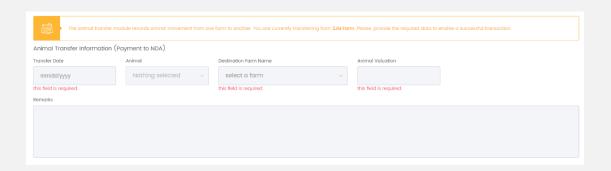
It's important to note that each transfer type—whether it involves acquisition, payment, or sale—has its own unique interface layout and data requirements. The form dynamically adjusts based on the selected transfer category, ensuring that only relevant fields are displayed to streamline the user experience and reduce confusion.

Below is a breakdown of the available transfer types, along with their respective required fields and descriptions to guide users in completing the form accurately.

- Animal Purchase and Received from NDA This transfer type is used when animals are acquired either through direct purchase or received from the National Dairy Authority (NDA). Upon selection, the form will display the following required fields:
  - Animal Type Select whether the animal is Cattle, Goat, or Carabao. This determines the breeding composition options.
  - Farm ETN Enter the unique Farm Ear Tag Number (ETN) to identify the animal within the farm.
  - Batch Assign the animal to a specific batch for tracking and grouping purposes.
  - Birthday Provide the birth date of the animal. This is used to determine its age classification.
  - Sex Specify the animal's sex: Male or Female.
  - Breed Composition Indicate the breed breakdown. The total must equal 100%.
  - Purchase Date Enter the date the animal was officially received or accepted at the farm.
  - Animal Price Input the purchase amount or declared value of the animal.

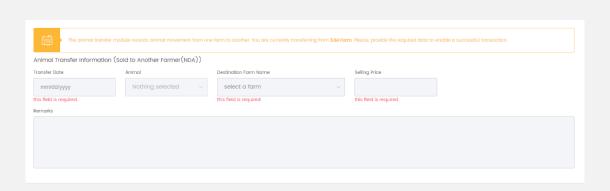


- Payment to NDA This transfer type is used when animals are formally transferred to NDA, typically as part of a payment or settlement process.
   The form will prompt the following required fields:
  - o Transfer Date Specify the date the animal was officially transferred to the destination farm.
  - o Animal Select from the list of animals currently registered within the farm.
  - Destination Farm Name Choose the receiving farm from the list of NDA-monitored facilities.
  - Animal Valuation Enter the monetary value assigned to the animal being transferred.

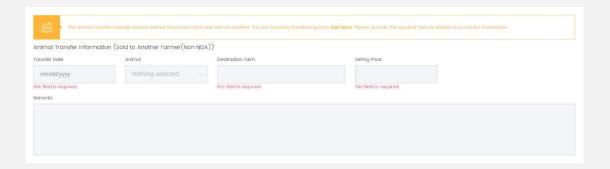


- Sold to Another Farmer (NDA) This transfer type applies when an animal is sold to another farm under the supervision of the NDA. The form will prompt the following required fields:
  - o Transfer Date Specify the date the animal was officially transferred to the buyer's farm.
  - Animal Select the animal from the list of registered animals within the current farm.

- Destination Farm Name Choose the receiving farm from the list of NDA-monitored facilities.
- o Selling Price Enter the sale amount agreed upon for the animal.



- Sold to Another Farmer (Non-NDA) This transfer type applies when an animal is sold to a farm not monitored by the NDA. The form will prompt the following required fields:
  - o Transfer Date Specify the date the animal was officially transferred to the buyer's farm.
  - o Animal Select the animal from the list of registered animals within the current farm.
  - Destination Farm Choose the receiving farm from the list of non-NDA-monitored facilities.
  - o Selling Price Enter the sale amount agreed upon for the animal.



After completing all required fields in the transfer form, the user must click the "Save Changes" button to submit the new transfer record. The system will automatically validate the entered data to ensure accuracy and completeness. If all information is valid, a success notification will appear, confirming that the record has been saved.

In cases where errors are detected—such as missing required fields or invalid entries—an error message will be displayed, clearly indicating the cause. Upon successful submission, the user is redirected to the Animal Transfer Management page, where the newly created record can be reviewed and managed.

### 2. Edit Transfer

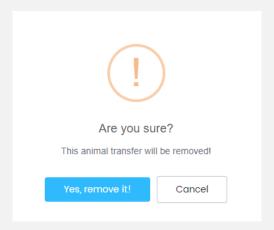
In certain cases, adjustments to an existing animal transfer record may be required. To initiate an edit, the user should click the edit icon located on the left side of the Animal Reduction List table. This action redirects the user to the transfer form page, where all previously entered data will be automatically populated into their respective fields. It is important to note that not all fields may be editable, depending on the transfer type and system rules.

After making the necessary updates, the user must click the "Save Changes" button to apply the modifications. The system will then validate the input data. If the update is successful, a confirmation message will appear indicating success. If any issues are detected, a warning message will be displayed, specifying the cause of the error.

### 3. Remove Transfer

Animal transfer records can be removed when necessary; however, removal does not equate to deletion. Instead, the record is disabled, allowing it to be reactivated or retrieved at a later time if needed.

To initiate removal, the user must click the trash icon located on the left side of the Animal List table. This action triggers a confirmation prompt asking whether the user wishes to proceed. Selecting "Yes" will disable the record and move it to the Inactive List, while selecting "Cancel" will abort the process and leave the record unchanged.



#### 4. Activate Transfer

Removed animal transfer records are not permanently deleted but instead moved to an inactive state, allowing them to be retrieved or reactivated when needed. These records can be accessed by clicking the "Inactive Animal Transfer" link located at the upper right corner of the Animal Data List page. This action redirects the user to a dedicated page displaying all disabled transfer records.

To reactivate a record, the user must click the retrieve icon positioned on the left side of the list. Upon confirmation, the system will display a message indicating that the record has been successfully activated.

## H. ANIMAL WEIGHT BCS

To ensure optimal health and physical condition, animals must undergo periodic weighing and Body Condition Score (BCS) assessments. This module is designed to record and maintain a comprehensive history of each animal's weight and BCS over time.

In addition to tracking past data, it also generates predictive estimates—highlighting the target weight and BCS values that animal should attain to meet recommended health standards. This proactive approach supports informed decision-making in herd management and promotes early intervention when deviations from ideal metrics are detected.

## 1. Create Weight BCS

To create a new Weight and BCS record, begin by clicking the "Add New Animal Weight BCS" button located at the upper right corner of the managed table. This button is visually distinguished by its blue color, indicating its function as a data entry trigger.

Once selected, a pop-up interface will appear prompting the user to input the weighing date. After entering the date, a list of available animals will be displayed. Users may select multiple animals from this list to include in the weighing session.

After making the selections, click the "Next" button to proceed. This action will redirect the user to the Weight and BCS entry form, where individual measurements and condition scores can be recorded for each selected animal.

The Weight and BCS Entry Form includes several text fields that must be completed with valid data. Fields marked with red text labeled "This field is required" indicate mandatory inputs that must be provided before submission.

Below are the required fields and their descriptions:

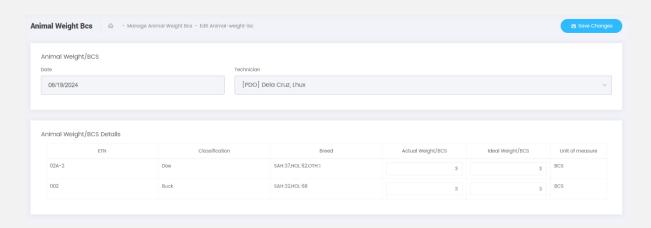
- Technician Displays a dropdown list of technicians assigned to the selected farm. These typically include PDOs. Technicians not directly assigned to the farm will appear with the designation DTS for reference.
- Actual Weight / BCS Represents the measured weight and BCS of the animal at the time of weighing. This data reflects the animal's current physical condition.
- Ideal Weight / BCS Indicates the target or recommended weight and Body Condition Score for the animal, based on breed standards, age, and health benchmarks.

Complete all required fields, then click the "Save Changes" button to create a new treatment record. The system will automatically validate the submitted data. If everything is correct, a confirmation message will appear, and you'll be redirected to the Animal Treatment Management page. If any errors are detected, an alert will display the specific issue, allowing you to make the necessary corrections before resubmitting.

# 2. Edit Weight BCS

There may be occasions when adjustments to the weight BCS data are required. In such cases, the record must be edited accordingly. To begin, click the edit icon located on the left side of the Animal Weight BCS list table. This action will redirect you to the Weight BCS Form page, where all existing data will be automatically populated into their respective fields.

Make the necessary updates, then click the "Save Changes" button to apply the modifications. The system will validate the input upon submission. If the update is successful, a confirmation alert will appear. If any issues are detected, a warning message will be displayed, indicating the specific cause of the error.



## 3. Remove Weight BCS

Weight BCS records can be removed when necessary. However, removal does not permanently delete the record—it is simply disabled. This means the entry remains retrievable and can be reactivated at any time.

