

CattleManagement.Online User Manual

Welcome to BosSires R&D Cattle Management Platform

This comprehensive guide will help you make the most of your cattle management system. Our platform combines intelligent cattle tracking, AI-powered analysis, and cloud-based management to enhance productivity in your livestock operations.

About the Screenshots: This manual includes real screenshots from Kallion Farms, one of our active ranch operations. All screenshots show actual working features and data to give you a clear understanding of how the system works in practice.

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Getting Started

Creating Your Account

1. Visit **cattlemanagement.online**
2. Click "**Sign Up**" in the top right corner
3. Enter your email address and create a secure password
4. Verify your email address
5. Complete your profile with ranch information

Logging In

1. Navigate to the login page
2. Enter your username or email
3. Enter your password
4. Click "**Login**"

Tip: The system remembers your preferences, including your preferred measurement system (imperial/metric) and language.

First-Time Setup

After logging in for the first time:

1. **Set Up Your Ranch** - Add your ranch details, location, and operation type
2. **Configure Preferences** - Choose your measurement system and language
3. **Add Your First Cattle** - Start building your herd database
4. **Upload Images** - Add photos of your cattle for AI analysis

Dashboard Overview

Your dashboard provides a quick overview of your operation:

- **Total Ranches** - Number of ranches you manage
- **Total Cattle** - Complete herd count
- **Recent Activity** - Latest cattle additions and updates
- **Quick Actions** - Fast access to common tasks

Dashboard Overview

Figure 1: Main dashboard showing system statistics and navigation menu

Navigation Menu

- **Cattle** - Manage your herd

- **Ranches** - Ranch information and settings
- **Images** - Photo gallery and management
- **Measurements** - Weight and body condition tracking
- **Marketplace** - Buy and sell cattle
- **Upload Queue** - Batch image processing
- **Voice Commands** - Voice-controlled operations
- **Admin** (for admin users) - System administration

Cattle Management

Viewing Your Cattle

Navigate to **Cattle** to see your herd. You have three view options:

1. Row View

- Shows cattle in a list format with images
- Displays key information: name, PHN, registration number, breed, sex
- Includes selection checkboxes for bulk actions

Cattle List - Row View

Figure 2: Cattle list in Row View showing images, key information, and selection checkboxes for Kallion Farms cattle

2. Card View

- Grid layout with cattle cards
- Visual presentation with images
- Quick access to details

3. Analysis View (Data Table)

- Comprehensive table with all data columns
- Customizable column visibility
- Sortable by any field
- Perfect for data analysis and comparison
- Includes selection checkboxes for bulk registration

Cattle List - Analysis View

Figure 3: Cattle list in Analysis View showing comprehensive data table with column visibility controls and checkboxes

Filtering & Searching

- **Search Bar** - Find cattle by name, registration number, ear tag, or PHN
- **Ranch Filter** - View cattle from specific ranches
- **Records Per Page** - Choose 20, 50, 75, or 100 cattle per page
- **Sort Options** - Click column headers to sort by any field

Adding New Cattle

1. Click "**Add Cattle**" button
2. Fill in the required information:
3. **Name** - Cattle's name or identifier
4. **PHN** (Permanent Herd Number) - Unique identifier
5. **Registration Number** - Official registration (if applicable)
6. **Ear Tag Number** - Physical tag number
7. **Breed** - Cattle breed
8. **Sex** - Bull, Cow, Heifer, Steer, etc.

9. **Date of Birth** - For age calculation
10. **Ranch** - Select owning ranch
11. Optional information:
12. Dam (mother) and Sire (father) for lineage tracking
13. Location within ranch
14. Color and markings
15. Health status
16. Body condition score
17. Click "**Save**" to add the cattle

Editing Cattle Information

1. Navigate to the cattle's detail page
2. Click "**Edit**" button
3. Update the information
4. Click "**Save Changes**"

Cattle Details Page

Each cattle has a comprehensive details page showing:

- **Basic Information** - Name, breed, sex, date of birth
- **Identification** - PHN, registration number, ear tag
- **Lineage** - Dam and sire information
- **Images** - All photos associated with the cattle
- **Measurements** - Weight history, body scores
- **3D Models** - Interactive 3D visualizations
- **AI Analysis** - Body composition and recommendations
- **Breeding History** - Offspring records

Cattle Detail Page

Figure 4: Individual cattle detail page showing comprehensive information, images, and action buttons

