

## Digital Smart Cattle Barn



#### **Eco-Smart Cattle Housing Solutions**



#### **Integrated Equipment System**

Through smart cloud cabinets, barn equipment including ventilation fans, spray systems, lighting, roll-up curtains, and scrapers, can be integrated into one platform for unified intelligent control and modern management, delivering efficient and reliable technical support for barn operations and maintenance.

## **Environmental Control**

Equipped with environmental monitoring control cabinets that collect barn environmental parameters and transmit to cloud cabinets, enabling intelligent equipment start/stop based on environmental data. Collected parameters include: temperature & humidity, ammonia concentration, methane, wind speed, light intensity, noise levels.

#### **Al Visual Inspection**

Optional intelligent vision systems provide real-time unmanned monitoring of cattle status, equipment operation, and feed execution. This enables unmanned management, reduces inspection costs, significantly improves efficiency and lowers operational costs, achieving next-generation cost reduction and efficiency gains.

#### **Energy Monitoring**

Through integrated smart electricity and water meters synchronized with herd inventory data, the system enables real-time monitoring and analytics of energy/water consumption and equipment status. This provides reliable data support for precision farm management and low-carbon decision making.













#### MOU EASY® One-Stop Smart Farm Management Cloud Platform

#### **Focus on Business Goals Fully Activate Farm Efficiency**

#### **Farm Daily Report**

Automated daily operations report includes: shift feeding statistics, equipment usage, production records, and maintenance plarts





#### **Wuitu Al Assistant**



#### **Carbon Emissions**







#### **Work Orders**



→ Environmental Monitoring ← → Intelligent Control ← → Al Visual Inspection ← → Energy Monitoring



#### Intelligent Environmental **Control System**

Unified equipment control enables flexible adjustment of indoor environmental parameters

#### **Precision AI Vision Spray System**

Through deep learning models on Al edge gateways to recognize cattle positions and behaviors, enabling precision spraying



Management



#### **Intelligent Feeding System**

Al technology enables automated feeding, formula optimization, and feed monitoring for precise feed calculation and more uniform, stable cattle nutrition

**Maintenance Operations** 

Used for production, recording,

processing, management, and



## **Intelligent Inspection System**

Automates and manages periodic inspection tasks for facility assets across operational areas.



# **Subsystem Integration**

Supports multiple sensor collection, ranch management software, milking machine systems, estrus collars, TMR systems, automatic weighing systems, grouping gate systems, etc.



#### monitoring of execution progress and effectiveness in production-related systems 8-Pillar Smart Ecosystem Supporting Ranch Management



**System** 

#### **Smart Ventilation System**

Uses high and low-end digital fans for diversified fan control, linkage, on-demand use, energy-saving use, and low-noise operation

#### **Data Decision System**

Through data collection, big data analysis, and intelligent decision-making, forms a complete data system effectively improving ranch, management and operational efficiency





### Non-Intrusive Digital Smart PMSD Livestock Fan

## **Leading Core Technology Heat Stress Solution Experts** · Energy-Efficient Operatio 本月节电 · Remote Intelligent Control · Extended Lifespan · Green & Eco-friendly

## **Professional Testing**









## Key Advantages

#### | Variable Speed Control

Automatically adjusts speed based on temperature and environmental optimization

#### | Surge-Protected Start

Permanent magnet motor gradually increases current during auto start, eliminating startup current surge

#### | Smart Management

Features intelligent communication protocols for real-time remote monitoring of fan operating status

#### Customizable

Materials, parameters, and other specifications can be customized based on ranch environment





#### Panel Fan

Minimum Energy, Maximum Airflow **Ensures Uniform** Air Distribution



#### Panel Circulation Fan

High airflow, easy installation Efficient cooling and heat

stress relief



#### Cyclone Fan

Precision Airflow Distribution System **Individual Animal Thermal Comfort Management** 



#### Exhaust Fan

One suction for fresh filtered air Creates comfortable barn climate



#### Pressure Fan

Positive pressure fresh air intake

Protects cattle health

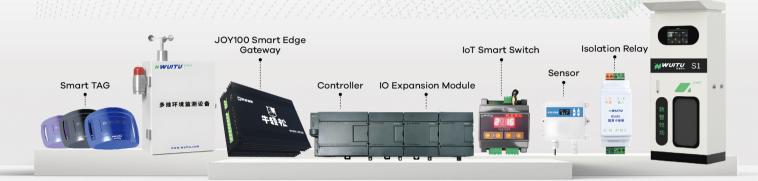




#### **Smart Hardware Series**

# Precision Environmental Monitoring Cattle Welfare Assurance

- Precision Transmission
- · Safe & Reliable
- · Protocol Compatible
- Flexible Expansion





#### **Al Visiaon Series**

# Precision Spraying / Cattle Detection Deep Learning · Visual Perception

- · Continuous Monitoring
- Fan Spray Linkage
- · Intelligent Recognition
- Flexible Standard



#### **Cattle Barn Identification**

Through AI vision algorithms, determines cattle presence in barns based on movement patterns rather than one-dimensional detection. While meeting business requirements, it reduces camera installation quantity and positioning requirements, enabling rapid cattle presence/absence identification from a single viewpoint.