To remove a Weight BCS record, click the trash icon located on the left side of the Weight BCS list table. A confirmation prompt will appear, asking whether you wish to proceed. Selecting "Yes" will disable the record and transfer it to the Inactive List. Choosing "Cancel" will abort the action, leaving the record unchanged.

# 4. Activate Weight BCS

Previously removed treatment records are not permanently deleted—they remain in a disabled state and can be reactivated when needed. These records are accessible via the "Inactive Animal Weight BCS" page. To access this page, click the link located at the upper right corner of the Weight BCS Data List. This will redirect you to a view displaying all disabled Weight BCS entries.

To reactivate a record, click the retrieve icon on the left side of the corresponding entry. Once clicked, the system will display a confirmation message indicating that the record has been successfully reactivated.

# IX. MILK PRODUCTION

Dairy animals typically produce milk on a daily basis, with optimal milking schedules occurring twice per day—once during the early morning hours and again in the late afternoon. This routine not only supports animal welfare but also ensures consistent yield and quality. To assist farmers in monitoring this vital aspect of herd productivity, the Milk Production Tracking Module provides a streamlined interface for recording and reviewing daily milk output for each individual dam.

In addition to daily tracking, the module includes functionality for logging periodic test dates. These test entries serve as reference points for estimating the average milk production of a specific animal over the course of a given month. By combining routine data entry with strategic sampling, farmers gain a clearer understanding of lactation trends, enabling more informed decisions around feeding, breeding, and herd health management.

### A. ANIMAL MILK PRODUCTION

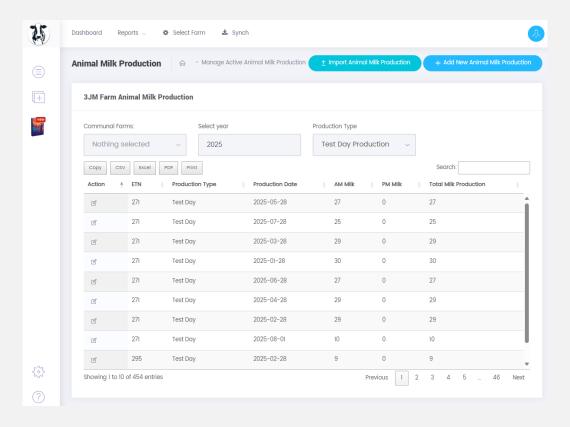
The Milk Production Analytics module provides a comprehensive overview of average monthly milk output for each individual animal, organized by year and based on the selected farm. This feature is designed to help users monitor productivity trends, identify high-performing animals, and make informed decisions about herd management and resource allocation.

Upon accessing the module, users are presented with a data visualization or tabular summary that reflects the average monthly milk production per animal for the chosen farm. This data is aggregated annually, offering a clear snapshot of performance across different time periods.

To customize the view and refine the displayed data, users can interact with two key dropdown menus located at the top of the interface:

- Year Selector: Allows users to choose the specific calendar year for which milk production data should be displayed. This enables historical comparisons and seasonal performance tracking.
- Production Type Filter: Enables users to toggle between different categories
  of milk production, such as total yield, saleable milk, or milk allocated for
  internal use (e.g., calf feeding or household consumption).

Once a selection is made from either dropdown, the system will automatically filter and refresh the data view to reflect the current parameters. This dynamic filtering ensures that users always see the most relevant and context-specific information, tailored to their operational needs.



## 1. Create Animal Milk Production

To begin recording milk production for individual animals, navigate to the Animal Milk Production section of the system. At the upper right corner of the data list, click the "Add New Animal Milk Production" button. This action will open the Animal Milk Production Form, where users can input detailed milking data for each animal.

The form includes several key fields that must be completed to successfully record milk production:

- Production Type: Select between two modes of recording:
  - Daily Production: Milk output is recorded per day, capturing both morning and afternoon milking sessions.
  - Test Day Production: Milk output is recorded for a specific test day and then multiplied by the total number of months selected.
     The system also factors in the number of milking days during the selected period to ensure accurate computation.
- Production Date: Specify the exact date on which the animal was milked.
   This date determines which animals are eligible for entry and ensures synchronization with other system modules.
- Checkbox: Each row in the form includes a checkbox. When checked, the system will capture and save data only from the selected rows. This allows users to selectively record production for specific animals.

- Morning Milk: Enter the volume of milk (in liters) collected during the morning milking session.
- Afternoon Milk: Enter the volume of milk (in liters) collected during the afternoon milking session.

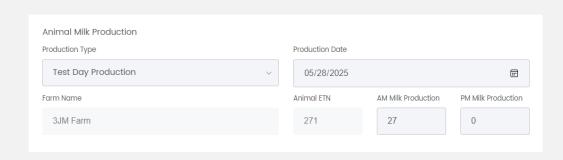
The list of animals displayed in the form is automatically updated based on the selected production date. This ensures that users are always working with the most relevant and current data.

Once all required fields have been filled in, click the "Save Changes" button located at the bottom of the form. The system will automatically perform a validation check to ensure that all inputted data is complete and correctly formatted.

### 2. Edit Animal Milk Production

To edit an existing milk production record, the user should first navigate to the Animal Milk Production section of the system interface. Within the data list, locate the specific entry to be modified and click the edit icon positioned at the left corner of the corresponding row. This action will redirect the user to the Individual Animal Milk Production Form, where detailed information related to the selected record can be reviewed and updated.

In the form, the user can update the Production Type, choosing between Daily Production—which records milk output per day—or Test Day Production, which calculates milk production. Additionally, the user can enter the Production Date, which determines the time frame for the record and ensures alignment with system data. The form also includes editable fields for Morning Milk and Afternoon Milk, where the respective volumes collected during each milking session should be accurately entered.



Once all necessary fields have been completed, the user should click the "Save Changes" button to initiate the system's validation process. The system will then verify the input data for completeness and consistency. If the combination of production type and date corresponds to an existing record in the database, the system will automatically activate the update function, allowing the user to revise and overwrite the previous entry with the new information. This ensures that milk production records remain current and accurate, while preventing duplication and maintaining data integrity across the platform.

## 3. Import Animal Milk Production

While the system offers users the flexibility to manually input individual animal milk production records, this method can become labor-intensive and inefficient—particularly when managing large datasets across multiple farms or livestock groups. To address this challenge and enhance operational efficiency, the platform includes a robust Import Animal Milk Production feature. This functionality allows users to upload hundreds or even thousands of production records in a single batch, dramatically reducing the time and effort required for data entry.

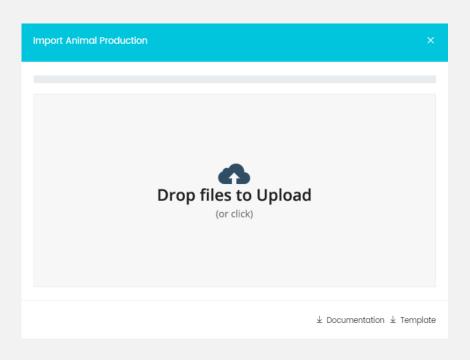
To initiate the import process, users should first navigate to the Managed Animal Milk Production table within the system interface. In the upper right corner of this section, a prominently displayed green button labeled Import Animal Milk Production serves as the gateway to the bulk upload tool. This button is intentionally color-coded to signal its importance and distinguish it from other interface elements. Upon clicking, the system will launch an upload interface that supports two convenient methods for file selection: users may either click the drop-box to browse and select a file from their local device, or simply drag and drop the file directly into the designated farm area to begin the upload process.

To ensure optimal system performance and maintain data integrity, each import file is limited to a maximum of 3,000 rows. This threshold helps prevent processing delays and supports accurate validation of each entry. It is essential that all uploaded files adhere to a predefined template structure, which standardizes the format and ensures compatibility with the system's backend logic. Users can easily obtain this template by clicking the Template button located at the lower right corner of the upload interface. Once selected, the template file will be automatically downloaded to the user's device.

In addition to the template, a supplementary documentation file is available for download. This resource provides detailed instructions on how to prepare the data correctly, including formatting guidelines, field definitions, and sample entries. By reviewing this documentation prior to upload, users can avoid

common errors such as misaligned columns, missing values, or incorrect data types.

Utilizing the import feature not only accelerates the data entry process but also enhances accuracy and consistency across records. This is particularly beneficial for farms or agricultural facilities managing large herds, where scalability and streamlined workflows are essential. By reducing manual workload and enabling faster integration of milk production data, the system empowers users to focus more on analysis, decision-making, and herd management—rather than routine administrative tasks.



# B. FARM MILK PRODUCTION

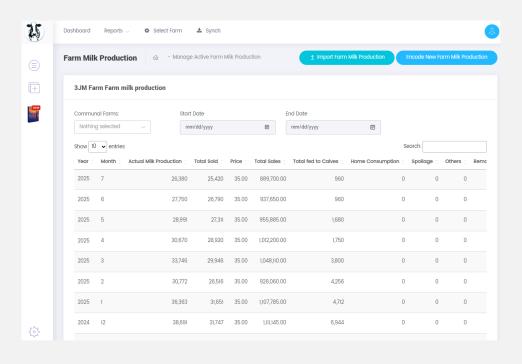
Milk collected from individual animals is managed through two primary channels: it may be sold commercially to external buyers, or it may be dispensed internally by the farm for personal consumption, community use, or other operational purposes. This dual-path handling ensures flexibility in how milk resources are allocated, depending on the farm's goals and daily needs.