Bulk Selection & Actions

In Row or Analysis view:

1. **Check boxes** next to cattle you want to work with
2. **Bulk Action Bar** appears showing selected count
3. Available bulk actions:
4. **Register Selected Cattle** - Batch registration
5. More actions coming soon

Bulk Selection

Figure 5: Bulk selection in action - checkboxes selected and bulk action bar displayed at bottom of screen

Ranch Management

Viewing Ranch Details

1. Go to **Ranches** menu
2. Click on a ranch name to view details

Ranch details include:

- Basic information (name, producer, registration number)
- Location (address, city, state, country)
- Ranch statistics (total acres, cattle count)
- Operation type and certification details
- Associated documents

Ranch Action Buttons

From the Ranch detail page, you can:

- **Register Action** (Yellow button) - Jump directly to cattle registration in Analysis view
- **Upload Documents** - Add ranch documents
- **Import Observations** - CSV import for pasture notes
- **Bulk Upload Images** - Upload multiple photos at once
- **Manage Pastures** - Define and manage grazing areas
- **Edit** - Update ranch information

Ranch Detail Page

Figure 6: Kallion Farms ranch detail page showing all action buttons and ranch information including cattle count and documents

Adding a New Ranch

1. Navigate to **Ranches**
 2. Click "**Add Ranch**"
 3. Enter ranch details:
 4. Name and producer information
 5. Contact details (email, phone)
 6. Address and location
 7. Total acreage
 8. Primary breed
 9. Operation type
 10. Click "**Save**"
-

Pasture Management

Interactive Pasture Maps

The pasture management system uses interactive maps powered by Leaflet.js:

1. **View Pastures** - From Ranch detail page, click "**Manage Pastures**"
2. **Map Interface** - See all your pastures on an interactive map
3. **Draw New Pastures** - Use drawing tools to define boundaries
4. **Edit Boundaries** - Modify existing pasture shapes

Pasture Management

Figure 10: Interactive pasture management interface with Leaflet.js map showing pasture boundaries and management tools

Creating a New Pasture

1. Go to a ranch's pasture management page
2. Click "**Create New Pasture**"
3. Enter pasture information:
4. **Name** - Pasture identifier
5. **Grazing Type** - Select from:
 - Continuous
 - Rotational
 - Intensive Rotational
 - Ultra High Density
 - Mob Grazing
 - Strip Grazing

- Holistic Planned Grazing
- And more...

6. **Acreage** - Size (calculated automatically from boundaries)
7. **Draw Boundaries** on the map:
8. Click points to create polygon
9. Double-click to finish
10. Click "**Save**"

GPS-Based Image Association

When you upload images with GPS data:

- Images are **automatically linked** to pastures
- The system uses GPS coordinates to determine location
- View pasture-specific images in the pasture gallery

Importing/Exporting Pasture Data

- **KML Export** - Download pasture boundaries for use in other mapping tools
- **KML Import** - Import existing pasture data
- **CSV Observations** - Import field notes and observations

Pasture Observations

Track what you see in the field:

1. Navigate to a pasture's detail page
2. View the **Observations** tab
3. Import observations via CSV with:
4. Observation type (weeds, pests, water issues, forage quality)
5. Severity level

6. GPS coordinates
7. Notes and photos
8. Track resolution status

Registration and Fees

Registering Cattle

The platform offers a streamlined cattle registration system:

Method 1: From Cattle List

1. Go to **Cattle** page
2. Switch to **Row View** or **Analysis View**
3. **Check boxes** next to cattle to register
4. Click "**Register Selected Cattle**"
5. Select the ranch for registration
6. Review the registration summary:
 7. Number of cattle to register
 8. Registration fee (\$10 per animal)
 9. Total cost
10. Click "**Register Cattle**"

Method 2: From Ranch Page (Quick Access)

1. Go to **Ranches**
2. Open a ranch detail page
3. Click the yellow "**Register Action**" button

4. You'll jump to the Analysis view with cattle from that ranch
5. Select cattle and follow steps above

Register Action Workflow

Figure 7: Clicking "Register Action" from ranch page navigates to filtered cattle list in Analysis view

Registration Numbers

- Format: **REG-YYYY-NNNN** (e.g., REG-2025-0001)
- Sequential numbering by year
- Unique and permanent
- Automatically generated

Registration Fees

- **\$10.00 per animal**
- Automatically added to your shopping cart
- Pay via secure checkout