#### **Cattle Feeding Analysis**

Through visual intelligence reuse, enables intelligent monitoring and analysis of cattle feeding patterns without additional hardware costs. Analyzes feeding and push timing rationality. Multi-dimensional data collection (including but not limited to: feeding behavior, activity levels, health status, environmental temperature & humidity) provides foundation for smart barn management and data support for scientific farm management decisions.



#### **Precision Spraying**

Using ranch-data trained recognition models, sprinkler systems achieve over 98% average identification accuracy. Precision spraying through visual algorithms offers easy installation and maintenance, reduces equipment wear, lowers cattle heat stress, and reduces wastewater treatment volume.



#### **Feed Lane Monitoring**

Through visual depth measurement reuse, enables real-time feed level monitoring. When low feed levels are detected, alerts users via notifications and SMS for timely feed replenishment, ensuring efficient and orderly cattle feeding.



#### **Full Lifecycle Carbon Neutrality Services**





Carbon Monitoring · Carbon Verification / Management / Trading
Low Carbon Technology Certification / Low Carbon Farm Certification · ESG Reports

- · Carbon Consultina
- Efficiency Enhancement
- · Low Carbon Certification
- · Report Managemen

#### Benefits Overview

SCAN TO GET CARBON EMISSION CALCULATOR



Wuitu has established a dedicated in-house carbon asset team and developed a full-cycle service system aligned with industry trends. Our comprehensive solution covers equipment selection, carbon asset development, management, trading, ESG integration, and supply chain decarbonization – all supported by expert investment planning for ranch-based photovoltaic areen energy projects.

Wuitu has built a complete carbon neutrality service chain, providing comprehensive solutions for ranches—from project assessment to carbon trading. Without altering existing operations, we enable systematic carbon reduction exceeding 10 million RMB through carbon asset development and trading, equipment upgrades, and green electricity integration.

In 2024, WUITU collaborated with industry regulatory departments and agricultural institutes to develop low carbon ranch standards (TLCAA014-2024 Low Carbon Evaluation Technical Specifications for Dairy Cattle Ranches) and received approval. This standard was applied to four ranches including Pingyin Ranch, Shaliang Ranch, Haojia Ranch and Fengshuiliang Ranch for low carbon evaluation, with Pingyin Ranch becoming the industry's four-star low carbon ranch leading the industry's low carbon development direction.





#### Project Case

#### Benchmark Ranch

#### Youran Chilechuan Eco-Smart Ranch

Hohhot Chilechuan Eco-Smart Ranch (Youran Xiaolibao Ranch) is one of the core supporting facilities for Yili's Modern Smart Health Valley. As a globally leading model in agricultural technology and intelligent management, it represents a premier green, low-carbon, and eco-friendly agritourism destination.



Currently, WUITU has deployed 12 smart cloud cabinets and 36 environmental monitoring devices, providing centralized control of over 8,000 pieces of equipment across 12 cattle barns, achieving standardized operations and systematic management for a digital carbon-neutral ranch.

By integrating ranch-wide data streams, Wuitu has developed a comprehensive cloud platform that enables ranch managers to monitor real-time operations through a unified "Ranch Dashboard." Following infrastructure deployment, the ranch achieved carbon neutrality certification through measured emissions reduction, carbon trading, and offset initiatives.

### **About WUITU**



The Choice for New-Generation Large-Scale Farms

### Pioneering Smart and Digitalized Carbon-Neutral Farm Solutions

Changzhou Wuitu is a specialized and high-tech enterprise focused on smart carbon-neutral farm solutions, evolving from the livestock ventilation business of Fanzic Ventilation (a former division of LG Industrial Systems). Leveraging deep expertise in industrial IoT and artificial intelligence, the company drives digital transformation in sustainable agriculture through integrated technology platforms.

The independently developed MOU EASY® digital farm management cloud platform and supporting intelligent equipment help farm managers optimize operations, reduce costs. WUITU has collaborated on multiple benchmark farm projects, establishing a new industry standard for smart, carbon-neutral ranching. The Wuitu team specializes in enhancing farm value through technology and has been recognized as a UN SBTi (Science Based Targets initiative) approved enterprise. We support the development of digital zero-carbon farms through carbon asset development, ESG reporting, and other services that help farms and enterprises achieve sustainable low-carbon development.





Credentials

Years in Livestock

Intellectual Property

Production Increase/Year

Domestic & International Ranches Served

20 + Years

50 <sup>+</sup>

200 + Ranches

Efficiency Improvement Results

**Energy Saving** 

**5** <sup>+</sup>

Reduced Heat Stress

**15**<sup>+</sup><sub>%</sub>

Emission Reduction/Year (Average for 10,000-head ranch)

1496 tons

# Trusted by **200**+ Farms Worldwide

## **Domestic Market**



















Sk·xing 赛科星



YINQIAO

**优然牧业** 





伊利

君乐宝





嘉立荷 JOLIE HEALTH DAIRY















现代牧业



FENGXING

