Just as milk production is recorded at the individual animal level, farm-level milk production is also tracked on a daily basis. This ensures consistency in monitoring output, supports inventory management, and enables accurate forecasting for both sales and internal usage.

The Farm Milk Production module provides a comprehensive interface for managing this process. It allows users to:

- Record daily milk yields at the farm level
- Track sales transactions across multiple buyers, including cooperatives, processors, and local vendors
- Log instances of milk spoilage, helping identify patterns or operational inefficiencies
- Account for milk consumed by calves, which is essential for nutritional planning and herd health monitoring

This module supports granular data entry and flexible reporting, enabling farms to maintain transparency and optimize resource utilization. By capturing both commercial and non-commercial milk flows, the system empowers users to make informed decisions that balance profitability, sustainability, and animal welfare.



### 1. Edit Farm Milk Production

To initiate the process of editing or encoding farm-level milk production data, begin by navigating to the Farm Milk Production section of the system interface. At the upper right corner of the data list, you'll find the "Encode New Farm Milk Production" button. Clicking this button will launch a guided input interface designed to capture the relevant production period.

The system will first prompt the user to specify the month and year for which the farm milk production data is to be recorded. It is important to note that the selected date must meet two key conditions:

- Animal Milk Production Data Must Exist: The system requires that individual animal milk production records have already been encoded for the selected month. This ensures that farm-level summaries are based on actual, validated data.
- Date Must Not Exceed the Current Day: Users are restricted from entering future dates to maintain data integrity and prevent premature reporting.

Once these conditions are satisfied, the system will automatically redirect the user to the Farm Milk Production Form. This form is pre-populated with summarized data derived from the previously encoded animal-level milk production records, streamlining the process and reducing manual entry errors.

The form includes several key fields that capture how the collected milk was utilized or distributed. Each field is described below:

- Sold Coop Total volume of milk sold to cooperatives or formal buyers.
- Sold Local Total volume of milk sold directly to local consumers or informal markets.
- Price Unit price per liter of milk sold, applicable to both cooperative and local sales.
- Total Fed to Calves Quantity of milk allocated for calf nutrition and feeding.
- Home Volume of milk consumed within the household or farm premises.
- Spoil Amount of milk that was spoiled or rendered unusable due to handling or storage issues.
- Others Any other milk usage not covered by the above categories (e.g., donations, laboratory use).

This structured approach ensures that all aspects of milk utilization are transparently recorded, supporting both operational analysis and compliance with reporting standards. By linking farm-level data to individual animal production records, the system promotes accountability and enables farms to make data-driven decisions about sales, consumption, and resource allocation.

Once all required fields in the Farm Milk Production Form have been accurately filled out, proceed by clicking the "Save Changes" button located at the bottom of the form interface. This action triggers the system's built-in validation process, which checks the completeness and correctness of the entered data.

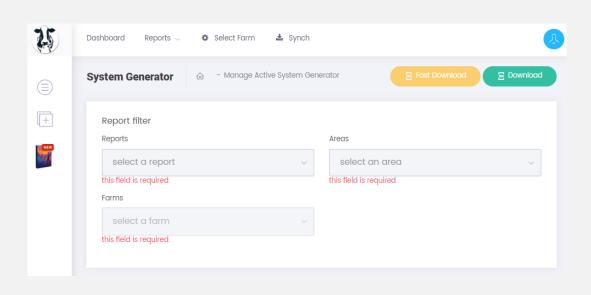
# X. REPORTS

The system is equipped with a comprehensive reporting module designed to support a wide range of operational and performance insights. Users with appropriate access privileges can request the generation of specific reports to assist in monitoring, analysis, and decision-making across various domains. These reports are available through the offline system, ensuring functionality even in environments with limited or intermittent internet connectivity. Depending on the user's role and permissions, the system may present options to generate any of the following report types, each serving a distinct purpose in managing agricultural, cooperative, and animal-related data.

### A. GENERATING REPORTS

Generating a report is very easy. Click on the Reports select dropdown and click on the report to generate. Select the appropriate filter field value and click the "Download" button to generate the report. The system will perform the report generation and will produce an Excel file containing the report. Note, that some reports change based on the selected report. Some reports require more than one filter; in those cases, the user must select the appropriate values to successfully generate a report.

Generating reports within the system is a straightforward process designed to be both user-friendly and efficient. To begin, navigate to the Reports section and click on the report selection dropdown menu. This menu will display only the reports that the current user has permission to access, ensuring a secure and personalized experience. Once you've selected the desired report type, the system will prompt you to choose from one or more filter field values. These filters help refine the data output, allowing users to tailor the report to specific timeframes, locations, animal categories, or operational parameters. After selecting the appropriate filters, simply click the "Download" button to initiate the report generation.



The system will then process the request and produce an Excel file (.xlsx) containing the report data. This file can be saved, shared, or further analyzed using spreadsheet tools. It's important to note that the filter options may vary depending on the selected report. Some reports require only a single filter, while others may demand multiple criteria to generate meaningful results. In such cases, users must ensure that all required fields are properly filled to avoid errors or incomplete outputs.

This dynamic filtering approach ensures that each report is contextually relevant and aligned with the user's operational needs. Whether you're tracking breeding schedules, monitoring farm performance, or reviewing cooperative metrics, the report generation process is designed to support informed decision-making with minimal friction.

# XI. MAIN ADMINISTRATION

This group module is a secured section of the DMS, accessible exclusively to administrators or users who have been explicitly granted permission. It serves as a centralized digital library that consolidates essential reference data and operational standards used throughout the platform.

## A. ANIMAL DISTRIBUTION

This module is specifically designed to manage livestock acquired through international importation processes. It serves as a dedicated system for tracking animals brought in from outside the country, ensuring that every step—from arrival to distribution—is properly documented and monitored.

Imported animals are first received at designated holding facilities, where they undergo initial assessments, quarantine procedures, and logistical preparations. Only after meeting all regulatory and health requirements are they cleared for distribution to various farms or operational zones.

The module plays a critical role in:

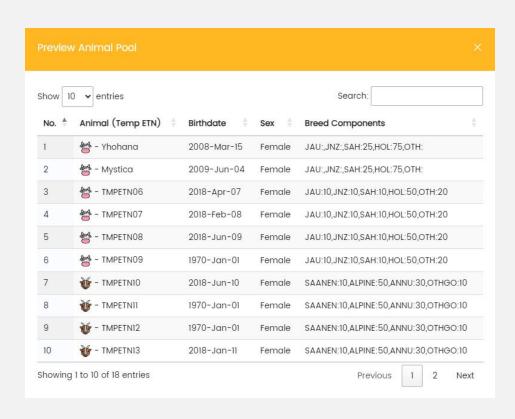
- Distribution Mapping: Documenting where each animal is eventually assigned or relocated, ensuring traceability across the system.
- Historical Data Archiving: Maintaining a comprehensive log of all importrelated activities, enabling retrospective analysis and compliance audits.

By centralizing these functions, the module ensures transparency, accountability, and operational efficiency in managing imported livestock within the Dairy Management System.

## 1. Import and View Animal in Pool

The Animal Distribution Module is a specialized component within the Dairy Management System (DMS), designed to handle the intake, processing, and allocation of livestock sourced from outside the country. This module plays a critical role in maintaining traceability, ensuring regulatory compliance, and streamlining the logistics of animal distribution across various operational zones. Access to this module is restricted to authorized personnel, typically the system administrator or a designated distribution officer, who are responsible for overseeing the importation workflow and maintaining the integrity of the data being entered into the system.

When animals arrive in the country, they are temporarily housed in designated holding facilities where they undergo initial health assessments, quarantine procedures, and administrative processing. During this phase, the distribution officer compiles essential information about each animal, including breed classification, age, and sex. These details are formatted into system-readable files to ensure compatibility with the database structure and to facilitate seamless integration into the DMS. Once validated, the data is uploaded to the central database, where each animal is assigned a unique identifier and becomes part of the system's official record.



Following successful data entry, the system automatically generates a distribution pool—a dynamic list of imported animals that are cleared and ready for allocation. This pool serves as a centralized repository from which area managers can view available livestock and select animals for deployment to farms within their respective jurisdictions. The pool is continuously updated to reflect real-time availability, ensuring that managers have access to the most current information when making distribution decisions.