Registration Form

Figure 8: Cattle registration form showing selected cattle, ranch selection, and registration fee summary (\$10 per animal)

Checking Registration Status

View registration status on:

- Cattle list pages (registration number column)
 - Cattle detail pages
 - Analysis view data table
-

Marketplace

Browsing Cattle for Sale

1. Navigate to **Marketplace** menu
2. Browse available listings
3. Use filters:
4. **Product Type** - Live cattle, semen straws, embryos
5. **Breed** - Filter by specific breeds
6. **Sex** - Bull, cow, heifer, etc.
7. **Search** - Find by name or keywords

Marketplace

Figure 9: Public marketplace showing cattle available for sale with filters and search options

Listing Cattle for Sale

1. Go to cattle detail page
2. Click "**Edit**"
3. Enable "**Available for Sale**"
4. Set **Visibility** to "Marketplace" or "Public"
5. Set your asking price
6. Add product details and photos
7. Save changes

Your cattle will appear in the marketplace for potential buyers.

Adding to Cart

1. Browse marketplace listings
 2. Click on cattle you're interested in
 3. Click **"Add to Cart"**
 4. Continue shopping or proceed to checkout
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Image and Video Management

Uploading Individual Images

1. Navigate to cattle detail page
2. Click **"Upload Image"**
3. Select image file (JPG, PNG, HEIC, HEIF)
4. Add description (optional)
5. Click **"Upload"**

Bulk Image Upload

For uploading many images at once:

1. From Ranch detail page, click **"Bulk Upload Images"**
2. **Drag and drop** files or click to browse
3. Supported formats:
4. Images: JPG, JPEG, PNG, HEIC, HEIF
5. Videos: MP4, MOV, MPEG
6. File size limit: **500MB per file**
7. Images upload **one at a time** to ensure stability

Automatic EXIF Data Extraction

The system automatically extracts metadata from your images:

- **Camera settings** - Make, model, ISO, aperture, shutter speed
- **Date & time** - When photo was taken
- **GPS coordinates** - Where photo was taken
- **Device information** - Phone or camera used

GPS-Based Association

Images with GPS data are automatically:

- **Linked to pastures** where they were taken
- **Associated with cattle** if coordinates match known locations
- **Organized geographically** for easy browsing

Image Gallery

View all your images:

1. Navigate to **Images** menu
2. Browse all uploaded photos
3. Filter by:
 - Ranch
 - Cattle
 - Date range
 - Pasture
4. Sort by date, cattle, or location

Image Gallery

Figure 11: Image gallery showing all uploaded photos with filtering and sorting options

3D Model Generation

For cattle with multiple images:

1. Upload at least 5-10 images from different angles

2. System generates **3D point cloud**
 3. View interactive 3D model on cattle detail page
 4. Rotate, zoom, and analyze from any angle
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Document Management

Uploading Ranch Documents

Build your ranch knowledge base:

1. From Ranch detail page, click "**Upload Documents**"
2. **Drag and drop** files or browse
3. Supported formats:
4. PDF
5. Microsoft Word (.doc, .docx)
6. Excel (.xls, .xlsx)
7. PowerPoint (.ppt, .pptx)
8. Apple iWork (Pages, Numbers, Keynote)
9. File size limit: **100MB**
10. Categorize document:
11. Breeding records
12. Health records
13. Financial documents
14. Pasture management
15. Feed records
16. Equipment documentation
17. Compliance records

18. General
19. Add title and description
20. Enable "**AI Accessible**" for future AI analysis
21. Click "**Upload**"

Document Upload

Figure 12: Document upload interface with drag-and-drop functionality and category selection for Kallion Farms

Viewing Documents

- All documents appear on Ranch detail page
- Download any document by clicking "**Download**" button
- Filter by category
- Sort by date or title

AI Document Scanning

Extract cattle records from documents:

1. Upload documents (PDFs, images of records)
 2. Click "**Scan for Cow Records**"
 3. AI analyzes documents and extracts cattle data
 4. Review extracted information
 5. Import into your database
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Measurements and Analysis

Recording Measurements

Track cattle growth and development:

1. Go to cattle detail page
2. Navigate to **Measurements** section
3. Click "**Add Measurement**"
4. Enter measurement data:
5. **Weight** - In lbs or kg (based on your preference)
6. **Height** - Shoulder height
7. **Body Length**
8. **Body Condition Score** - 1-9 scale
9. **Measurement Method** - Manual, scale, AI estimate
10. **Date** - When measured
11. Add notes (optional)
12. Click "**Save**"