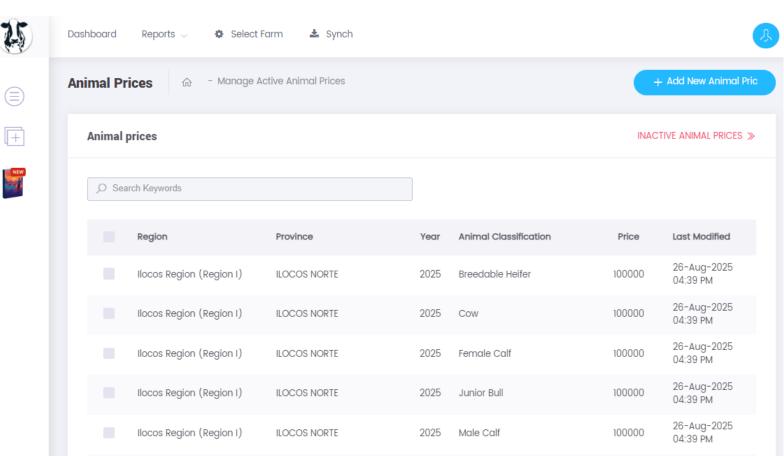
Area managers, operating within their assigned regions, can access the module to retrieve animals from the pool and assign them to specific farms based on operational needs, breeding plans, or farm capacity. Each transaction is meticulously logged by the system, capturing critical details such as the animal's unique ID, the assigned farm, the date and time of the transaction, and the credentials of the user performing the assignment. This comprehensive logging mechanism ensures full traceability and accountability, enabling administrators to audit distribution activities and maintain a transparent record of all movements within the system.

By consolidating these functions into a single, structured module, the DMS enhances operational efficiency, supports strategic livestock deployment, and reinforces the integrity of the importation process. The module not only simplifies the administrative burden associated with animal imports but also provides a robust framework for managing the lifecycle of imported livestock from arrival to farm-level integration.

## B. ANIMAL PRICES

The Animal Prices module provides a centralized system for managing standardized livestock pricing based on classification, age, and sex. Recognizing that market values vary across geographic locations, this module allows users to record and maintain distinct price sets for each area, region, and province.

By supporting location-specific pricing, it ensures that valuations remain accurate and relevant to local economic conditions. This functionality is essential for streamlining procurement, budgeting, and reporting processes, while promoting consistency and transparency across the broader agricultural management system.



#### 1. Create Prices

To initiate the creation of classification-based animal prices within the system, the administrator must begin by navigating to the user interface where pricing records are managed. At the upper right corner of the user list panel, there is a clearly labeled button titled "Add New Animal Prices." Clicking this button will redirect the administrator to the dedicated Animal Prices Form Page, where all relevant data entry fields are presented in a structured layout.



On this form page, the administrator is required to input several key pieces of information that define the pricing parameters. These include the region and province where the pricing will apply, the calendar year for which the prices are valid, and the amount per classification, which typically reflects the standard valuation for animals based on breed, age group, and sex. Each field must be completed accurately to ensure the integrity of the pricing data and its compatibility with other modules in the system.

- Regions Select the broader geographic area where the animal pricing applies. This serves as the primary filter for location-based valuation.
- Province Automatically filters available provinces based on the selected region, allowing for more precise localization of pricing data.
- Year Specify the calendar year for which the animal prices are recorded. This ensures historical tracking and future forecasting.
- Animal Prices per age group and type Input specific price amounts based on, animal type, and age group.

Once all required fields have been filled out, the administrator must click the "Save Changes" button located at the bottom of the form. Upon submission, the system will automatically perform a validation check to confirm that all data entries are complete, correctly formatted, and logically consistent. This includes verifying that the selected region and province exist within the system's geographic database, that the year is within an acceptable range, and that the classification amounts are numerically valid.

- If the validation process is successful and no errors are detected, the system will proceed to create a new pricing record and store it securely within the database.
- If not, an error message will be prompted and the specific field required are highlighted.

#### 2. Fdit Prices

To modify an existing classification price within the system, the user should begin by clicking the Edit button located at the far-right corner of the corresponding entry in the animal prices list. This action will redirect the user to the Edit Price Form, which mirrors the layout and structure of the original creation form. However, unlike the blank fields presented during initial entry, this form is pre-populated with all relevant data tied to the selected classification—ensuring that the user can easily review, adjust, and confirm the existing values without re-entering baseline information. This includes region, province, year, and the detailed breakdown of animal prices per age group and type.

Once the necessary updates have been made, the user must click the Save Changes button to initiate the system's validation process. At this stage, the system will automatically verify whether all required fields have been properly completed and whether the inputted data adheres to the expected format and logical constraints.

- If the validation is successful and no errors are detected, the system will
  proceed to update the classification record, ensuring that the revised
  animal prices are accurately reflected across all relevant modules and
  reports.
- If not, an error message will be prompted and the specific field required are highlighted.

## 3. Remove Prices

To remove an existing classification price from the system, the administrator must locate the desired entry within the animal prices list and click the Delete button positioned at the far-right corner of the corresponding row. This action will trigger a confirmation prompt, typically in the form of a message box, asking the user to verify whether they wish to proceed with the deletion. This safeguard ensures that accidental removals are avoided and that users have a moment to review their decision before finalizing the action.

If the administrator confirms the deletion, the system will proceed to deactivate the selected record. This process involves removing all associated data tied to the specific animal classification, including pricing details segmented by age group, sex, and location. Once deactivated, the record will no longer appear in the active listings or be accessible for reference within related modules.

The system ensures that the removal is comprehensive and consistent, maintaining data integrity across the platform while allowing administrators to manage and update pricing structures as needed.

### 4. Activate Prices

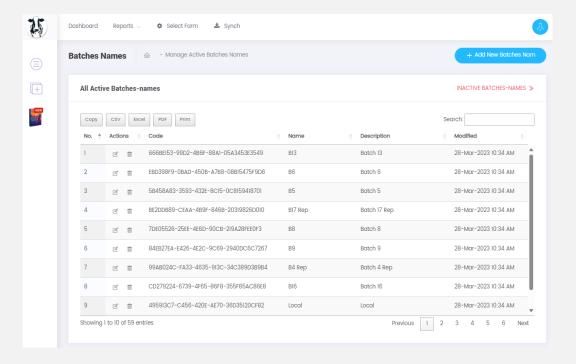
When an animal price record is removed, it is not permanently deleted but instead transferred to the "Inactive Animal Prices" section, allowing administrators to retrieve it if needed. To restore a record, the administrator must navigate to the inactive table and locate the desired entry. On the left side of the record row, there is an arrow button—clicking this initiates the retrieval process.

Once clicked, the system automatically fetches the associated data and reactivates the record, returning it to the active animal prices list. This mechanism ensures that no critical pricing information is lost and provides flexibility for users to manage and reinstate records as necessary.

## C. BATCHES NAMES

The Batches Names module plays a vital role in organizing and evaluating livestock within the Dairy Management System. Animals are grouped according to project name and imported group allowing for streamlined tracking and performance analysis. By assigning animals to specific batch groups, the system can monitor trends over time and identify which groups yield the highest success rates—whether in terms of growth, milk production, reproductive efficiency, or overall health outcomes.

This classification not only enhances operational clarity but also supports datadriven decision-making. Area managers and administrators can use batch group insights to analyze the best project group record by categorizing and comparing to another batch group. The module serves as a foundation for comparative analysis, enabling users to assess group-level performance and make informed adjustments to improve herd productivity and sustainability.



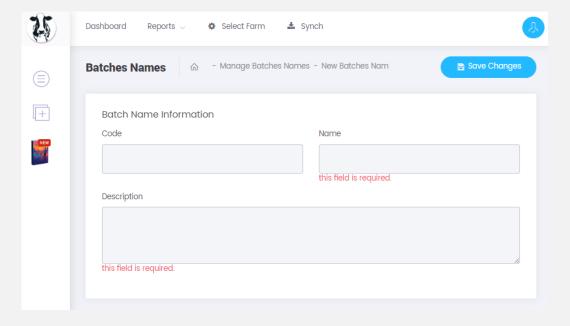
### 1. Create Batch

To create a new batch group, navigate to the Batch List page and click the "Add New Batch" button located at the upper-right corner of the data table. This action will redirect the administrator to the batch form page, where essential details must be provided.

Fill in the required fields including the batch code, name, and description to define the group clearly. The following are fields and the description:

- Code A unique identifier assigned to each batch group for system tracking and reference.
- Name The official name of the batch, often reflecting the project group or operational category.
- Description A brief summary that explains the purpose, context, or distinguishing features of the batch.

Once all information is entered, click "Save Changes." The system will automatically validate the input to ensure completeness and accuracy. If the data passes validation, the batch record will be successfully created and added to the system, enabling animals to be classified under this new group for performance tracking and analysis.



### 2. Edit Batch

To edit an existing batch group, navigate to the Batch List page and click the Edit button located at the right corner of the data table. This will redirect the user to the batch edit form, which mirrors the layout of the creation form. However, all fields—such as code, name, and description—will be pre-filled with the current data associated with the selected batch.

Review and update the necessary information, then click "Save Changes." The system will automatically validate the input to ensure accuracy and completeness. If the data passes validation, the batch record will be successfully updated, reflecting the new details in the system.

### 3. Remove Batch

To remove a batch group from the system, locate the desired entry in the Batch List and click the Delete button positioned at the right corner of the list. This action will trigger a confirmation dialog box, prompting the user to confirm whether they wish to proceed with the deletion.

If the user confirms, the system will deactivate the batch record rather than permanently erasing it. This ensures that historical data remains intact for reference or auditing purposes, while effectively removing the batch from active use.

#### 4. Activate Batch

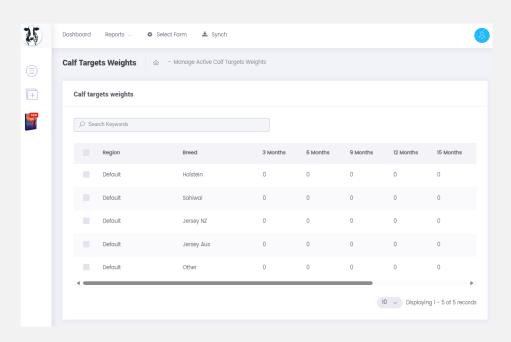
Removed batches are stored in the "Inactive Batches" section, allowing administrators to retain historical data and restore records when needed. To retrieve a batch, locate it within the inactive table and click the arrow button positioned on the left side of the entry.

Once clicked, the system will automatically reactivate the batch, restoring its status and making it available for use in ongoing operations. This retrieval process ensures flexibility in managing batch records without permanently losing valuable information.

### D. CALF TARGET WEIGHTS

The Calf Target Weights module is a specialized component dedicated only for cattle animals and designed to monitor and guide the growth performance of calves across various breeds. It maintains a structured list of target weights for each breed at key developmental milestones—specifically at the third, sixth, ninth, twelfth, and eighteenth months of age. These benchmarks serve as reference points for evaluating whether individual calves are growing at a healthy and expected rate, based on their genetic background and breed-specific standards.

For calves that are hybrids or have mixed breed compositions, the system employs a weighted calculation method to determine their expected target weight. This involves summing the standard target weight of each contributing breed by its respective percentage in the calf's genetic makeup. The resulting values produced a composite target weight that reflects the calf's unique breed profile. This approach ensures that growth expectations are tailored and accurate, even for animals with complex lineage.



By centralizing this data, the module supports area and farm managers in tracking calf development, identifying growth anomalies, and making informed decisions about nutrition, and health interventions. It also contributes to long-term herd performance analysis by aligning individual growth metrics with breed standards and operational goals.

## 1. Edit Target Weights

To edit a target weight in the Calf Target Weights module, the administrator should first locate the desired breed entry in the data table and click the edit button positioned at the far-right corner of the row. This action will redirect them to the edit form, where they can update the target weight values for the specified age milestones—typically the third, sixth, ninth, twelfth, or eighteenth month.

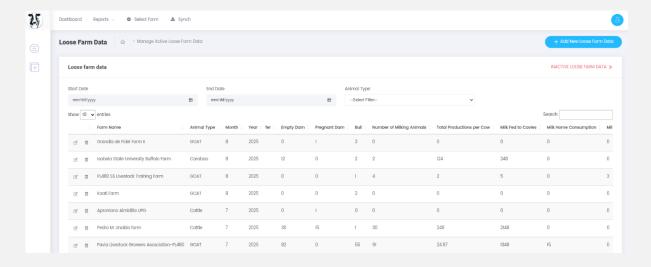
After entering the new data, clicking the "Save Changes" button will prompt the system to validate the inputs. The system checks whether all required fields are completed and ensures that the values are within acceptable numeric ranges. If the validation is successful, the system will automatically update the target weight information and confirm the changes with a success message, ensuring that breed-specific growth benchmarks remain accurate and up to date.

### E. LOOSE FARM DATA

The Loose Farm Module is designed to accommodate farms that operate independently—those not directly supported or assisted by field officers or extension services. While these farms may not be part of the formal monitoring network, they can still contribute valuable operational data through simplified numeric reporting.

In this module, data is captured in quantitative form, allowing for basic tracking and analysis without requiring detailed, assisted input. The system enables users to record essential figures such as:

 Animal Inventory – This section captures a comprehensive overview of the farm's current livestock population. It records the total number of animals present on the farm, categorized by animal classification groups such as calves, heifers, cows, bulls, and other livestock types. Additionally, it tracks the number of pregnant animals, specifically identifying pregnant heifers and cows.



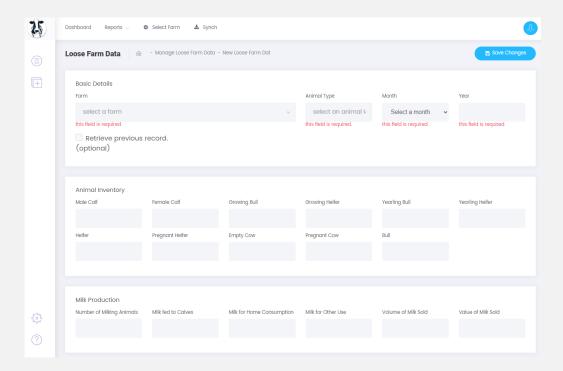
- Milk Production This category documents the farm's dairy output and its
  economic utilization. It includes the total number of animals currently
  producing milk, helping assess productivity levels. The system also records the
  milk usage category, indicating whether the milk is consumed on-farm, sold to
  cooperatives or local markets, fed to calves, or used for other purposes.
  Furthermore, it captures the volume of milk sold during the reporting period
  and the monetary value of milk sales per month, providing insights into income
  generation and market engagement.
- Breeding Information This section monitors reproductive activities and outcomes. It records the number of animals bred, distinguishing between those bred through artificial insemination (AI) and those bred naturally. The system also logs the number of semen straws used for AI procedures, offering a view into genetic planning and resource usage. Additionally, it tracks the number of animals confirmed pregnant during the current month—whether newly confirmed or ongoing pregnancies—and the number of offspring born, supporting generational tracking.
- Animal Health This category captures veterinary and health-related services provided to the livestock. It records the number of health interventions performed during the specified month, categorized by service type. These may include treatments for tuberculosis, Surra, and other common livestock diseases, as well as routine services such as vaccinations, deworming, and general check-ups. This data helps monitor herd health, identify recurring issues, and ensure timely medical attention to maintain animal welfare and farm productivity.

#### 1. Create and Edit Loose Farm

To create a loose farm record, begin by navigating to the data table list within the system interface. At the upper right corner of this list, you'll find the "Add New Loose Farm" button. Clicking this button will redirect the user to the Loose Farm Form Page, where new entries can be created.

On the form page, users are required to complete all designated fields to ensure that the record being submitted or retrieved is valid, properly categorized, and aligned with the system's data integrity protocols. These fields are located under the Basic Details section and serve as the foundational parameters for either updating existing records or entering new data into the system. Accurate completion of these fields is essential for enabling the system to locate historical entries, validate farm-level data, and maintain consistency across reporting modules.

- The first field, Farm, presents a dropdown menu containing a list of registered farms within the system. Users must select the appropriate farm name or identifier to associate the record with the correct information. This selection ensures that all data entries are traceable to a specific operational site and can be aggregated accurately for analysis or compliance purposes.
- Next, the Animal Type field allows users to specify the species involved in the record—such as cattle, goat, or carabao. This classification is critical for segmenting data by livestock category, enabling tailored reporting and species-specific management insights. Selecting the correct animal type also ensures that the system applies the appropriate health, production, or breeding metrics during analysis.
- The Month and Year fields are used to define the temporal scope of the record. Users must select the relevant month and year to either retrieve previously entered data or to timestamp new entries. These fields are especially important for tracking seasonal trends, monitoring farm performance over time, and aligning records with monthly reporting cycles.
- An optional checkbox labeled Retrieve Previous Record is available for users who wish to access and update existing data. When this box is selected, the system will search its database for records that match the chosen farm, animal type, month, and year. If a matching record is found, it will be displayed for review and editing. If no record exists, the user will be prompted to input new data, allowing for seamless creation of entries where gaps are identified.



By carefully selecting and completing these parameters, users can retrieve historical information, update records for a specific farm, or input new data where none currently exists.

Once all necessary information has been entered, click the "Save Changes" button located at the bottom of the form. The system will automatically validate the input to check for completeness and correctness. If any required data is missing or improperly formatted, the system will prompt the user to make corrections. If all inputs are valid, the system will successfully create and store the new loose farm record.

After saving, a confirmation message will appear, indicating that the record has been added. The newly created entry will then be visible in the data table list, ready for review, updates, or further action.

# 2. Remove Loose Farm

To remove a loose farm entry from the system, navigate to the list view where all existing records are displayed. Locate the specific record you wish to remove, and click the Delete button positioned at the far-left corner of its row. This action initiates a confirmation prompt—a message box will appear asking whether you wish to proceed with the deletion.

If you confirm the action by selecting Yes or Continue, the system will proceed to deactivate the selected record. Deactivation ensures that the farm entry is no longer active or visible in standard workflows, but it may still be retained in the system for audit purposes or historical reference.