Measurements Page

Figure 13: Measurements tracking page showing historical weight data, body scores, and filtering options

Weight Tracking

The system includes advanced weight tracking:

- **Growth Charts** - Visual weight progression over time
- **Milestone Tracking** - Automatic milestone detection
- **Efficiency Calculations** - Average daily gain
- **Data Validation** - Prevents backdated entries that could corrupt data

AI-Powered Body Analysis

Using GPT-4o vision:

1. Upload clear photos of cattle from multiple angles
2. Click "**AI Analysis**"
3. Receive detailed analysis:
4. **Body Composition** - Muscle and fat distribution
5. **Conformation Assessment** - Structure and balance
6. **Bonsma Methodology** - Functional efficiency scoring
7. **Recommendations** - Feeding and management suggestions

Body Condition Scoring

Standard 1-9 scale:

- **1-2** - Emaciated
- **3-4** - Thin
- **5-6** - Moderate (ideal for most cattle)
- **7-8** - Fleishy
- **9** - Obese

Voice Commands

Using Voice Control

The platform supports voice commands for hands-free operation:

1. Navigate to **Voice Commands** menu
2. Click the **microphone icon**
3. Speak your command clearly

4. System processes and executes

Example Voice Commands

- "Show me all cattle at Scratch Land ranch"
- "Find cattle with registration number REG-2025-0001"
- "Add weight measurement for cattle Vegetation"
- "Show health status for all bulls"
- "Upload image for cattle number 12345"

Voice Command Features

- **Natural Language Processing** - Speak naturally
- **Multi-Language Support** - English and Spanish
- **Fallback to Text** - Type if voice isn't working
- **Command History** - Review past commands

Shopping Cart and Checkout

Viewing Your Cart

1. Click the **Cart** icon in the top navigation
2. Review items:
3. Cattle registration fees
4. Marketplace purchases
5. See total cost

Checkout Process

1. Review cart contents
2. Click "**Proceed to Checkout**"
3. Enter payment information via **Stripe**
4. Confirm purchase
5. Receive confirmation email

Payment Security

- **Stripe Integration** - Industry-leading payment security
 - **SSL Encrypted** - All transactions protected
 - **PCI Compliant** - Meets payment card industry standards
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Mobile App (iOS)

BosSires Depth Capture App

Available for iOS devices with LiDAR:

Features

- **ARKit Integration** - Use iPhone/iPad LiDAR scanner
- **Depth Data Capture** - High-quality 3D depth maps
- **Real-Time Sync** - Automatic upload to cloud
- **GPS Integration** - Location-tagged captures
- **Offline Mode** - Capture in the field, sync later

Using the App

1. **Download** from App Store
2. **Login** with your account credentials
3. **Grant Permissions** - Camera, location, storage
4. **Scan Cattle:**
 5. Position cattle in frame
 6. Tap "**Capture**" button
 7. Walk around for multiple angles
 8. Data uploads automatically
9. **View Results** - 3D models appear in web dashboard

Supported Devices

- iPhone 12 Pro and newer
- iPad Pro (2020 and newer)
- Any iOS device with LiDAR sensor

Tips and Best Practices

Photography Tips

For best AI analysis results:

1. **Good Lighting** - Natural daylight is best
2. **Clear Background** - Minimize distractions
3. **Multiple Angles** - Front, side, rear, and 3/4 views
4. **Full Body Shots** - Show entire animal

5. **Standing Position** - Cattle should be standing square
6. **Distance** - 10-15 feet away for full body
7. **High Resolution** - Use highest camera quality

Data Entry Best Practices

1. **Consistent Naming** - Use clear, consistent cattle names
2. **Complete Records** - Fill in as much information as possible
3. **Regular Updates** - Keep measurements current
4. **Photo Documentation** - Upload images regularly
5. **Backup Important Documents** - Upload to document management

Measurement System

The platform automatically adjusts based on your country:

- **United States** - Imperial (lbs, inches, °F)
- **Canada, Australia** - Metric (kg, cm, °C)
- **Paraguay** - Metric

You can override this in your profile settings.