#### 3. Activate Loose Farm

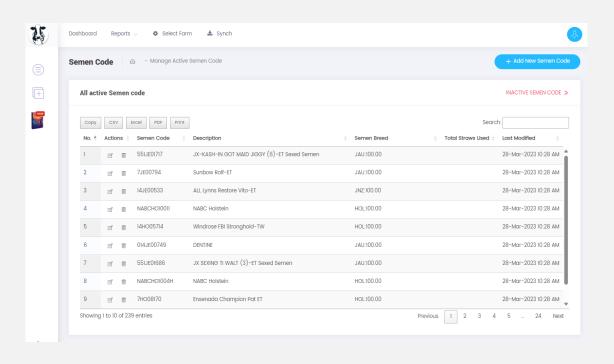
Once a loose farm record has been removed, it is not permanently deleted but instead transferred to the Inactive Loose Farm section. This area serves as a secure archive for deactivated entries, allowing administrators to review, manage, and restore records as needed without compromising data integrity.

To retrieve and reactivate a previously removed farm, navigate to the Inactive Loose Farm table. Each entry in this table includes an arrow button located on the left side of the row. Clicking this button initiates the retrieval process. Upon selection, the system will automatically locate the corresponding record, restore its active status, and reintegrate it into the main farm list.

### F. SEMEN CODE

The Semen Codes module serves as a centralized registry of all semen codes recognized and supported by the system. It ensures standardized tracking and referencing of genetic material used in breeding operations. Currently, the module accommodates semen codes for cattle and goats, allowing administrators to enroll new entries or update existing ones as needed. Each code corresponds to a specific donor profile, which may include breed, lineage, and other relevant attributes.

This structured approach supports accurate recordkeeping, facilitates traceability in breeding workflows, and enhances decision-making in herd genetics management. As the system evolves, additional species or classifications can be integrated into the list to expand its utility across diverse livestock operations.



#### 1. Create Semen Code

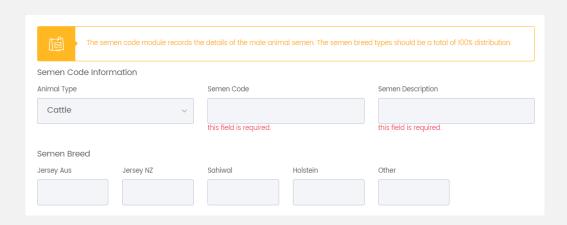
To create a semen code, begin by clicking the Add New Semen Code button, which is prominently located at the upper right corner of the semen code data table list. This action will redirect the administrator to the Semen Code Form Page, where new entries can be created and configured.

On the form page, the administrator is required to complete several key fields to ensure the semen code is properly categorized and documented. Below is a list of the required fields along with their descriptions:

- Animal type Allows the user to select the species associated with the semen code, such as cattle, goat, or carabao. Upon selection, breedspecific fields will automatically appear to ensure accurate classification.
- Code A unique identifier assigned to each semen entry. This code is used for tracking, referencing, and linking semen data to breeding records and donor profiles.
- Description A brief summary that provides context or additional details about the semen code, such as lineage, genetic traits, or usage notes.

After all required fields have been filled out, click the "Save Changes" button located at the bottom of the form. The system will then perform a validation check to ensure that all inputs are complete and correctly formatted.

 If the data passes validation, the semen code record will be successfully created and added to the database. If any issues are detected, the system will prompt the administrator to correct the errors before proceeding.

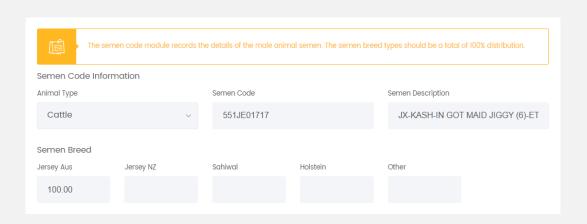


#### 2. Edit Semen Code

To edit an existing semen code, the administrator must first locate the desired record within the semen code data table. On the far-right corner of the corresponding row, click the Edit button. This action will redirect the user to the semen code edit form, which mirrors the layout of the creation form. However, unlike the creation process, all fields in the edit form are automatically populated with the current data associated with the selected semen code. This includes the animal type, code, description, and any breed-specific information, allowing the administrator to review and modify the details as needed.

After making the necessary changes, click the "Save Changes" button. The system will then validate the updated inputs to ensure they meet all required criteria. If the data is complete and correctly formatted, the system will successfully update the semen code record.

• If any errors are detected, the system will prompt the administrator to correct them before proceeding. This process ensures that semen code entries remain accurate, consistent, and aligned with evolving breeding and donor information.



#### 3. Remove Semen Code

To remove an existing semen code from the system, locate the specific entry within the semen code data table. On the far-right corner of the corresponding row, click the Delete button. Once clicked, a confirmation dialog box will appear, prompting the user to confirm whether they wish to proceed with the deletion. This step is designed to prevent accidental removal and ensure intentional action.

If the user confirms, the system will proceed to deactivate the selected record. Rather than permanently erasing the data, the system marks the semen code as inactive, preserving its historical integrity while removing it from active workflows and selection lists. This approach supports auditability and data traceability within the breeding management system.

### 4. Activate Semen Code

When a semen code is removed, it is not permanently deleted but instead transferred to the "Inactive Semen Code" section of the system. This ensures that historical data remains accessible and can be restored if needed. Administrators can retrieve and reactivate any previously removed semen code from this list.

To begin the retrieval process, navigate to the Inactive Semen Code table. Each record in this table includes an arrow button located on the left side of the row. Clicking this button initiates the recovery process. Once selected, the system will automatically retrieve the associated data and reactivate the semen code, restoring it to the active list and making it available for use in breeding workflows and donor references.

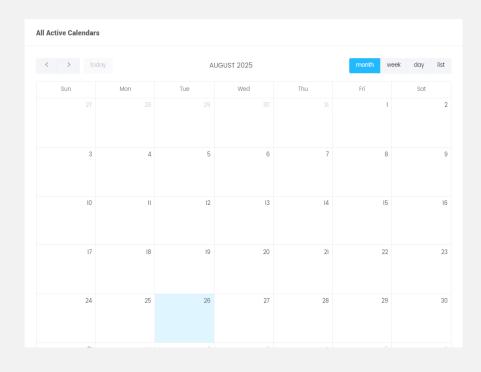
# XII. CALENDARS

This feature was developed to provide comprehensive task tracking and auto-scheduling support for users engaged in farm and dairy operations. It actively monitors work-related responsibilities and delivers timely reminders for critical events such as calving due dates and scheduled pregnancy diagnoses. By ensuring that these essential milestones are never overlooked, the system enhances operational efficiency and supports proactive herd management.

In addition to agricultural workflows, the feature also accommodates personal task management, allowing users to organize non-work-related activities within the same intuitive interface—promoting a balanced and well-coordinated daily routine.

## A. ACTIVE CALENDARS

The active calendar interface is designed to provide users with a clear and intuitive view of their daily schedules. It prominently displays the current date, allowing users to stay oriented within their workflow. When a specific date contains scheduled tasks—such as calving appointments, pregnancy diagnoses, or personal reminders—the system automatically highlights that date and presents the corresponding task details. This includes the name of the task and a brief description, ensuring that users can quickly understand what needs attention without navigating away from the calendar view. By integrating task visibility directly into the calendar, the system promotes better time management, reduces missed deadlines, and supports a more organized approach to daily operations.

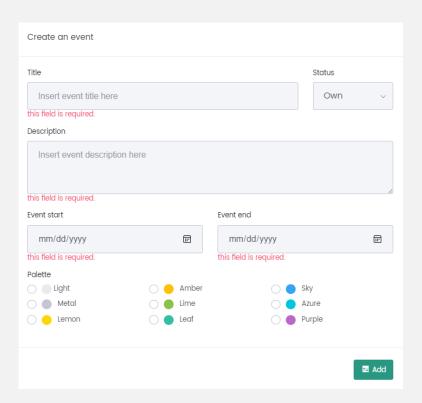


#### 1. Create Event

Calendar tasks can be created either automatically by the system—based on predefined workflows such as breeding schedules, calving predictions, or health check intervals—or manually by the user.

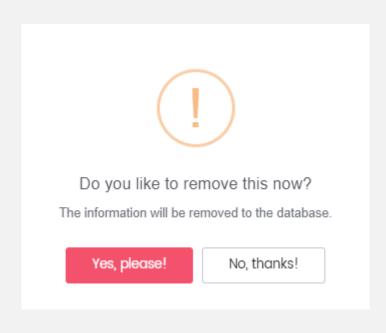
To manually create a task, the user simply clicks on any date within the calendar interface, which triggers a prompt for event creation. The input form includes several required fields to ensure clarity and consistency across scheduled events.

- Title The name of the event, used as its primary label (e.g., "Goat Vaccination" or "Milk Quality Audit").
- Status Determines visibility either as Public as visible to all users in the system and as Private, visible only to the event creator.
- Description A detailed explanation of the event, including objectives, procedures, or contextual notes.
- Event Start The beginning date and time of the event. Supports both single-day and multi-day scheduling.
- Event End The ending date and time of the event.
- Palette A unique color assigned to the event, helping visually distinguish it within the calendar and enabling intuitive categorization (e.g., blue for breeding, green for feeding, red for health checks).



# 2. Remove Event

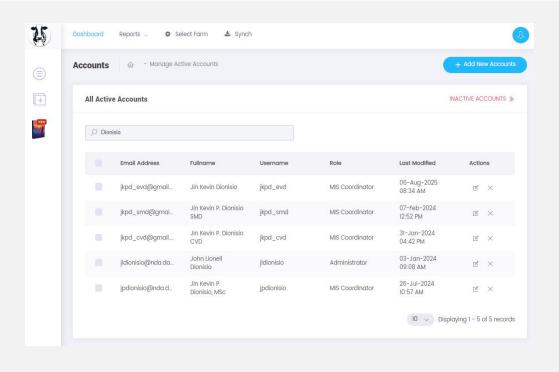
To remove an event from the calendar, the user must click directly on the event within the calendar management interface. This action will trigger a warning message, prompting the user to confirm whether they wish to proceed with the deletion. If the user chooses to continue, the event will be permanently removed from the system. It's important to note that once an event is deleted, it cannot be restored or reactivated—this action is irreversible. Users are advised to double-check the event details before confirming removal to avoid accidental loss of important scheduling data.



# XIII. USERS

This module serves as the central repository for all user accounts within the system. To ensure proper access control and operational transparency, every user must be registered with essential information, including their name, email address, assigned role, and area of management. Each user is granted one role per category, which defines their permissions and determines which modules of the Dairy Management System (DMS) they can access. Roles are critical for maintaining structured workflows, as they allow the system to tailor interfaces, data visibility, and functional capabilities based on the user's responsibilities—whether in breeding, inventory, diagnostics, or administrative oversight.

This role-based architecture ensures that users interact only with the modules relevant to their scope, promoting both security and efficiency across the platform.



### A. ACCOUNTS

The system displays a comprehensive list of all user accounts that have been registered, providing administrators with a centralized view of active personnel and their associated roles. This module is strictly controlled—only administrators have the authority to manage, modify, or remove account data. This includes editing user details, assigning roles, updating area management assignments, and deactivating accounts when necessary. By restricting access to administrative users, the system

ensures data integrity, prevents unauthorized changes, and maintains a secure environment for role-based access across the system.

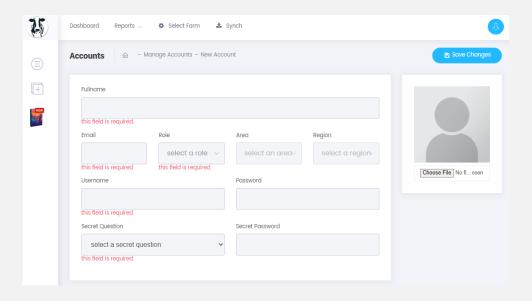
#### 1. Create Accounts

To create a new account, the administrator must click the "Add New Accounts" button located at the upper right corner of the user list interface. This action redirects to the user form page, where essential details must be entered to successfully register a new user.

Required fields included are as follows:

- Full name The complete name of the account user, used for identification and display across the system.
- Email A unique email address where system notifications and alerts may be sent. Must not duplicate existing accounts.
- Role Defines the user's access level and permissions within the system (e.g., Administrator, Technician, MIS).
- Area Specifies the operational zone assigned to the user. The system filters data based on this assignment.
- Region Indicates the broader geographic location of the assigned area, useful for hierarchical data segmentation.
- Username A unique login credential used to access the system. Must follow naming conventions and avoid duplication.
- Password A secure string entered by the administrator. The system encrypts this input into a format readable only by the backend.
- Secret Question and Answer An added layer of security for account recovery. Used to verify identity in case of forgotten credentials.

These inputs ensure that each user is properly identified and granted appropriate access within the system. Once all necessary information is filled out, clicking the "Save" button finalizes the process, adding the new account to the system and enabling role-based functionality tailored to the user's responsibilities.



### 2. Edit Accounts

To edit an existing account, the administrator must click the Edit button located at the right corner of the user list. This action redirects to the Edit Account Form, which mirrors the layout of the account creation form. However, all fields are pre-filled with the current data associated with the selected user, allowing for seamless updates.

After making the necessary changes, the administrator should click "Save Changes." The system will then validate the input to ensure all required fields are correctly completed. If validation passes, the system will automatically update the account information and reflect the changes in the user list.

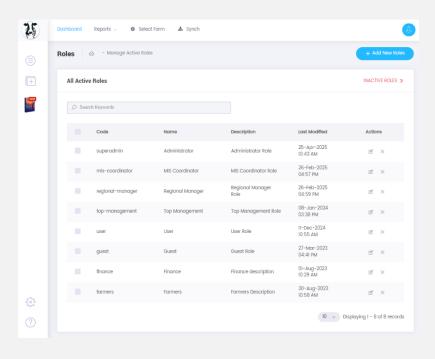
### 3. Remove Accounts

To remove an account, the administrator must click the Delete button located at the right corner of the user list. Upon activation, a confirmation dialog box will appear, prompting the administrator to confirm whether they wish to proceed with the deletion.

If confirmed, the system will initiate the deactivation process, effectively disabling the account and revoking its access privileges. This ensures that the account remains in the system for audit purposes but is no longer active or operational.

### 4. Activate Accounts

Removed accounts are stored in the "Inactive Accounts" section, allowing administrators to retain historical data while maintaining control over user access. To retrieve and reactivate an account, the administrator must click the arrow button located on the left side of the inactive accounts table. Once clicked, the system will automatically restore the account's information and change its status to Active, reinstating the user's access and role-based privileges within the system.



## B. ROLES AND PERMISSIONS

The Dairy Management System (DMS) enforces role-based access control, ensuring that each user interacts only with the modules relevant to their responsibilities. The system defines four major account levels, each with distinct permissions:

- Administrator Has full access to all system features and modules.
   Responsible for managing user accounts, configuring system settings, and overseeing data integrity across all areas.
- Top Management Limited to viewing summary reports and system overviews across all operational areas. This role focuses on strategic insights and performance metrics, without access to detailed technical modules or data entry functions.

- Area MIS Officer Possesses administrative-level access but is restricted to their assigned area. Can manage data, users, and workflows within their jurisdiction, ensuring localized control without cross-area interference.
- User (Field Technician / Recorder) The primary operator for daily dairy recording and technical input. Access is limited to essential modules such as breeding, calving, pregnancy diagnosis, and milk production. This role ensures accurate field-level data entry without exposure to administrative or summary-level features.

## 1. Create Roles and Permissions

The system is designed with scalability and adaptability in mind. While it includes predefined account levels for common user types, it is not limited to these defaults. Administrators have the authority to create entirely new user roles that reflect the specific needs of their organization or workflow. This feature empowers system administrators to define custom access levels, assign permissions to specific modules, and tailor user experiences based on operational responsibilities.

To define a new role and configure its permissions, follow these steps:

- Initiate Role Creation
  - Navigate to the Roles and Permission sub-module under the User Module section of the system.
  - o Click the "Add New Roles" button.
  - o This action will open the Roles and Permissions Form, where the administrator can input role details and assign access rights.
- The form requires the following fields to be filled out:
  - O Code: A unique identifier for the role. This code ensures system-level distinction and helps with backend tracking and auditing.
  - O Name: The display name of the role. This label will appear in dropdown menus and user assignment fields throughout the system.
  - o Module Access Permissions: A list of available modules will be presented with corresponding checkboxes.
    - Administrators can select which modules the role can access.
    - For each module, granular access levels (e.g., View, Create, Edit, Delete) may be specified depending on system configuration.

Save the Role Configuration After completing the form and selecting the appropriate permissions, click "Save Changes." The system will validate the input and display a confirmation message upon successful creation. The newly created role will automatically be added to the Role Selection Dropdown in the User Management module, making it available for assignment to users.

### 2. Edit Roles and Permissions

Administrators have full control over user permissions and can modify existing roles as needed to reflect changes in responsibilities, workflows, or system access policies. To edit a role, the administrator must click the Edit button located at the right corner of the role table list. This action redirects to the Role Edit Form, which mirrors the layout of the original role creation form. However, all fields are automatically populated with the current data associated with the selected role, allowing for seamless updates.

Within the form, the administrator can revise the role's name, code, and module access permissions by checking or unchecking the relevant boxes. Once the necessary changes are made, clicking "Save Changes" will prompt the system to validate the input. If all required fields are correctly completed, the system will update the role configuration and display a confirmation message.