Performance Optimization

1. **Image Compression** - System automatically optimizes large images
2. **Batch Operations** - Use bulk upload for multiple files
3. **Regular Cleanup** - Archive old records periodically
4. **Browser Cache** - Clear browser cache if experiencing slowness

Security Recommendations

1. **Strong Passwords** - Use complex, unique passwords
 2. **Regular Logout** - Log out when finished on shared computers
 3. **Permission Management** - Only grant access to trusted users
 4. **Document Security** - Mark sensitive documents as private
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Internationalization

Language Support

Switch between:

- **English**
- **Spanish** (Español)

Change language using the language selector in the top navigation.

Country-Specific Features

The platform adapts to your location:

- **United States** - Imperial measurements, USD currency
- **Canada** - Metric measurements, CAD currency
- **Australia** - Metric measurements, AUD currency
- **Paraguay** - Metric measurements, PYG currency

Automatic Unit Conversion

When viewing data from different regions:

- Weights convert between lbs and kg

- Heights convert between inches and cm
 - The system displays in your preferred units
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Support and Help

Getting Help

If you need assistance:

1. **User Manual** - This document
2. **In-App Help** - Click the help icon
3. **Email Support** - Contact your administrator
4. **Training Videos** - Coming soon

System Requirements

- **Modern Web Browser** - Chrome, Firefox, Safari, Edge
- **Internet Connection** - Stable broadband recommended
- **Screen Resolution** - 1024x768 minimum
- **JavaScript Enabled** - Required for full functionality

Browser Recommendations

For best experience:

- **Google Chrome** - Recommended
 - **Safari** - For iOS and macOS users
 - **Firefox** - Fully supported
 - **Microsoft Edge** - Fully supported
-

Frequently Asked Questions

General Questions

Q: How do I reset my password?

A: Click "Forgot Password" on the login page and follow the instructions.

Q: Can I manage multiple ranches?

A: Yes! You can add and manage multiple ranch operations from one account.

Q: Is my data backed up?

A: Yes, all data is backed up regularly to cloud storage.

Q: Can multiple users access the same ranch?

A: Yes, ranch administrators can grant access to other users.

Cattle Management

Q: What's the difference between PHN and Registration Number?

A: PHN is a permanent herd number for tracking. Registration number is the official breed association number.

Q: How do I track lineage?

A: Enter dam (mother) and sire (father) information when adding or editing cattle.

Q: Can I delete cattle records?

A: Cattle are typically soft-deleted (marked inactive) to preserve historical data.

Images and Analysis

Q: What image formats are supported?

A: JPG, JPEG, PNG, HEIC, HEIF for photos. MP4, MOV, MPEG for videos.

Q: How many images do I need for 3D modeling?

A: Minimum 5-10 images from different angles. More is better.

Q: What is the Bonsma methodology?

A: A functional efficiency scoring system that evaluates cattle based on body proportions and structural soundness.

Registration and Fees

Q: How much does cattle registration cost?

A: \$10.00 per animal for registration with unique registration numbers.

Q: Are registration numbers permanent?

A: Yes, once assigned, registration numbers never change.

Q: Can I register cattle in bulk?

A: Yes! Use the multi-select feature to register many cattle at once.

Technical

Q: Why use sequential uploads instead of batch?

A: Sequential uploads (one file at a time) prevent timeout errors and ensure reliable processing of large files.

Q: What happens to my GPS data?

A: GPS coordinates from images are used to automatically link photos to pastures. Your exact location is never shared publicly.

Q: Is the mobile app required?

A: No, the mobile app is optional. All features are available through the web browser.

Glossary

ARKit - Apple's augmented reality framework for 3D scanning

Body Condition Score (BCS) - Numerical rating of cattle fatness (1-9 scale)

Bonsma Methodology - Functional efficiency evaluation system

Dam - Mother of a cattle

Ear Tag - Physical identification tag on cattle's ear

EXIF Data - Metadata embedded in image files

GeoJSON - Format for encoding geographic data

GPS - Global Positioning System for location tracking

KML - Keyhole Markup Language for geographic data

LiDAR - Light Detection and Ranging for 3D scanning

PHN - Permanent Herd Number

PLY File - 3D point cloud file format

Sire - Father of a cattle

Version History

Version 1.0 - November 2025

- Initial user manual release
 - Complete feature documentation
 - Step-by-step guides
 - FAQ section
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Contact Information

For technical support, feature requests, or questions about your account, please contact your system administrator.

Platform: CattleManagement.Online

System: BosSires R&D Cattle Management Platform

Documentation Version: 1.0

Last Updated: November 2025

Thank you for using BosSires R&D Cattle Management Platform. We're committed to helping you manage your cattle operation efficiently and effectively.