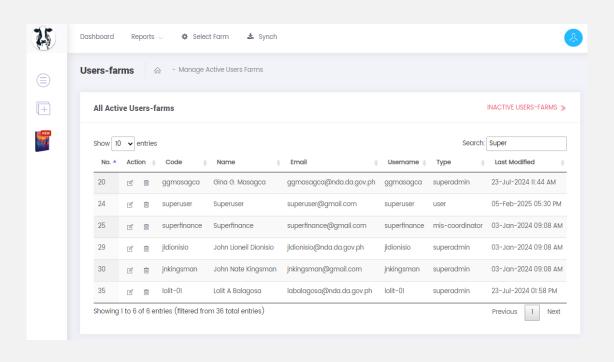
It's important to note that any updates made to a role are immediately effective. This means that all users assigned to the modified role will automatically inherit the new permissions—whether expanded or restricted—without requiring manual reassignment. This dynamic update mechanism ensures consistent access control across the platform and supports real-time adjustments to organizational needs.

# XIV. USERS FARMS

This module plays a critical role in maintaining the security and integrity of farm-level data within the Dairy Management System (DMS). It allows both administrators and Area MIS officers to manage user access to specific farms, provided the users fall under the same area of jurisdiction. By granting or revoking access, the system ensures that sensitive operational data—such as breeding records, calving logs, and milk production metrics—remains visible only to authorized personnel.

Through this module, administrators can selectively assign farms to users, tailoring access based on operational roles and responsibilities. This granular control helps prevent unauthorized viewing or manipulation of farm data, reinforcing the system's commitment to secure and role-based access.

In addition to access control, the module also supports credential management. Administrators can reset a user's basic account information, including username and password, ensuring smooth recovery in cases of forgotten credentials or compromised accounts. These updates are processed securely and immediately reflected in the system, allowing users to regain access without delay.



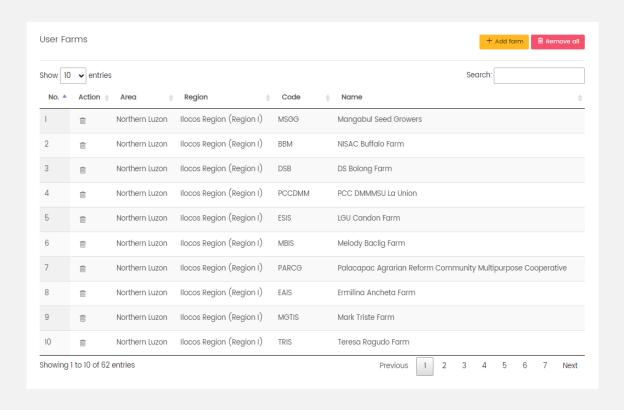
## A. ASSIGN FARMS TO USERS

#### 1. Edit Users Farms

Upon account creation, users at the lowest access level are automatically granted visibility to all farms within the same area and region as defined by the administrator. This default configuration ensures operational continuity and avoids manual setup delays for new users.

To customize or restrict farm access for a specific user:

- Navigate to the User List Table. Locate the user whose farm access needs to be modified.
- Click the Edit Icon. The edit icon is positioned on the left side of the user's row in the table.
- Redirect to the Form Page. Upon clicking, the system redirects to a dedicated User Farm Form, where the administrator can:
  - o Select or deselect farms from a checklist
  - o Save changes to update the user's access to farms



There are five (5) core functionalities that the administrator can use to manage the list of farms assigned to a user. These controls allow for flexible and secure handling of farm access, ensuring that users only interact with data relevant to their designated area. Below is a detailed breakdown of each functionality and how it operates:

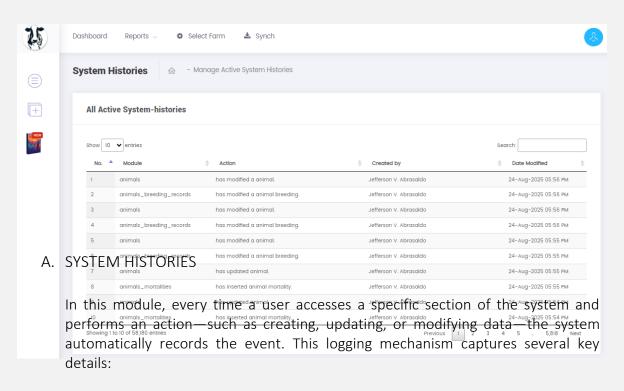
- Add Farm This function allows the administrator to view and assign farms that are not yet linked to the selected user. Upon clicking the Add Farm button, an interface box will appear displaying all available farms under the same area of jurisdiction. Each farm entry includes a green plus icon, which the administrator can click to initiate the assignment. A confirmation prompt will appear asking, "Do you want to continue?" Once confirmed, the farm is automatically added to the user's active list—there is no need to click a separate "Save Changes" button. This streamlined process ensures quick and accurate farm assignment while maintaining area-based restrictions.
- Remove To remove a specific farm from the user's active list, click the
  trash icon located on the left side of the farm entry. Upon clicking, the
  system will display a confirmation interface. If the administrator chooses
  to proceed, the selected farm will be removed from the active list and
  transferred to the Inactive Farms section. This ensures that the farm is
  no longer accessible to the user but remains recoverable if needed.
- Remove All This function performs a bulk removal of all farms currently listed in the user's active list. To execute, click the Remove All button located at the upper right corner of the active farm list, marked with a red color for visibility. A confirmation prompt will appear. Upon confirmation, all farms will be moved to the Inactive Farms list. This is useful for resetting a user's access or preparing for reassignment across multiple farms.
- Retrieve Farms that have been removed can be individually restored to
  the user's active list. To retrieve a specific farm, navigate to the Inactive
  Farms section and click the retrieve icon on the left side of the farm
  entry. Once clicked, the farm will be immediately moved back to the
  Active Farms list, reinstating the user's access to that farm.
- Retrieve All This function allows the administrator to restore all farms
  in the inactive list at once. Click the Retrieve All button located at the
  upper right corner of the inactive farm list, marked with a blue color. A
  confirmation prompt will appear. Upon confirmation, all farms will be
  reactivated and moved back to the user's active list. This is especially
  helpful when reversing bulk removals or restoring full access after
  temporary restrictions.

# XV. AUDIT LOGS

The Dairy Management System (DMS) is designed with robust tracking capabilities to ensure transparency, accountability, and data integrity across all user interactions. Every action performed by a user within the system is automatically recorded and stored as part of the system's audit trail. This includes—but is not limited to—the creation of new records, modifications to existing data, and the deletion or deactivation of entries.

Whenever a user adds a new item—such as a farm, animal profile, breeding record, or user account—the system logs the event along with relevant metadata, including the timestamp and the identity of the user who performed the action. Similarly, any updates made to existing records are captured in detail, allowing administrators to trace changes over time and verify the accuracy of information. Deletions or removals are also recorded, ensuring that no data is lost without trace and that all actions can be reviewed if necessary.

This comprehensive logging mechanism not only supports internal auditing and compliance but also reinforces the system's commitment to secure and responsible data management. By maintaining a complete history of user activities, DMS empowers administrators to monitor usage patterns, investigate anomalies, and uphold operational standards across all modules.



• The type of module accessed (e.g., Farm Management, Breeding Records, User Credentials)

- A description of the action performed (e.g., "Updated calving date," "Removed farm access")
- The specific data that was created or changed
- The exact date and time the action occurred

This functionality serves as a built-in audit trail, allowing administrators and authorized personnel to trace all changes made within the system. It ensures accountability, supports data integrity, and provides a reliable reference for reviewing historical actions—especially useful during troubleshooting, compliance reviews, or operational audits.

Furthermore, users with the role of Area Manager have elevated visibility within their assigned jurisdiction. They can view the activity logs of all users operating under their authority, but this access is strictly limited to actions performed within the same area assigned to them. This hierarchical visibility ensures that oversight is both effective and appropriately scoped, maintaining privacy and operational boundaries across regions.

# XVI. GAMES and AWARDS

The system includes a built-in gamification and awards module designed to encourage active participation and recognize meaningful contributions from users. Through simple interactive games and a dynamic reward system, the Dairy Management System (DMS) fosters engagement while reinforcing productive behavior across all modules.

Every time a user performs an action—such as updating records, managing farm data, submitting reports, or interacting with system features—the system automatically acknowledges and records the contribution. These actions are tracked and translated into points, which accumulate over time based on both the quantity and quality of user activity.

Once a user reaches specific point thresholds or completes notable milestones, DMS automatically grants recognition awards. These awards may include:

- Medals awarded for high-impact contributions or consistent performance over time
- Ribbons given for completing specific tasks, modules, or workflows
- Unique Items special tokens or collectibles that reflect personalized achievements or rare accomplishments

The awards are visible in the user's profile and may also be used to unlock additional features, rank progress, or qualify for area-level recognition. This system not only motivates users to stay engaged but also provides administrators with a transparent view of user performance and participation.

### A. DMS TOKENS

Tokens are a form of virtual currency generated from user actions within the system. This gamified mechanic highlights user contributions, making it easy to identify the most active and engaged participants. Tokens can be exchanged through the Market Interface for various digital rewards, including exclusive items, profile posters, and other customizable assets.



My Tokens: **3,175.00** 

Claim Voucher Points

# FREE +100 tokens

■ Inventory



As we prepare for the next edition of our manual book, we are inviting submissions for a new cover design. We welcome your creative contributions.